

CHINA INSURETECH

INDUSTRY REPORT



AUTHORS

Oliver Wyman

Cliff Sheng, Partner

Matthew Leonard, Partner

Prashanth Gangu, Partner

Kang Liu, Manager

ZhongAn

John BI, Chief Financial Officer

Wayne XU, Chief Operation Officer

Karen JI, Director of Investor Relationship

PREFACE

The global surge in Fintech has spread to the insurance industry, where Insuretech is leveraging cutting-edge technologies to improve existing insurance products, develop innovative new ones, and reshape the industry.

The technologies include big data, the Internet of things (IoT), block chain, and cloud computing. In mature markets such as the U.S., these tools have helped insurers lower costs and increase efficiency. They have also improved the customer experience and optimized product offerings. At the same time, new, disruptive Insuretech companies have emerged with a variety of business models to challenge insurance industry incumbents.

In China, an underdeveloped insurance market enjoying double-digit growth, the disruptions triggered by Insuretech are causing an insurance industry revolution. One reason for the impact is the fast adoption and heavy use of online ecosystems by the Chinese. In addition, Insuretech is underpinned by a regulatory environment supportive of innovation.

The result has been a surge in new Insuretech players creating disruptive products, services, and business models. Some of these are integrating insurance products into online ecosystems and fostering groundbreaking innovations.

Oliver Wyman and ZhongAn, China's first online-only insurer, are jointly publishing this report to analyze the Chinese Insuretech market and answer the following questions:

1. How big are the opportunities?
2. How are business models evolving to seize the opportunities?
3. What are the key factors required for success?

CONTENTS

PREFACE	3
EXECUTIVE SUMMARY	6
1. CHINA INSURETECH MARKET OVERVIEW	8
1.1. China Fintech overview	8
1.2. China insurance market overview	9
1.3. China Insuretech market	10
1.3.1. Definition of segments	10
1.3.2. Market forecast	12
1.3.3. Regulatory environment	13
1.3.4. Competitive landscape	14
2. INSURETECH BUSINESS MODELS FOR CHINA	16
2.1. Evolution of business models	16
2.1.1. Wave 1: Technology enablement	16
2.1.2. Wave 2: Ecosystem integration	17
2.1.3. Wave 3: Future derivatives of expansion	19
2.2. Economic evolution	22
3. KEY SUCCESS FACTORS FOR INSURETECH BUSINESS MODEL	24
4. RISKS AND UNCERTAINTIES	29

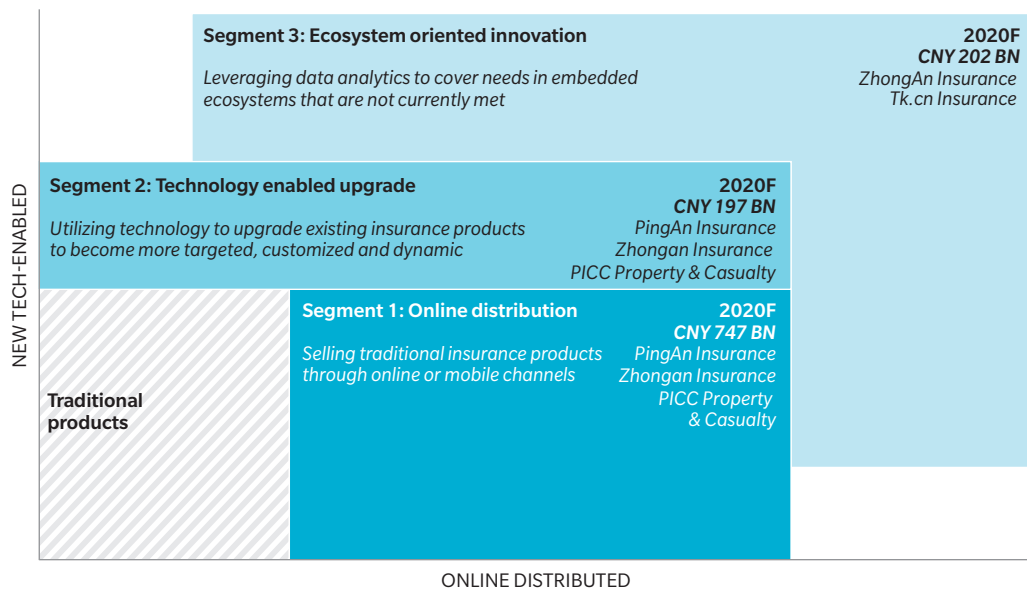
APPENDIX A: EXAMPLES OF TECHNOLOGY ADOPTION AND ECOSYSTEMS	31
APPENDIX B: KEY METHODOLOGY AND ASSUMPTIONS OF OUR FORECAST	33
APPENDIX C: SCREENSHOTS OF TAOBAO'S STATISTICS ON SHIPPING RETURN INSURANCE	35

EXECUTIVE SUMMARY

China has been at the forefront of Fintech innovation, leveraging large, unique, online ecosystems and developing state-of-the-art products. Insurers, especially those that have been growing with the online ecosystem, are utilizing the latest technology to better serve a population that is starting to realize the benefits of insurance. They are also delivering products to cover the risks generated by new technology ecosystems.

The first section of this report aims to illustrate the size, growth, and underlying drivers of the Insurtech market in China. We define Insurtech as “insurance further enhanced through technology in a customer-centric way.” It can be divided into three segments, as in Exhibit 1. This market has attracted both traditional players (such as PingAn and PICC) and online-only players (such as ZhongAn).

Exhibit 1: China Insurtech segments, key players and market size forecast by 2020



Based on our forecasts, total Insurtech premiums in China will reach over 1.1 TN CNY (174 BN USD) by 2020. These can be broken down into the following segments:

- Online distribution of traditional insurance products (e.g. online auto insurance sales): 747 BN CNY
- Technology enabled upgrades of existing insurance products (e.g. new health insurance policies or prices based on wearable devices, telematics): 197 BN CNY
- Ecosystem oriented innovation of new insurance products (e.g. shipping return insurance, flight delay insurance): 202 BN CNY

The second section provides a deeper analysis of possible business models for Insuretech companies and the potential changes that technology disruption could bring to their business economics. We see three phases in the evolution of the Insuretech business model in China:

- The first wave started with technology-driven improvements along the value chain of the traditional insurance business model. This means utilizing digital technology as a way to improve and optimize existing processes and products. This wave is largely driven by incumbents. In this model, the value of technology consists mainly of digital distribution and the optimization of operations.
- The second wave uses superior technology to integrate insurance products into existing online ecosystems, by identifying consumers' needs, and creating tailored products that address these needs. This wave which we also call disruptive Insuretech will need disruptive technology and will be largely driven by new start-up players with internet DNA. The value created in this model consists of increasing the penetration of under-penetrated products using technology transformation, such as health insurance; or integrating innovative new products into ecosystems, such as shipping return insurance and flight delay insurance.
- The third wave will likely go beyond insurance. When insurance engines become embedded in various ecosystems, they could potentially become hubs for data and information about customers. With the fast development of data security and data science technology, Insuretech players will be in a good position to provide either infrastructure services, such as storing health data in a block chain, or a full suite of customized financial services products, such as consumer finance and wealth management. Some of the most innovative players are piloting similar models, and some of these have achieved initial financial success.

In the third section, we identify key success factors and the capabilities required to support Insuretech business models. These include five major technical capabilities: universal connectivity, customer behavior analytics, dynamic pricing, risk management, and automated processing. Also necessary are organization and governance that resemble those of high-tech start-ups, access to and relationships with major online ecosystems, and a human resources strategy to attract and retain the best talent.

The report closes with a fourth section that highlights major risks and concerns, including macroeconomics, regulations, technology, and competition.

1. CHINA INSURETECH MARKET OVERVIEW

1.1. CHINA FINTECH OVERVIEW

The technology boom has hit China especially fast. Enabled by the rapid increase in mobile and internet users, tech firms have created large-scale ecosystems serving a community with strong online consumption habits and a heavy reliance on mobile devices.

These online ecosystems have come to symbolize the Chinese tech scene and are significant contributors to the economy. The fast increase in the number of tech companies and the rapid growth of online ecosystems are based on strong encouragement of innovation and support for entrepreneurship. The most established tech firms have created online ecosystems that encompass all aspects of life, ranging from e-commerce to lifestyle services to financial services. They have reached scales that are large even by global standards.

However, China does not have mature capital markets that can support financial innovation, and incumbent state-owned financial institutions are not reforming quickly enough. This gap in supply has provided opportunities for Chinese Fintech players. Aided by fast-growing online ecosystems and a tech-savvy population, Chinese Fintech players have created businesses that are often larger than their counterparts in mature markets, in fields such as investing, financing, payment and infrastructure, and protection with the leading players achieving large scales and high valuations (Exhibit 2).

