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mandiri
capital

DailySocial^{id} DSRResearch^{mi}

Insurtech Strategic Innovation

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Mandiri Capital Indonesia (MCI)

About Us

MCI is the Corporate Venture Capital arm of Bank Mandiri Group. We are committed to establish partnerships between local or ASEAN-based fintech startups and Bank Mandiri Group to drive open innovation.

Our Role

Act as a bridge of innovation between Mandiri Group and fintech startups to drive synergy propositions and initiatives

Source

Scout and identify potential technology partners with disruptive solutions and aligned to innovative trend paths

Synergize

Build strategic partnerships or collaboration between existing portfolio or new fintech startups partners and Bank Mandiri Group to accelerate innovation

Invest

Invest in promising tech companies with strong synergy value and aligned with interests of Bank Mandiri Group

Our Portfolio

as per April 2020



Our Key Initiatives

VENTURE FUND

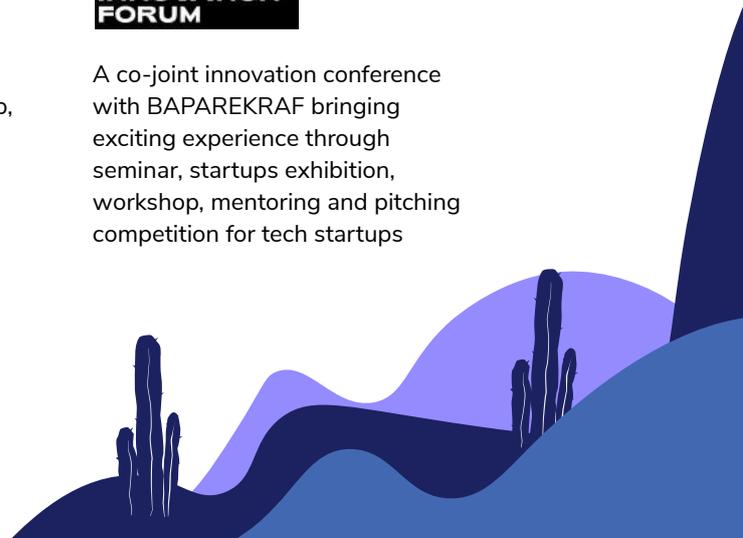
An initiative of building independently-run funds to expand MCI's investment spectrum by capturing investment opportunities across multiple investment stages and verticals

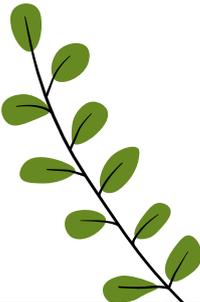
mandiri DIGITAL INCUBATOR

An incubator run by MCI providing seminar, workshop, and investor-matching for seed stage startups



A co-joint innovation conference with BAPAREKRAF bringing exciting experience through seminar, startups exhibition, workshop, mentoring and pitching competition for tech startups





"You can't solve a problem on the same level that it was created. You have to rise above it to the next level."

— **Albert Einstein**

Is your tech-driven startup have these criteria?



Synergy Element

Be ready to create wider opportunity with the excellence of your team and us, through value-creating collaboration



Innovative and Disruptive

Exploring the why deeper and bring meaningful change to people, because radical change are your lifeblood in defining the future.



Market-Centric

You know them. You always listen and build things for their needs. Your validated take-aways and experimentation are your engine for continuous customer-oriented innovation.

Are you ready to go **beyond?**



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We are open to collaborate with you!

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 Mandiri Capital Indonesia



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Contents

| | | | |
|-----------|--|-----------|--|
| 01 | Contents | 38 | Challenges in Insurtech Innovation |
| 02 | Forewords | 39 | Registration |
| 03 | An Introduction to Insurtech | 39 | UI/UX Design |
| 03 | Modernizing the value chain | 39 | Customized Product Development |
| 05 | Market | 39 | Unimpressive Pricing Offerings |
| 06 | Ecosystem | 40 | Lack System Integration |
| 08 | Global Insurance Landscape Overview | 40 | Less Fraud Prevention |
| 09 | Insurance beyond Technology Implementation | 40 | Long Claim Process |
| | Trends: Highlight & Impacts | 41 | Innovation Outlook |
| 09 | Global Insurtech Trends: Zoning from | 42 | New Discoveries & Strategic Innovation |
| 10 | The United States Trends | 42 | Chatbot and Registration |
| 13 | Europe Trends | 42 | Customized product development |
| 15 | China Trends | 42 | Product diversification |
| 18 | Southeast Asia Trends | 42 | Competitive Premi |
| 20 | Insurance Landscape in Indonesia | 43 | Wellness App |
| 21 | Indonesia Insurance Performance | 43 | Health Tech |
| 23 | Bancassurance | 44 | Back End Process, System integration, |
| 26 | Traditional Insurance with Adoption of Technology | 44 | Claim Process: Claim Automation & Fraud Prevention |
| | Insurtech Players | 45 | Case Study |
| 30 | Insurtech Platform | 45 | Bancassurance: Generali x OCB Vietnam |
| 31 | Aggregator | 46 | Healthtech Insurance: Oscar |
| 32 | Tech Enablement | 48 | P2P Insurance: Lemonade US |
| 33 | Insurtech Era: How Technology Drives the Innovation of Insurance Industry | 51 | Bibliography |
| 33 | Insights on Current State | | |
| 34 | Partnership between insurance player and healthtech | | |
| 36 | Collaboration between insurance player with unicorn startup | | |
| 38 | Partnership between insurtech player and another platform | | |