Exhibit 2: China Fintech business models and selected players

INVESTING	FINANCING	PAYMENT AND INFRASTRUCTURE	PROTECTION
Wealth Management 	Internet Financing 	Payment 	Online Insurance
Online Securities 	Supply Chain Financing 	Credit Research 	
Online Mutual Fund 			
P2P 		Information Aggregator and Product Platform 	
Crowdfunding 			XX BN USD Valuation¹

1. Latest announcement of last round of fund raising stock price as of Sep. 2016

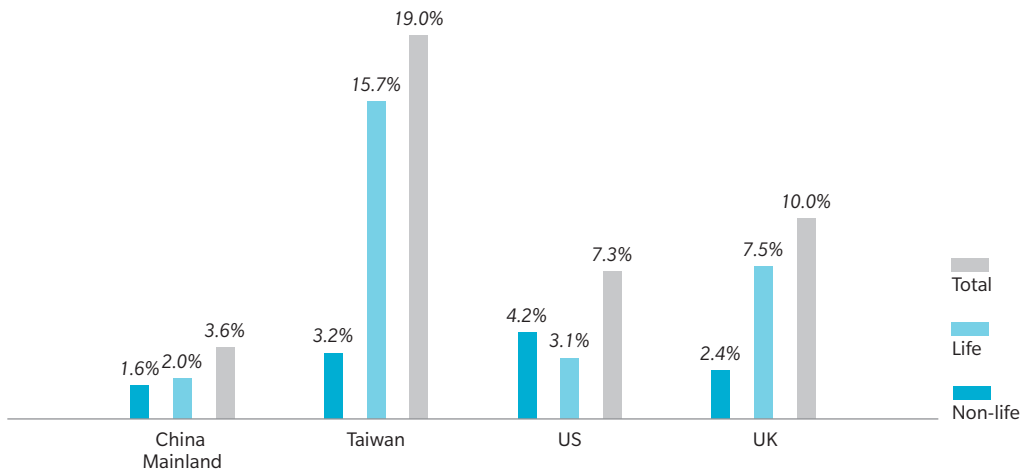
Source: Oliver Wyman analysis

1.2. CHINA INSURANCE MARKET OVERVIEW

Compared to developed markets, insurance penetration in China is lagging, with a rate of 3.6 percent in 2015. By comparison, the U.S. has a penetration rate of 7.3 percent and U.K. 10.0 percent (Exhibit 3). However, the emerging middle class and strong government support for making insurance products more accessible have driven growth in total insurance gross written premiums (GWP) in China. These increased 20% in 2015 over the previous year to reach 2.4 TN CNY.

Exhibit 3: Penetration of insurance products

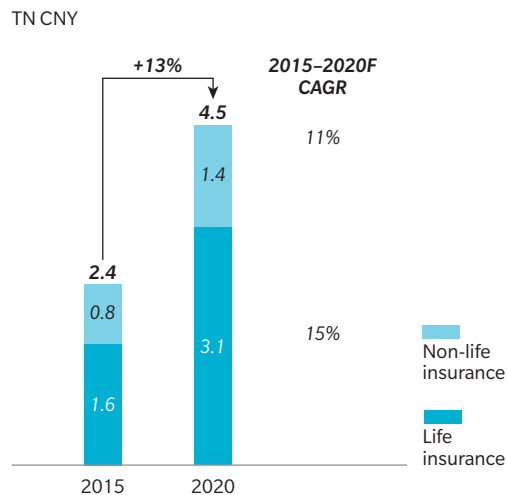
PREMIUM AS % OF GDP IN 2015



Source: Swiss Re Sigma, Oliver Wyman analysis

The Chinese insurance market has doubled in size over the past six years. Based on various sources, including the China Insurance Regulatory Commission's (CIRC) five-year plan, we forecast compound annual growth of 13 percent up to 2020, taking the total to 4.5 TN CNY (700 BN USD). This will consist of 3.1 TN CNY (500 BN USD) in life insurance and 1.4 TN CNY (200 BN USD) in non-life insurance (Exhibit 4).

Exhibit 4: Total insurance premiums: life and non-life insurance



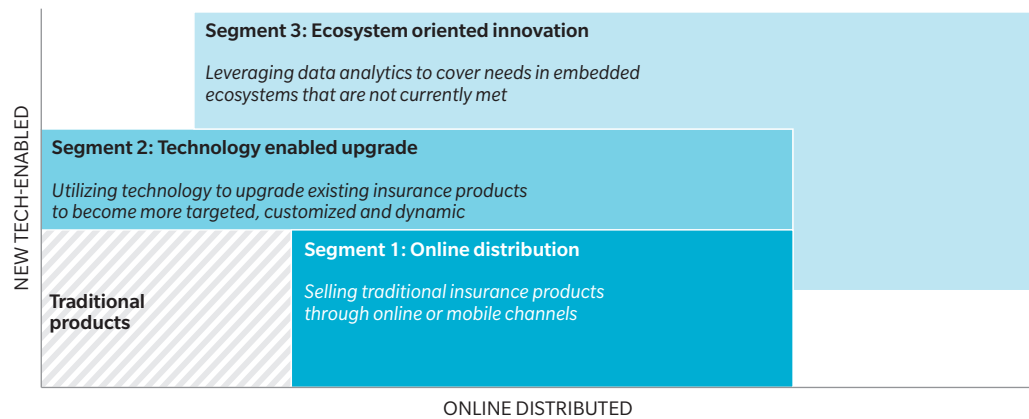
Source: CIRC; Oliver Wyman analysis

1.3. CHINA INSURETECH MARKET

1.3.1. DEFINITION OF SEGMENTS

Marrying insurance and technology has the potential to create an Insurtech market with a variety of different opportunities. Our definition of Insurtech market includes three segments of tech related opportunities within the insurance market, as shown in Exhibit 5.

Exhibit 5: Three segments of China Insurtech



- **Online distribution** – Selling traditional insurance products through online or mobile channels. The contribution of technology in this market is its ability to reach long-tail, low-cost customers, make operations more efficient, and improve the customer experience. Competition in this segment comes from traditional insurance players such as PingAn, as well as platforms run by large ecosystems, such as Alipay and Taobao of Alibaba Group, and JD.com.
- **Technology enabled upgrade** – Utilizing technology to make existing insurance products more targeted, customized and dynamic. This includes the use of technology to collect and analyze massive datasets, in order to manage and reduce underlying risk and to optimize operations and claims efficiency. For example, both PingAn and PICC are adopting telematics and preparing to launch UBI (usage-based insurance) products, and ZhongAn is offering critical illness insurance based on data from a wearable device. Participants in this segment will include both incumbents and challengers from various backgrounds, especially companies with strong data analytics capabilities and the technical ability to adapt new technology and optimize current operations.
- **Ecosystem oriented innovation** – Leveraging data analytics to cover needs in embedded ecosystems that are not currently met. For example, online consumers cannot physically feel or try merchandise, so they often feel uncertainty or risk over purchases. For a small fee (on average 0.4 CNY, or 0.06 USD), shipping return insurance (described in more detail in Section 2.1.2) covers the cost of returning unwanted goods and alleviates a consumer’s fear of purchasing an unwanted item. This business model requires a full understanding of consumer needs in each ecosystem. It also necessitates the ability to analyze a large amount of dynamic ecosystem data to create the right pricing model, as well as tech-enabled operations to automate processes, and the highest level of innovation.

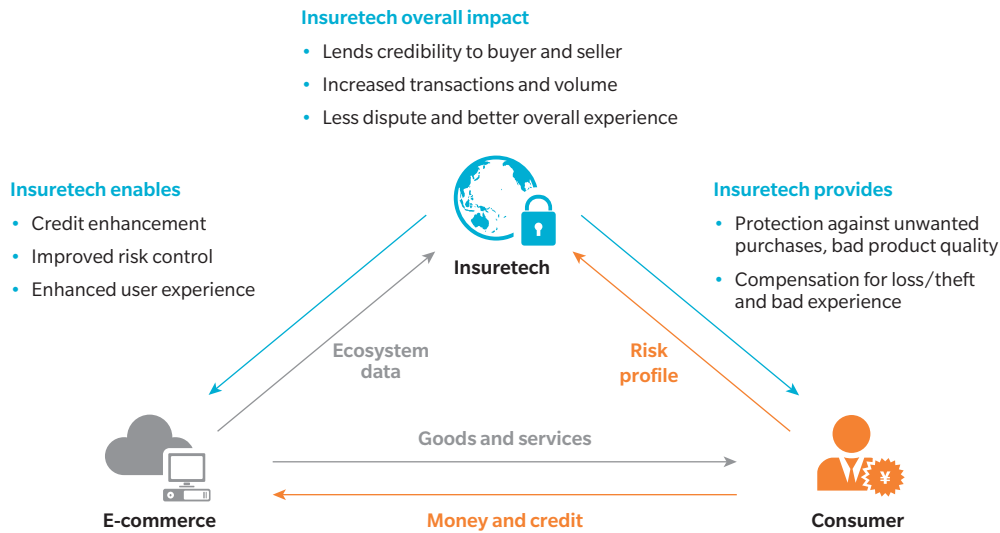
For the last segment, the coverage of previously uninsurable risks alleviates consumers' concerns and therefore helps drive future ecosystem growth. Key properties of ecosystem oriented insurance include:

- **Insurance alleviates worry** by providing an additional level of guarantee to the consumer during the purchasing process, it also can protect the consumer against personal/property damage when utilizing domestic services booked through O2O (Online to Offline) platform.
- **Insurance encourages purchases and consumption** through the hassle-free return of goods, easing the worry of purchasing goods that might turn out to be unwanted. Online shoppers can purchase multiple items they would like to try out in the comfort of their own home and simply return the unsatisfactory products at no additional cost.
- **Insurance improves the user experience** by lowering the frequency of disputes caused by unsatisfactory products and providing better service. This can include the automatic pickup of products for return from high-rating clients, where ratings are based on analytics provided by the insurance company related to things like fraud detection and credit ratings.

This creates a virtuous cycle, in which insurance providers continuously serve consumers' potential needs within the ecosystem – and the ecosystem benefits from higher customer satisfaction and increased consumption (Exhibit 6).

Exhibit 6: Virtuous cycle between Insuretech and online ecosystem

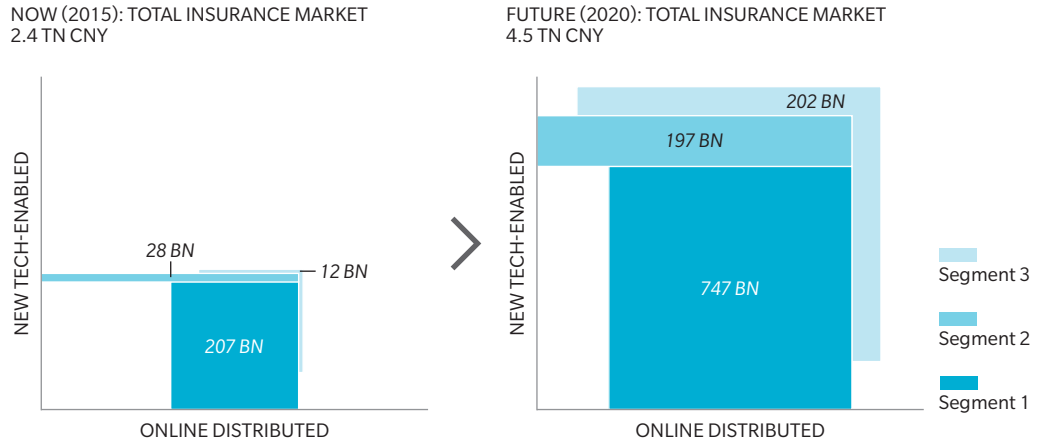
IMPACT OF INSURETECH ON E-COMMERCE PLATFORM



1.3.2. MARKET FORECAST

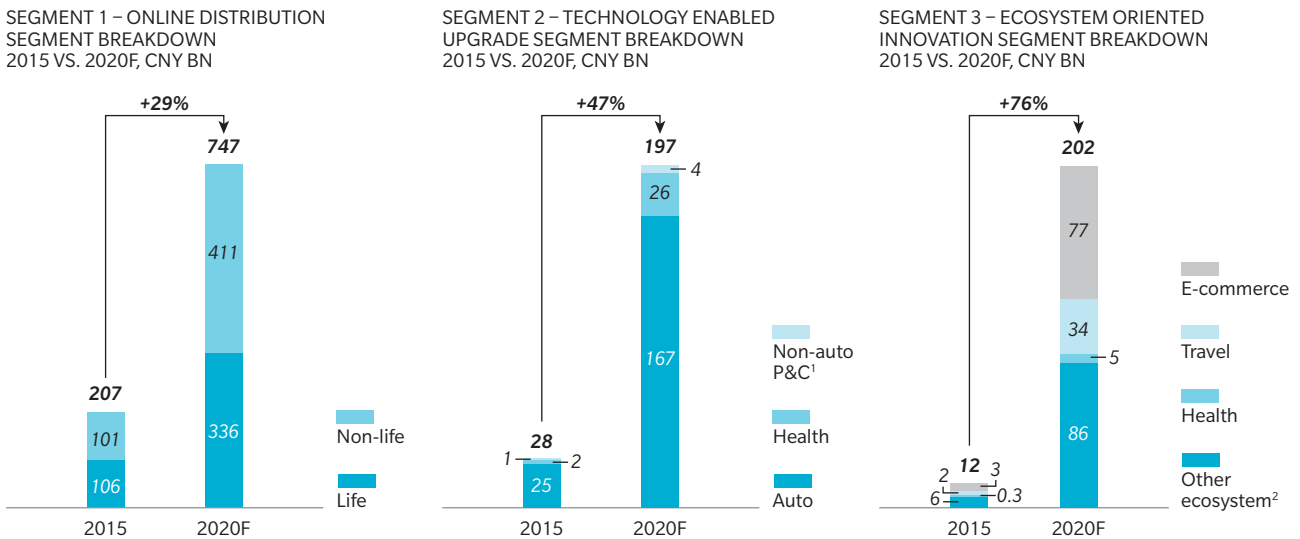
Looking forward, we believe the Insurtech market will continue to grow at an immense pace, from about 250 BN CNY (37 BN USD) in 2015 to over 1.1 TN CNY (174 BN USD) by 2020, as shown in Exhibit 7. It will not only expand in digital distribution channels and through technology-enabled innovation, but also through innovative insurance practices that serve particular needs in online ecosystems.

Exhibit 7: China Insurtech market size



Of the three aforementioned segments – online distribution, technology enabled upgrade, and ecosystem oriented innovation – the speed of growth and key drivers for each segment will vary (Exhibit 8).

Exhibit 8: China Insurtech market size by segments



1. Non-auto P&C include insurance products such as property, accident and travel
 2. Other ecosystems include financial services, lifestyle, sports and entertainment, etc.

Source: Industry research, Oliver Wyman analysis

- Our estimates show that GWP for the online distribution segment will grow from about 207 BN CNY (31 BN USD) in 2015 to about 747 BN CNY (113 BN USD) in 2020. Within this segment, non-life insurance products will grow at a faster pace than life products.
- For the technology enabled upgrade segment, we estimate GWP will grow from about 28 BN CNY (4 BN USD) in 2015 to about 197 BN CNY (30 BN USD) in 2020. The main contributions will come from auto and health insurance products. Technological advances in areas such as telematics and precision medicine are forecast to be significant drivers of GWP growth in this segment, taking share from traditional business models.
- In ecosystem oriented innovation, GWP is projected to grow from 12 BN CNY (1.8 BN USD) in 2015 to 202 BN CNY (31 BN USD) in 2020. The e-commerce and travel ecosystems are expected to be the main contributors in this segment due to their sheer market size and the growing consumer desire to insure against risks related to these ecosystems.

Our forecasting methodology and key assumptions are further discussed in Appendix B.

1.3.3. REGULATORY ENVIRONMENT

China Insurance Regulatory Commission (CIRC), the insurance market regulator in China, governs based on a three-tier regulatory framework: nationwide license controls; approvals of product features and prices; and market entry controls for each province. We have observed a number of trends relating to the regulation of Insuretech:

- Headway in fostering innovation
 - Online-only insurance licenses are being approved (four issued as of September 2016).
 - Provincial entry for innovative insurance products is being allowed. For example, shipping return and flight delay insurance can be distributed to nationwide clients, while insurers still need to get approval from provincial regulators for auto insurance.
 - Sweeping changes to C-ROSS have made it more beneficial risk-wise to favor the retail insurance business. For example, insuring simple risk, such as auto insurance, will require less capital than commercial insurance.
 - Many more insurance licenses have been issued recently. This makes it easier to capture future cross-sell opportunities, because a single-license insurer can apply for another license faster and more easily than before.
 - CIRC has made efforts to foster innovation and boost retail insurance penetration. In health insurance, it has offered tax rebates and encouraged tech-based innovations such as insurance linked to wearable devices.
- Differences in regulatory constraints between new and existing products
 - New products, such as shipping return insurance and one-time accident and liability insurance, can be launched quickly after filing with CIRC. The regulator accepts a large range of pricing and underwriting practices, making innovations such as dynamic pricing and underwriting feasible.
 - Mature products, such as auto insurance, are regulated by both the provincial and the national regulators, and are difficult to disrupt in the short term. However, the barrier for health insurance innovation is lower than that for auto insurance, mainly because health insurance has a smaller premium pool and the government has a regulatory agenda to increase penetration.

- Mandate of 'inclusive finance'
 - Higher levels of education and financial sophistication are helping people understand the benefits of insurance. China is expanding insurance as a key protection and financial planning tool for the masses. Given the dominant role of technology and mobile communications in the consumer market, 'inclusive insurance' in China will be largely made available through digital channels.

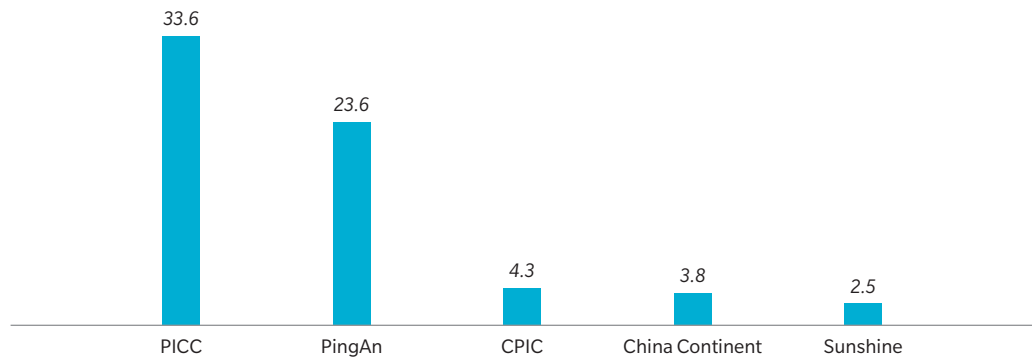
1.3.4. COMPETITIVE LANDSCAPE

Given the favorable regulatory environment across the three Insuretech segments, some players have operated in several – even all – of the segments.

- The online distribution segment is mainly dominated by traditional insurers selling P&C products (Exhibit 9).