Forewords

Insurtech Strategic Innovation is the first edition of a white paper series that is prepared by DSRResearch and fully supported by Mandiri Capital Indonesia. DSRResearch conducted in-depth discussion with insurance and insurtech players as a part of the methodology.

Mandiri Capital Indonesia is a Corporate Venture Capital (CVC), fully owned by Mandiri Group, to explore potential sustainable innovation.

In this report, our aim is to provide knowledge and understanding to readers regarding the importance and impacts on collaboration between startups and corporates that focuses on insurtech.



An Introduction to Insurtech

The word "insurtech" (insurance technology) is often used to describe the use of new technology to boost efficiency at various points in the insurance value chain. It is also used as a synonym for startups that offer new products or provide traditional coverage with greater speed and efficiency than traditional operators can provide.

Many insurtech startups are funded by incumbent insurance companies, as well as venture capitalists. According to the World Insurance Report 2019, traditional or incumbent and new companies find that collaboration offers a mutually beneficial path. More than half of the insurance companies partnered with insurance companies for risk control and loss prevention services.

Insurtech emerged around 2010 as a branch of a similar effort in banking, known as "fintech". This is most consistently used to refer to the use of applications, usable

products, big data, machine learning, and other transformative technologies to automate and improve processes throughout the insurance value chain. It includes marketings, policies, guarantees, services, and claims.

Insurtech will promote the insurance industry to improve its service in terms of customer service and offerings. The challenge is attracting the attention of consumers. This means providing customized products, not one size for all.

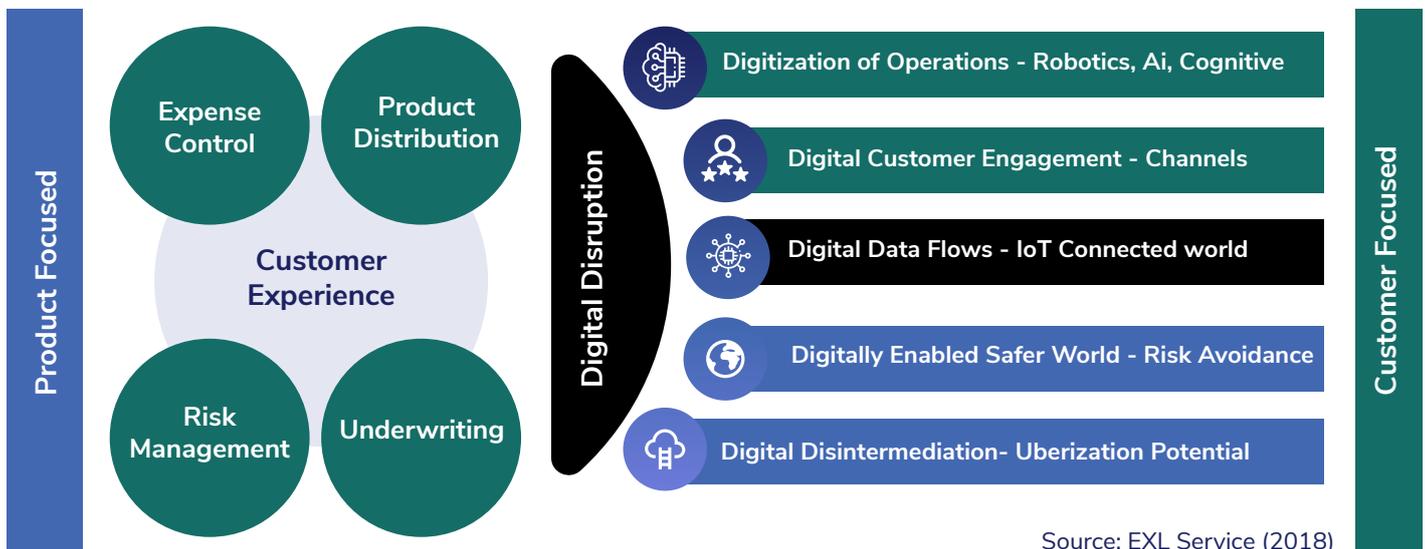
There is a polarization in insurance between incumbents' use of technology to adapt their existing service offerings to changing markets, and startups that divert purchases to buy markets. The general link is consumers, who will choose between established players and challengers, or use a mix in between.

Modernizing the value chain

Figure 1. Traditional approach vs. digital transformation

Pillars of Traditional Insurance Business

Level of Digital Disruption in Insurance



Source: EXL Service (2018)

Digital trends are dissolving the traditional boundaries and the long-held competitive advantages of insurance companies. Pillars of the insurance industry such as underwriting, risk management, expense control and product distribution are being disrupted.