Exhibit 9: Online insurance P&C GWP of traditional insurance companies, 2015

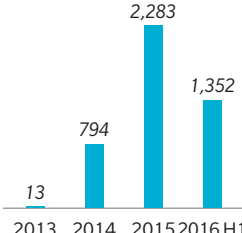



BN CNY



Source: Insurance association of China, Oliver Wyman analysis

- The technology enabled upgrade segment is the battleground for many new innovative products. Online-only players like ZhongAn offer flight delay insurance utilizing real-time weather data, historical flight results, and purchase history data to determine pricing and payout conditions. Other traditional insurers like PICC and PingAn are adopting telematics to improve auto insurance pricing methodology.
- Ecosystem oriented innovation is a segment that is mainly covered by online-only insurers. Their ability to develop insights from large amounts of customer data is unparalleled. Below are some key products and partners of online-only insurers (Exhibit 10).

Exhibit 10: Online-only insurance players in China

PLAYER	ZHONGAN INSURANCE	TK.CN INSURANCE	1AN.COM INSURANCE	ANSWERN PROPERTY & CASUALTY INSURANCE
GWP (MM CNY)				
License approval date	2013.10	2015.11	2016.2	2015.12
Key partners	<ul style="list-style-type: none"> Alibaba Ctrip Pingan 	<ul style="list-style-type: none"> Taikang insurance DXY 	<ul style="list-style-type: none"> Yinzhijie (a Fintech company) 	<ul style="list-style-type: none"> Honganonline (a Fintech company)
Key products	<ul style="list-style-type: none"> Shipping return insurance Flight delay insurance Intelligent health insurance 	<ul style="list-style-type: none"> Investment-linked insurance Accident insurance 	<ul style="list-style-type: none"> Medical expenses insurance Household property insurance 	<ul style="list-style-type: none"> Online payment insurance Household property theft insurance

Source: CIRC, company websites, Oliver Wyman analysis

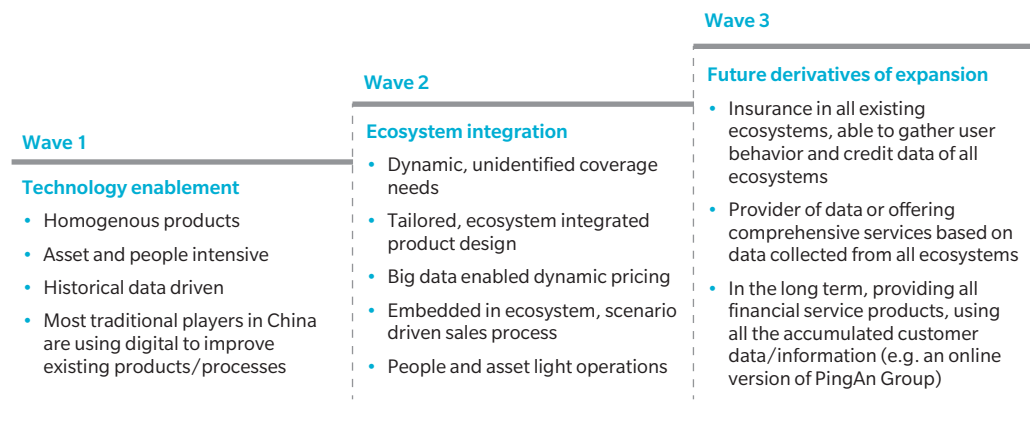
In the current competitive landscape, the choices of focus of different players are determined by its business model and capabilities, which we will further discuss in the following chapters.

2. INSURETECH BUSINESS MODELS FOR CHINA

2.1. EVOLUTION OF BUSINESS MODELS

To seize market opportunities, it is critical to have the right business model. In the digital revolution, technology has permeated into insurance companies' business models and triggered the rise of Insurtech (Exhibit 11).

Exhibit 11: The evolution of Insurance business models



2.1.1. WAVE 1: TECHNOLOGY ENABLEMENT

The traditional insurance model is based on serving clear and tangible customer needs by providing a homogenous product. Prices are decided using actuarial models and analyzing statistics and historical data. To sell a static and homogenous product, large sales teams are needed to drive sales and gain market share. Large operational support teams are needed too, making the traditional business model both asset- and people-intensive.

Traditional players are now utilizing digital technology to improve their processes and products. One example is online and mobile distribution channels, which reduce the need for sales staff. Another is automated claims processing, which reduces staff, lowers costs, and increases operational efficiency. However, this is done without disrupting the fundamentals of the traditional insurance business model (Exhibit 12). Organizational inertia means that some traditional players are still unable to fully utilize the power of digital channels for distribution.

New challengers are also trying to drive innovations of existing products, leveraging strength in connecting ecosystems and flexibility in adopting new technologies. In addition, new challengers start to partner with traditional players, for example, ZhongAn and PingAn are coinsuring online distributed auto insurance in some provinces.

Exhibit 12: Examples of technology enablement across insurance value chain



2.1.2. WAVE 2: ECOSYSTEM INTEGRATION

In the ecosystem integration business model, Insuretech companies create a universal analytics and processing engine that can operate seamlessly within each online ecosystem. This engine acts as the link between the ecosystem and the insurance provider, gathering consumer data from the ecosystem; applying analytics to create and process customized, scenario-based insurance products; and processing claims with automation technology. This disruptive business model is both asset- and people-light, and is the direct outcome of Insuretech innovation. It is based on the ability of Insuretech companies to integrate into existing online ecosystems, and then identify consumers' needs and create tailored products that address these needs.

The keys to success are being able to:

- Utilize analytics and technology to derive insights into customers that cannot be found in historical data, and use these insights to create innovative insurance products. For example, utilizing data from wearable devices can help insurers develop insights into personal health that historical data cannot provide. These insights can be further used to offer products that are priced in line with the risk level and health of an insured individual.

- Use big data to design product features and offer dynamic pricing for specific scenarios. For example, Helijia is an online-to-offline service that provides on-call manicures in customers' homes. The safety of the service provider and of the consumer is at risk given the multiple unknowns in this scenario, and an accident insurance product can insure against these risks. The price is determined dynamically by factors such as the historical ratings of service providers and the frequency with which the consumer buys such services.
- Digitally deliver and process insurance claims, usually in conjunction with customer behavior in the ecosystem. This is an integral part of the experience. For example, flight delay insurance pays out when a flight is delayed for a certain amount of time, usually over two hours. This insurance is purchased digitally and paid out digitally. An automated processing engine takes care of all operational tasks using flight and purchase data.

Below is a case study of a shipping return insurance product, which shows how Insuretech players are developing innovative insurance products under the ecosystem integration model.

Case study: E-commerce shipping return insurance

China's online and mobile shopping market is a 6 TN CNY (1 TN USD) industry, with clothing making up the largest part. The average transaction value for clothing on Taobao is 60 CNY (10 USD), and the average cost of shipping is around 12 CNY (2 USD). Clothes shopping on the Internet comes with the following challenges: Customers cannot know if the size is right; they are not sure about the material used; and they often simply do not know whether they will like the product delivered. As the average cost of shipping is nearly 20 percent of the transaction value, returning items are a significant expense. So when shipping return insurance was introduced, it resonated strongly with consumers and merchants alike. Shipping return insurance costs on average 0.4 CNY (6 cents USD) and pays out the cost of shipping automatically if a product is returned. Payment is automatically triggered when the seller approves a product return (Exhibit 13). In this case, the insurance product eliminated pain points for both the consumer and merchant:

- Consumers no longer had to worry about not liking a product they purchased, because for a nominal fee they could buy shipping return insurance and return the product at no extra cost.
- Merchants spent less time on product return disputes. They could also purchase shipping return insurance for their customers for a nominal fee, allowing customers to freely return products they didn't like.

ZhongAn Insurance and Alibaba jointly developed this product. By 2015 it had become a 1.1 BN CNY (0.17 BN USD) market, with peak volume reaching 100 MM CNY (15 MM USD) on November 11, 2015 – China's Black Friday. At the same time, Taobao e-commerce volume has grown 35 percent thanks to consumers' increased willingness to buy products online. This is an example of how an innovative insurance product can benefit both the insurance provider and the ecosystem it serves.

Exhibit 13: Ecosystem oriented innovation example: shipping return insurance

PROCESS



Pick out products online



Purchase products and Shipping Return insurance



Get approval from seller for product return



Pay for shipping back to seller and induce claims (to cover shipping costs)



Shipping reimbursement payment reach account within 72 hours

KEY HIGHLIGHTS

Taobao.com

① Dynamic pricing

- Insurance premium varies based on the historical return ratio of the buyer, the purchased product and store, as well as the purchase number etc.
- Average price is 0.4 RMB

② Seamless customer experience



Purchase the Shipping Return insurance for 0.5 RMB, get 8 RMB back if goods are returned

- Insurance purchase option shown in the Taobao product payment page in **one line**
- Only **one click** is needed to complete the insurance buying process

③ Interaction with the ecosystem

- Integrated with Taobao
- Improves customer experience by reducing cost of having to return products
 - Increased average store traffic of seller by 35%¹
 - Increased average sales revenue by 35%¹
 - Decreased the average dispute rate by 30%¹

1. Refer to Appendix C

Source: Taobao.com, Oliver Wyman analysis

Major players focusing on this model are not incumbents, but rather newcomers with strong Internet backgrounds. These innovators provide scenario-based, customer-centric products as online-only insurance providers.

- These insurers integrate into ecosystems and use big data techniques to analyze consumer behavior and needs.
- Product manager led development teams then use these insights to develop scenario-based products. They are launched quickly and iterated several times to optimize pricing and enhance product features.
- They utilize streamlined operations using automated engines that process tens of thousands of policies and claims per second.

2.1.3. WAVE 3: FUTURE DERIVATIVES OF EXPANSION

As the need for insurance products grows, players can become embedded in nearly all technology ecosystems, providing specific services to each one while utilizing the same analytics and processing engine. This approach will provide access to a vast array of consumer data and create opportunities to analyze and optimize products in different ecosystems. As the ecosystem integration model expands and accumulates data, interesting business models start becoming possible.

Infrastructural services provider: Data gathered from different ecosystems are extremely valuable, as they provide significant insights into consumer behavior.

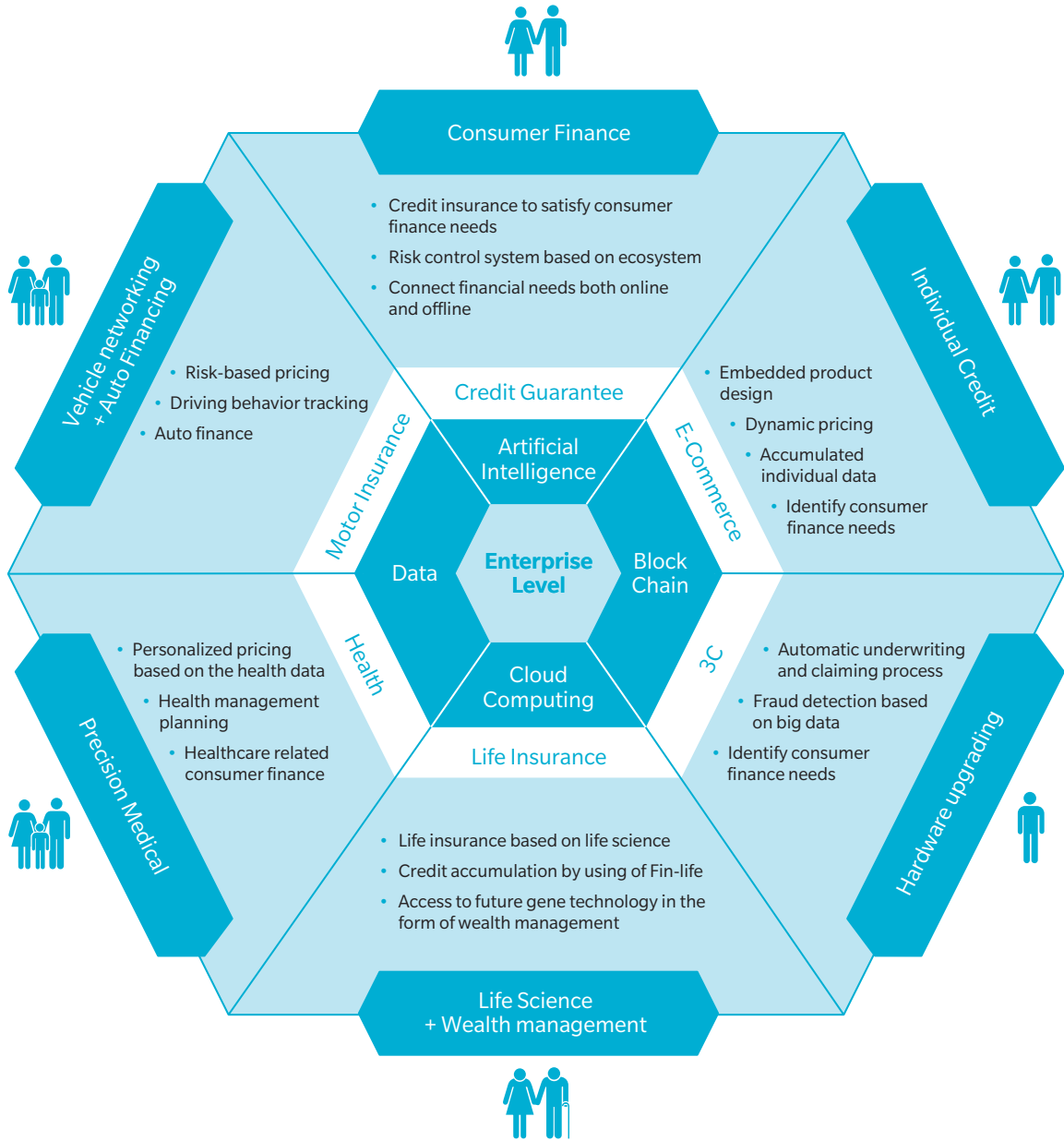
- One potential model is to be a provider of credit data. Analysis of multiple sources of consumer data can produce metrics such as credit ratings and fraud probabilities.
- Another possible model would use block chain technology to provide personal health information on customers collected through wearables, insurance policies, image recognition, and partnerships with hospitals.

Comprehensive financial services provider: In the long term, with the right analytical tools, consumer data can be used to digitally provide a suite of customized financial products. The ability to manage risk is essential for financial innovation, and with the breadth of data gathered from technology ecosystems and insurance products means that risk management is no longer a bottleneck to product development. Ultimately, acquiring customers will rely on being able to provide products that they truly need and insurers that are integrated into ecosystems should understand this well.

- One example would be to expand into consumer credit by utilizing the data from ecosystems such as travel, job websites, e-commerce, and wearables. Travel choices provide data that can indicate wealth. Job sites yield information that can predict potential earning power. E-commerce data show spending habits, which provide clues to money management ability. And wearables data provide a picture of a consumer's state of health, which is linked to repayment ability. Such data can be used to paint a complete picture of the risk attached to a borrower. This picture can then help to determine interest rates and to price products dynamically in a way that minimizes default rates.
- Another idea is wealth management services. Data points from life-insurance products, wearables, e-commerce, and consumer credit are indicators of stage of life, wellness, and spending habits. They can all be used to determine a person's risk appetite. Technology that matches wealth-management products with the right risk profile increases customer satisfaction and boosts sales.

This model will ultimately take Insuretech players beyond insurance, turning them into customer-centric digital service providers. Some Insuretech players, such as ZhongAn Insurance, have been piloting this model in selected markets. Currently, they are mainly operating in the financial services space by providing products such as shipping return insurance, flight delay insurance, auto insurance, precision medical insurance, individual credit enhancement, and consumer finance. Yet in the future, they have the potential to operate in the non-financial services market as well, providing credit, health and automobile data. (Exhibit 14)

Exhibit 14: Potential future derivatives of Insuretech in China



Source: iResearch; ZhongAn

2.2. ECONOMIC EVOLUTION

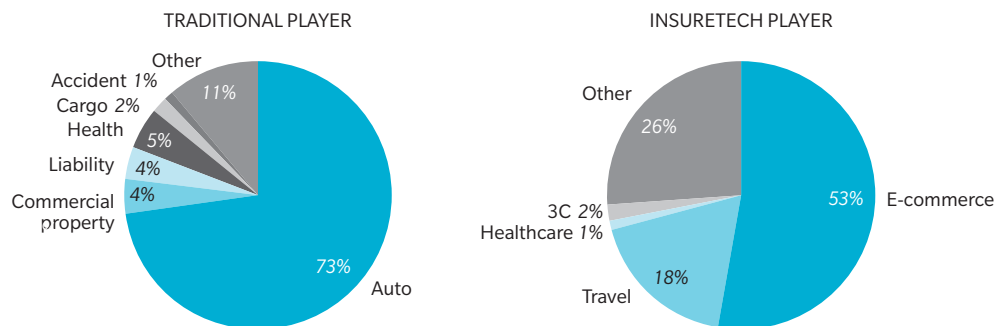
As insurance companies move from traditional business models to disruptive, tech-oriented Insuretech models – in particular of the Wave 2 type – the economics are bound to change. From a top-line perspective, Insuretech players can grow much faster than traditional players thanks to large sets of high-quality customer data that provide insights into consumers and accurate contact information of consumers. Insuretech players will also benefit from the fast growth of their consumption-driven ecosystems.

From a bottom-line perspective, as technology enriches automation and analytics, both risk and cost models change significantly. Insuretech players can automate processes such as product testing and risk control better than traditional players. This will enable them to significantly increase speed of product launch and upgrades, and reduce labor costs.

Moreover, disruptive Insuretech players are still in the early stages of development, and have not yet fully amortized their IT investments or reached economies of scale. We anticipate that after economies of scale have been reached, IT development costs will decrease as a percentage of gross written premiums.

Exhibit 15 shows the difference in business mix between a traditional insurer and a typical Wave 2 Insuretech player. With little auto or commercial property insurance, the Insuretech insurer currently focuses on insuring risk in digital ecosystems, offering products such as e-commerce buyer protection, shipping return insurance, flight delay insurance, and travel insurance, but in the future will likely expand into more traditional insurance products.

Exhibit 15: Revenue structures of a typical traditional player vs. typical Insuretech player

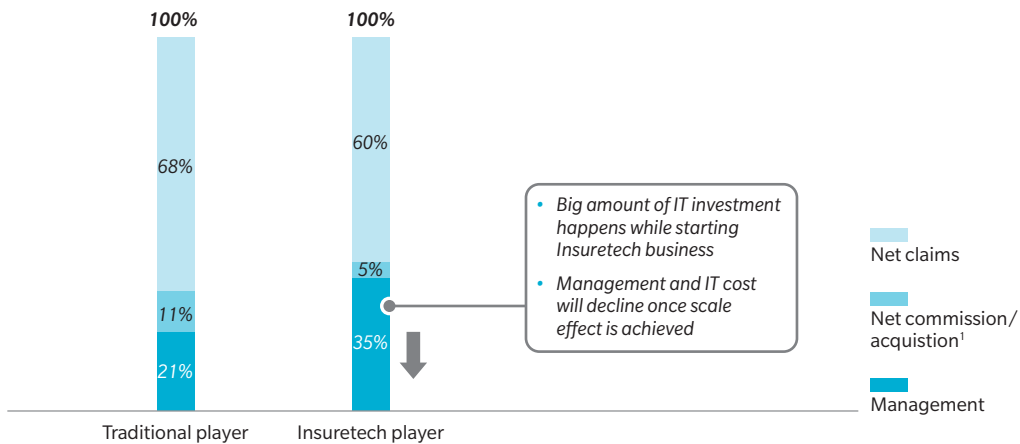


Source: Annual reports, ZhongAn, iResearch, Oliver Wyman analysis

Exhibit 16 shows the differences in cost structure between a typical traditional insurer and a Wave 2 Insurtech player. The latter has a lower customer acquisition cost than the former, but higher management costs, because of large investment in IT development during the early stages of building an Insurtech business. Management cost is estimated to decline, once a scale effect is achieved.

Exhibit 16: Cost structure of a typical traditional player vs. typical Insurtech player

%, AS % OF TOTAL EXPENSES AND CLAIM COSTS



¹ Some acquisition cost may be included in management cost, because of different accounting practices

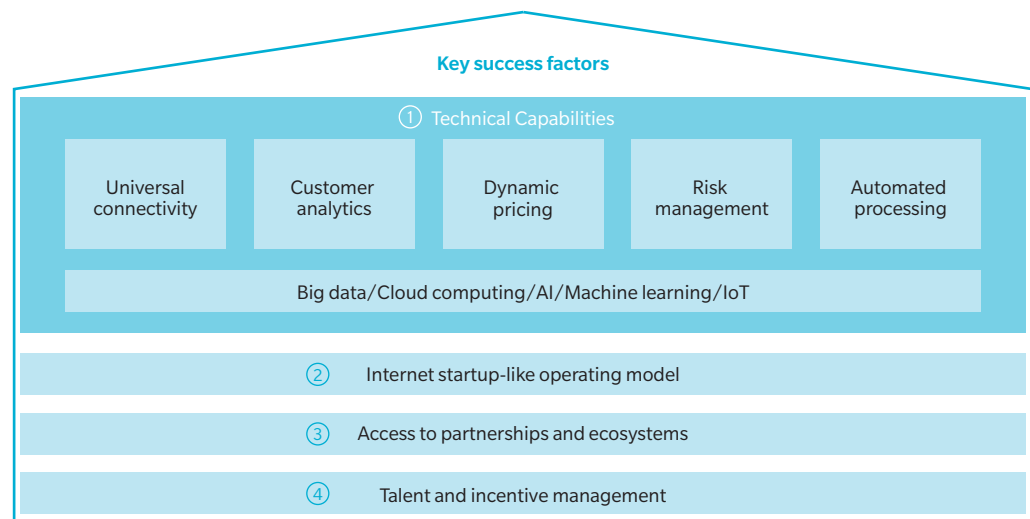
Source: Annual reports, Oliver Wyman analysis

If the Wave 2 Insurtech player further evolves into an infrastructure service provider or a comprehensive financial services provider, its topline will increase significantly with only a marginal increase in costs. That will be thanks to its existing infrastructure combined with data accumulated from insuring various ecosystems. An asset-light, high-margin company will emerge.

3. KEY SUCCESS FACTORS FOR INSURETECH BUSINESS MODEL

The success of the ecosystem integration insurance model in the Insuretech market depends on four key factors.

Exhibit 17: Key success factors for Insuretech in China

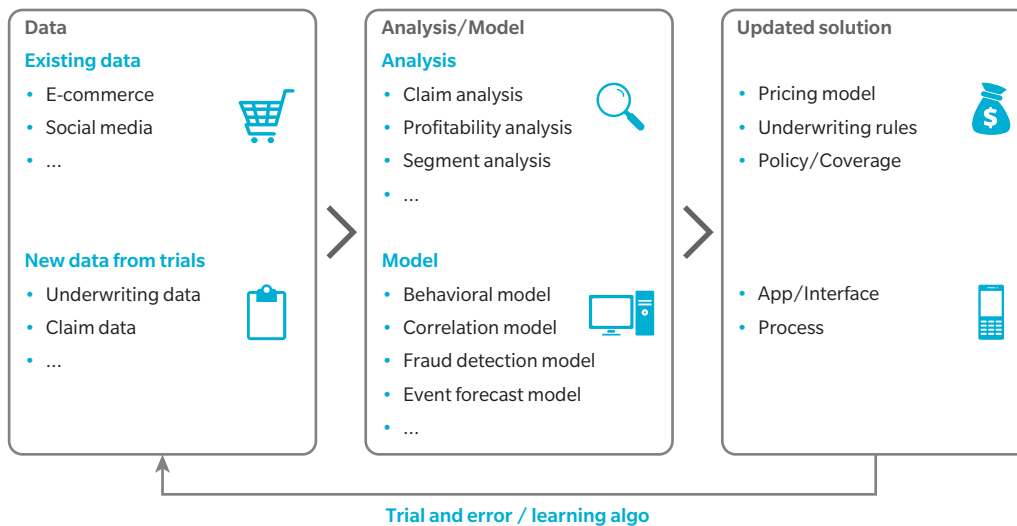


#1 Success factor – Technical capabilities: An illustration of how technical capabilities come together during an iterative learning process is shown in Exhibit 18.

- **Universal connectivity** is essential for connecting ecosystems and relevant parties in order to acquire critical data for product development and customer acquisition. The key step for achieving universal connectivity is to migrate from traditional technology, which utilizes mainframes for centralized processing and relational databases. This should be replaced by new, big data and cloud computing technologies that allow the parallel processing of different data formats. Such technology provides much larger data storage, extraction of a greater variety of data, and faster data processing across different ecosystems.
- **Customer analytics** help insurers draw insights from large amounts of new and dynamic data. These help to enhance the customer experience and better serve customer needs. Advanced analytical tools and skilled data scientists are pivotal for effective customer relationship management. Data scientists are starting to adopt customer intelligence analytics tools such as the nano- and pico-segmentation of clients, predictive modelling, and behavior patterning. These analytical tools provide a detailed understanding of customers and they aid predictions and strategic decisions based on the patterns and motivations behind customer behavior.

- **Dynamic pricing** allows savvy insurers to design a customized and competitive pricing strategy. Like with the enablers of customer behavior analytics, dynamic pricing needs advanced analytical tools for pricing and strong technical teams. As big data technology becomes more prevalent, the pricing team can adopt sophisticated price elasticity modelling that utilizes complex machine-learning algorithms. This can help study rich sets of client and competition data.
- **Risk management** lies at the heart of any insurer’s business, as major fraud events or data leakage can cause significant economic and reputation losses. To combat fraud, artificial intelligence can trace customer transaction behavior and detect fraudulent transaction patterns. Artificial intelligence has already been widely used to detect credit card fraud, and insurers can leverage the technology to prevent acts of fraud such as false insurance claims. In addition, block chain technology decentralizes and scatters information, so data can be recorded in a secured form.
- **Automated processing** is vital for keeping a business model viable. Automation technology is essential for keeping operating costs down when an insurer tests and launches dozens of new products every month, processes millions or even BNs of policies in one day, and dynamically adjusts pricing based on the latest data and granular insights into customer behavior. A key advantage of automated processing is the ability to settle claims without human intervention or even the involvement of clients. Paying out claims accurately and without disputes or mistakes will be an integral part of providing services at minimum cost. Automation technology can also be used in risk management, such as automated fraud detection and alerts for abnormal behavior.

Exhibit 18: Iterative learning using technological capabilities

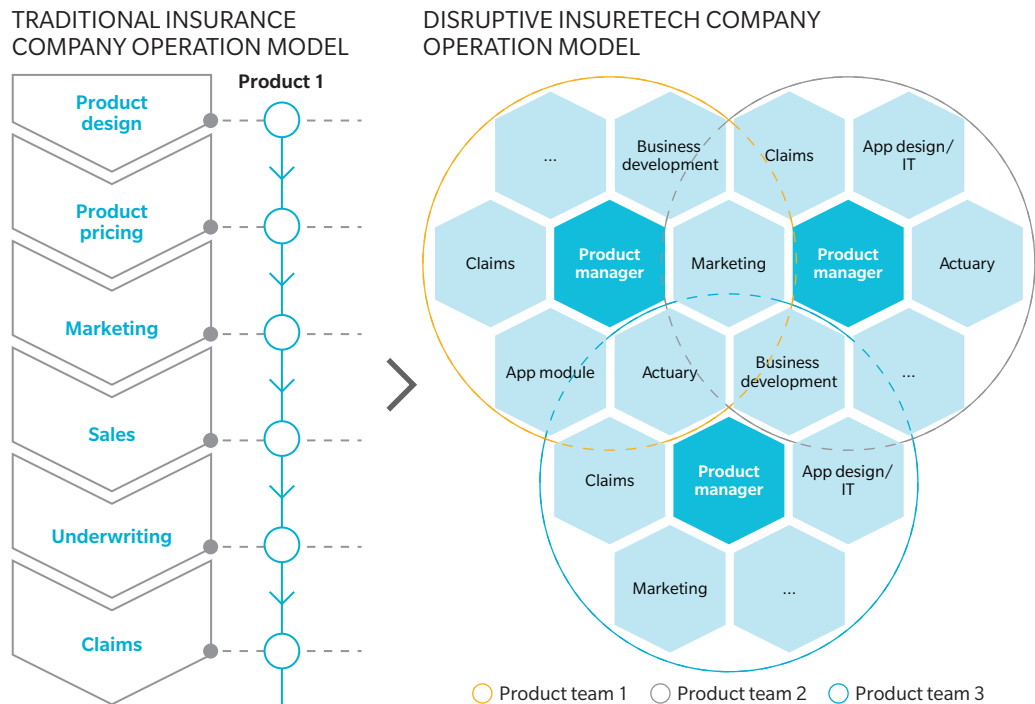


#2 Success factor – Internet startup-like operating model: The traditional operating model is split into departments such as product design, product pricing, marketing, sales, underwriting, and claims. Product launches require a long process, because each department has to give its approval.

In contrast, the Insuretech company operating model should:

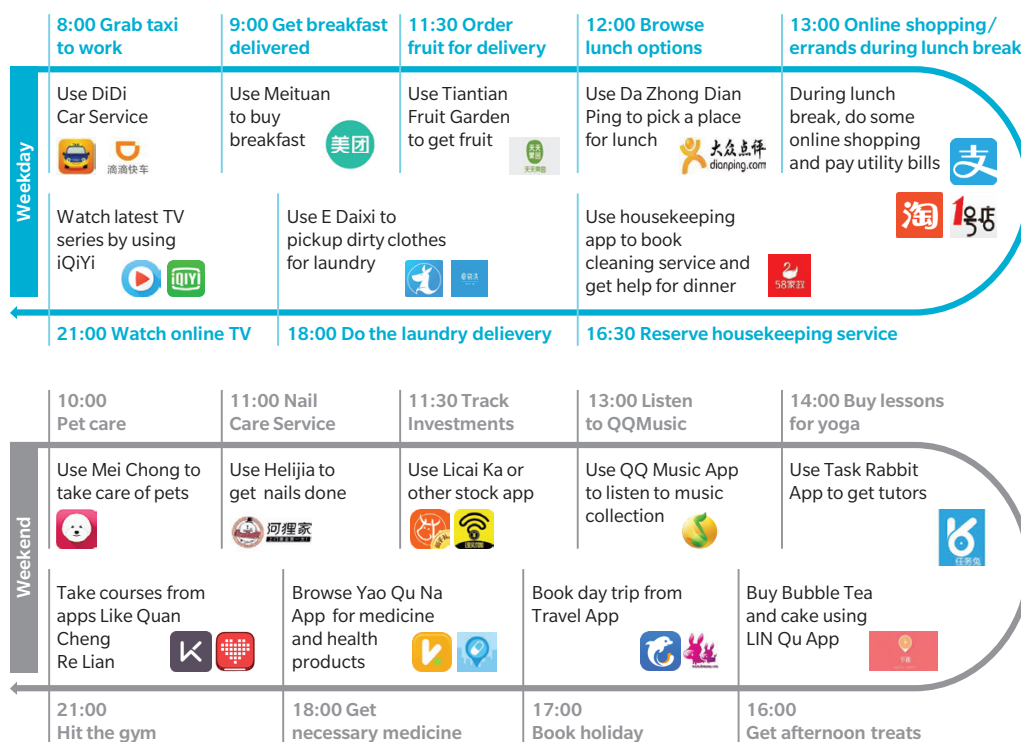
- Operate a lean start-up culture with flat working structures and product-driven teams.
- Maintain transparency and accountability throughout the organization.
- Shorten product development cycles through hypothesis-driven experimentation, quick iterations, and validated learning.
- Develop products that truly meet the needs of customers, thus reducing risk and the funding required.

Exhibit 19: Comparison of operating models



#3 Success factor – Access to ecosystems: Being able to develop relationships with technology ecosystems is a must in order to gain access to consumer data and develop insurance products that meet their needs. Such access need not necessarily be exclusive, given that most online ecosystems are open for access by their nature. However, early access, smooth business cooperation, and top-level relationships can help to establish dominance. One example is ZhongAn working with Taobao early on to gain access to its e-commerce ecosystem, and then introducing shipping return insurance. Pingan Insurance worked with 58 Daojia, a domestic services provider, to provide integrated property insurance that covers damaged caused to household goods by domestic workers. Shareholder backgrounds will be a determining factor in gaining such access, followed by strong business development teams, personal relationships, and familiarity with the ecosystem’s management and technology team.

Exhibit 20: Weekly use of major online ecosystems in China

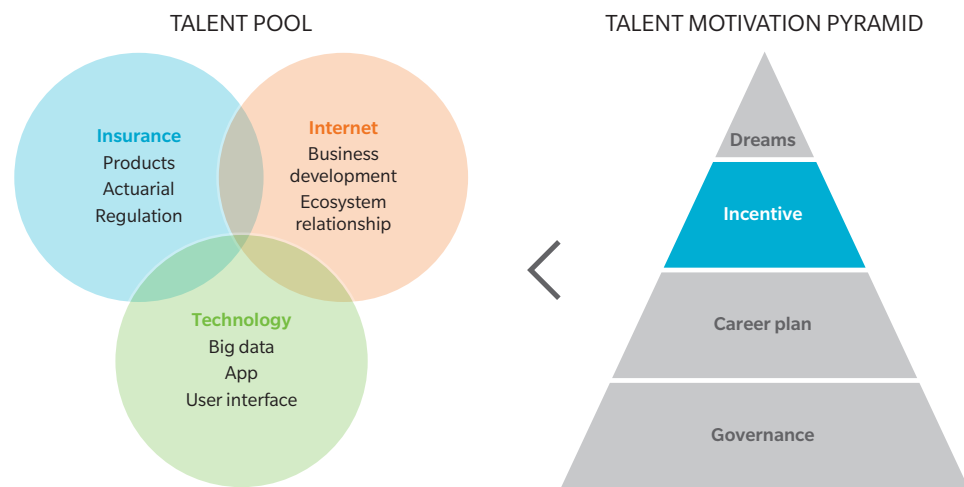


Source: Oliver Wyman analysis

#4 Success factor – Talent and incentive management: Talent wise, a strong team will consist of technical experts, insurance experts, actuarial experts, and strong business development teams to build relationships with online ecosystems. But in order to retain top talent, it is imperative to implement incentive schemes and give talent the opportunity to grow. We have observed several incentive programs in the industry that help align personal and departmental incentives with strategic corporate goals:

- Each business unit is treated as an individual profit center in order to better track performance and reward both individuals and groups.
- A stock purchase plan is offered to all employees to motivate performance and align their interests with those of shareholders.
- Innovation is a core component of the key performance indicators system, in order to reward and incentivize creative ideas.

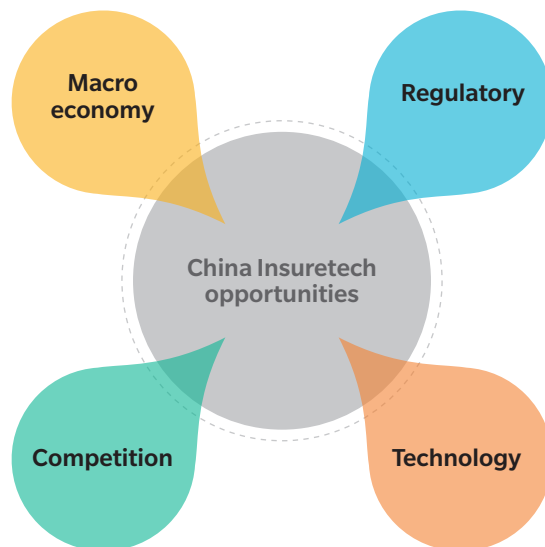
Exhibit 21: Key Insuretech talent needs and motivations



4. RISKS AND UNCERTAINTIES

Previous sections have discussed attractive opportunities in the Chinese Insuretech market that are driven by new technologies and growing ecosystems. However, while there is plenty of opportunity for a few simple products, such as travel insurance and shipping return insurance, many other products, such as auto insurance and universal life insurance, face inherent uncertainties. These are due to the following four factors, shown in Exhibit 22.

Exhibit 22: Key risks and uncertainties for Insuretech



Macro economy

If annual GDP growth were to drop to 5% or lower, there would be a significant impact on per capita disposable income. This could negatively affect purchasing habits for goods with non-rigid demand, such as automobiles, wearable devices and connected home devices. The GWP in these sectors would fall as a result. However, disposable income has a relatively smaller impact on the innovative insurance practices in rising online ecosystems: These online ecosystems are replacing offline retail consumption, and have strong growth momentum over the short and medium term.

 **Regulatory**

The regulator has been supportive of innovation in general. But we have also observed examples of conservatism from time to time. Here are some specific examples:

- The online distribution of products such as auto insurance, universal life insurance, and health insurance may be constrained by more regulatory requirements. For example, regulator may require stricter confirmation through call centers before online purchased auto insurance policy becomes effective, and regulator may put a limit on guaranteed return of universal life insurance distributed online. Recently, online universal life was stopped by regulator, which is considered as temporary measure to curb increasing risk.
- Technology adoption in insurance products – such as auto insurance and health insurance – may be discouraged if the de-tariff process slows down, for example, we have observed that the slow adoption of telematics is caused by the tariff set by the regulator even after the recent pricing reform of auto insurance.
- Ecosystem-based innovation may slow if the regulator strengthens approval requirements for new products covering unfamiliar new risks. For example, smog travel insurance, which is to compensate travelers during bad weather caused by smog, has been stopped by the regulator.

 **Technology**

Insuretech is highly dependent on the future development of technologies such as big data, cloud computing, block chain and artificial intelligence. (However, an assessment of these technologies is beyond the scope of this report.) Technological failures of particular platforms also constitute risks for individual companies, particularly in the ramp-up phase of a new enterprise.

 **Competition**

Currently, the field is dominated by traditional insurers and disruptors. To compete with disruptors, traditional insurers may set up joint ventures with tech companies, taking advantage of the large number of these in China, or set up subsidiaries to attack this market. Moreover, other players may emerge in the future. Auto, connected home and 3C (computer, communication and consumer electronics) manufacturers might set up insurance companies to insure their own products; peer-to-peer insurers might rise to cover online communities; and large ecosystems might self-insure.

APPENDIX A: EXAMPLES OF TECHNOLOGY ADOPTION AND ECOSYSTEMS

China has an online population of hundreds of millions. They shop, book travel plans, order food and chat online. The average weekly time spent online by Chinese who use the Internet is estimated at 26 hours. See Exhibit 23.

Exhibit 23: Digital penetration in China (Data as of 2016 H1)







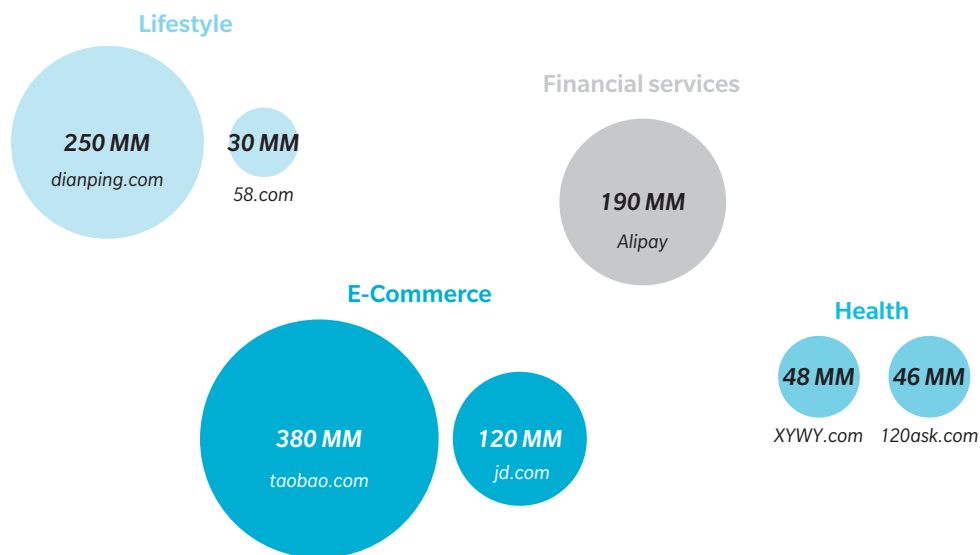
	Internet population	710 millions
	Mobile internet population	656 millions
	Online payment users	455 millions
	Online shopper	448 millions
	Online Travel booking	264 millions
	Weekly time spent online	26 hours

Exhibit 24: Monthly active users of major ecosystems



Source: Oliver Wyman analysis, company press release

Apart from these major ecosystems, there are hundreds of smaller ecosystems with active users in the tens of millions each month that encompass various areas of life. This points to the importance of ecosystems in China and how much Chinese people rely on them, indicating further opportunities to integrate financial services into those ecosystems.

The scale, speed of growth, and unique importance of online ecosystems in China have three particular implications for other industries, including financial services:

- They have established an enormous customer base with large amounts of data and information on customer behavior. Other industries could potentially leverage this. For example, Taobao has nearly 500 million registered customers and trillions of data points.
- They have the potential to trigger business flows in other industries. For example, online shopping has triggered payment and financing needs for the financial services sector. By the end of 2015, Ant Financial (the financial arm of Alibaba) had completed over 6 TN CNY in payments, over 30 BN CNY in financing, and over 1 TN CNY in managed investments, entirely through the multiple ecosystems in the Alibaba group.
- They can serve as testing beds for leading-edge technologies such as artificial intelligence, the Internet of Things, block chain, and big data analytics. For example, Alibaba is utilizing artificial intelligence, facial recognition technology, and big data analytics to gather credit information from multiple sources. This will help create complete pictures of consumers' credit profiles, which can be used in financial products.

APPENDIX B: KEY METHODOLOGY AND ASSUMPTIONS OF OUR FORECAST

SEGMENTS 1 & 2: ONLINE DISTRIBUTION & TECHNOLOGY ENABLED UPGRADE PRODUCTS

In order to forecast GWP for the first two segments, we selected key products that will be impacted by advances in digital distribution channels and technology. These include auto, health, property, accident, travel and life insurance products.

The methodology is based mainly on the following three types of data:

1. Historical GWP
2. Online penetration rate
3. Technology penetration rate

Historical GWP serves as a baseline to forecast the future growth rate of GWP. Additional factors considered on top of historical GWP include the GDP growth rate and the increasing awareness of and need for insurance products.

The future online penetration rate for each product is derived from current online penetration rates and benchmarks for developed markets. For instance, auto insurance has a current online penetration rate of about 10 percent, and the penetration rate forecast for 2020 is benchmarked against the current U.S. penetration rate of 25 percent and U.K. rate of 30 percent.

Similarly, future technology penetration rates for other products are derived from current technology penetration rates, projections of future penetration rates, and benchmarks from developed markets. In auto insurance for example, the current technology penetration rate is about 4 percent. This consists mainly of telematics penetration (about 2.5 percent) and some other technologies, such as block chain, artificial intelligence, and cloud computing, which optimize the process. Based on benchmarks across various developed markets, technological advancement will grow at about 20 percent per annum, and contribute to a penetration rate of about 10 percent in 2020 for auto insurance products.

Therefore, digital channel GWP can be computed as a function of annual forecast GWP and the online penetration rate. Technology enabled upgrade products can be computed as a function of annual forecast GWP and the tech penetration rate.

SEGMENT 3: ECOSYSTEM-ORIENTED INNOVATION

To project the GWP of innovative products, major ecosystems surrounding consumers' regular activities are considered, such as e-commerce, travel, financial services, health, sports, entertainment, lifestyle, and education.

The methodology is mainly based on the following types of data:

1. Ecosystem market size
2. Risk aversion

The market size of a future ecosystem is derived from the historical market size of the ecosystem, growth factors such as personal disposable income, and the historical market growth rate of the ecosystem.

The risk aversion factor is defined as the premium relative to the insured value that an average person is willing to pay to insure against risks in the ecosystem. The factor is a function of the following two items:

- a. Pricing
- b. Penetration rate

Pricing is defined as the amount of premium relative to the insured value that a customer is willing to pay for each transaction in a particular ecosystem. The penetration rate is defined as the proportion of people willing to insure against risks involved in the transaction. For instance, the pricing (230 CNY to insure 10,000 CNY) and penetration rate (about 5 percent) of travel tour cancellation insurance are adopted as proxies to determine pricing in the overall travel ecosystem, as well as the penetration rate. The main driver of risk aversion is the penetration rate – that is, more people willing to buy and more needs covered in the ecosystem.

Hence, the GWP for ecosystem-oriented innovation products can be computed from the ecosystem market size and the risk aversion factor.

APPENDIX C: SCREENSHOTS OF TAobao'S STATISTICS ON SHIPPING RETURN INSURANCE



ABOUT OLIVER WYMAN

Oliver Wyman is a global leader in management consulting. With offices in 50+ cities across 26 countries, Oliver Wyman combines deep industry knowledge with specialized expertise in strategy, operations, risk management, and organization transformation. The firm's 4,000 professionals help clients optimize their business, improve their operations and risk profile, and accelerate their organizational performance to seize the most attractive opportunities. Oliver Wyman is a wholly owned subsidiary of Marsh & McLennan Companies [NYSE: MMC]. For more information, visit www.oliverwyman.com. Follow Oliver Wyman on Twitter @OliverWyman.

ABOUT ZHONGAN

ZhongAn Insurance is the first truly online insurance company in China, co-founded by reputable companies such as Ant Financial, Tencent and Ping An Group on 6th November 2013. Till now, ZhongAn has developed 200+ insurance products serving more than 400 million customers. ZhongAn aims to reshape traditional insurance by applying internet thinking across the insurance value chain from product design to claims servicing with its core strengths in technology. For more information, visit www.zhongan.com.

Copyright © 2016 Oliver Wyman

All rights reserved. This report may not be reproduced or redistributed, in whole or in part, without the written permission of Oliver Wyman and Oliver Wyman accepts no liability whatsoever for the actions of third parties in this respect.

The information and opinions in this report were prepared by Oliver Wyman. This report is not investment advice and should not be relied on for such advice or as a substitute for consultation with professional accountants, tax, legal or financial advisors. Oliver Wyman has made every effort to use reliable, up-to-date and comprehensive information and analysis, but all information is provided without warranty of any kind, express or implied. Oliver Wyman disclaims any responsibility to update the information or conclusions in this report. Oliver Wyman accepts no liability for any loss arising from any action taken or refrained from as a result of information contained in this report or any reports or sources of information referred to herein, or for any consequential, special or similar damages even if advised of the possibility of such damages. The report is not an offer to buy or sell securities or a solicitation of an offer to buy or sell securities. This report may not be sold without the written consent of Oliver Wyman.