Digitization of Operations

Automation has driven process efficiencies for many years. According to McKinsey, automation can reduce the cost of a claims journey by as much as 30% and large incumbents could make more than double profits over five years by digitizing existing business. Automation can apply to processes in the front such as registration and claim, as well as in the back, for bookkeeping and underwriting processes.



Digital Customer Engagement

Traditionally, the insurance industry has relied heavily on the role of agents. Most of them use non-digital contribution modes. The financial services industry such as banks has already supported the use of technology to reduce operational costs and most importantly to serve millennial budgets.

Most insurance companies wrestle with this problem and make investments to provide digital channels that help attract and retain customers. Digital as in on boarding process, claim, and measure risk.



Digital Data Flows

Advances in artificial intelligence and the Internet of Things (IoT) have launched new markets and new opportunities. Telematics, home sensors, drone surveys, and others can provide insurance companies with important data that can be utilized to help make better decisions in various fields including underwriting, pricing, and claim adjudication. Digital data flow helps insurance companies manage them as individuals with different customization. This also allows for extraordinary speed in decision making and provides more accurate and personal offers to customers.

With more devices connected and growing every day, more data and improved time-sharing IoT will create significant new opportunities in better product segmentation, more specialized risk sets and predictive modeling for better performance, increasing loss control and premiums.



Digitally Enabled Safer World

Over time digital technologies such as connected homes, sensors, and cars without a driver will reduce human error and provide a better response to hazards as a form of increased security. While the need for insurance will not disappear, it will affect the price and scale. However, this digital world will create a need for more innovative products and protection services. Risks arising from cybersecurity will trigger the need for risk protection from companies and individuals. Fundamental risk coverage will shift when the risk coverage requirements shift. Future insurers will play more roles in risk avoidance and less risk mitigation.



Digital Disintermediation

When disruption has taken place, the most likely thing to happen is a change in the overall business pattern. As already discussed by the predecessor bullies. The presence of Gojek in Indonesia has changed the entire transportation ecosystem. Spotify not only provides music streaming, but it also makes music consumption a collaborative activity.

In the world of insurance, aggregators, algorithms and customer engagement models are the key to bullies. Digital technology has the ability to do all three. There is an insurance company, while initially, it will launch these three functions. In the future, the more advanced technology and mindset that is used will bring big changes to insurance companies.

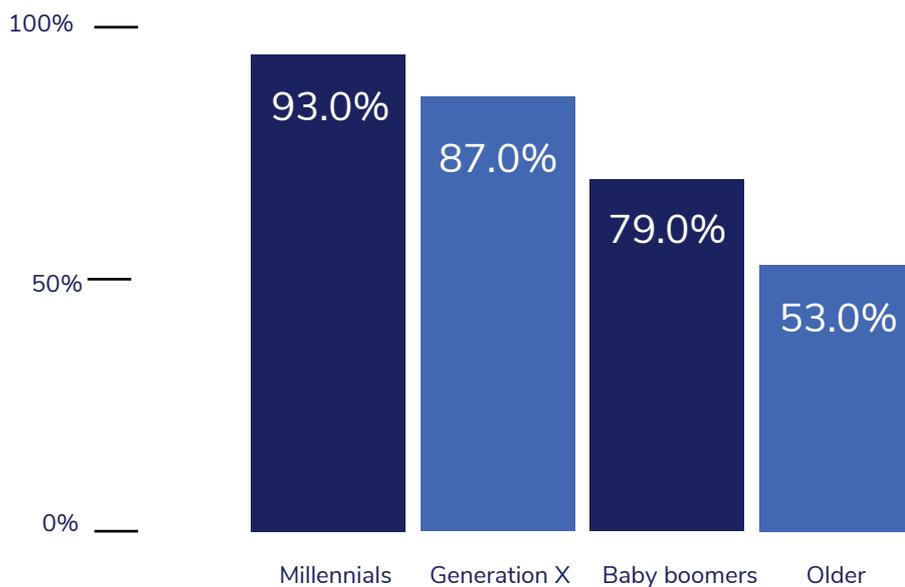
Market

Digitalization has contributed to the current condition of the insurance market. Online channels which most of the time improves the customer experience. Its presence completely disrupts and provides adverse side effects for insurance companies. Customer interaction has shifted to the digital realm. Market transparency is increasing, giving consumers access to information about almost all insurance providers. Price competition is very intensive and encourages the focus of insurance companies to offer the lowest premiums and lead to decreased customer loyalty.

The Insurtech market is expected to reach \$1019.1 million in 2023, growing at a CAGR of 13.8% over the forecast period. The market witnessed significant growth because of the increasing need for implementation of automation, better communication between clients and agents, and better personalization offers.

Figure 2. Willingness to share recent driving data for personalized insurance quotes in the United States in 2017

Share of respondents likely to share data, by generation



Source: Willis Towers Watson (2017)

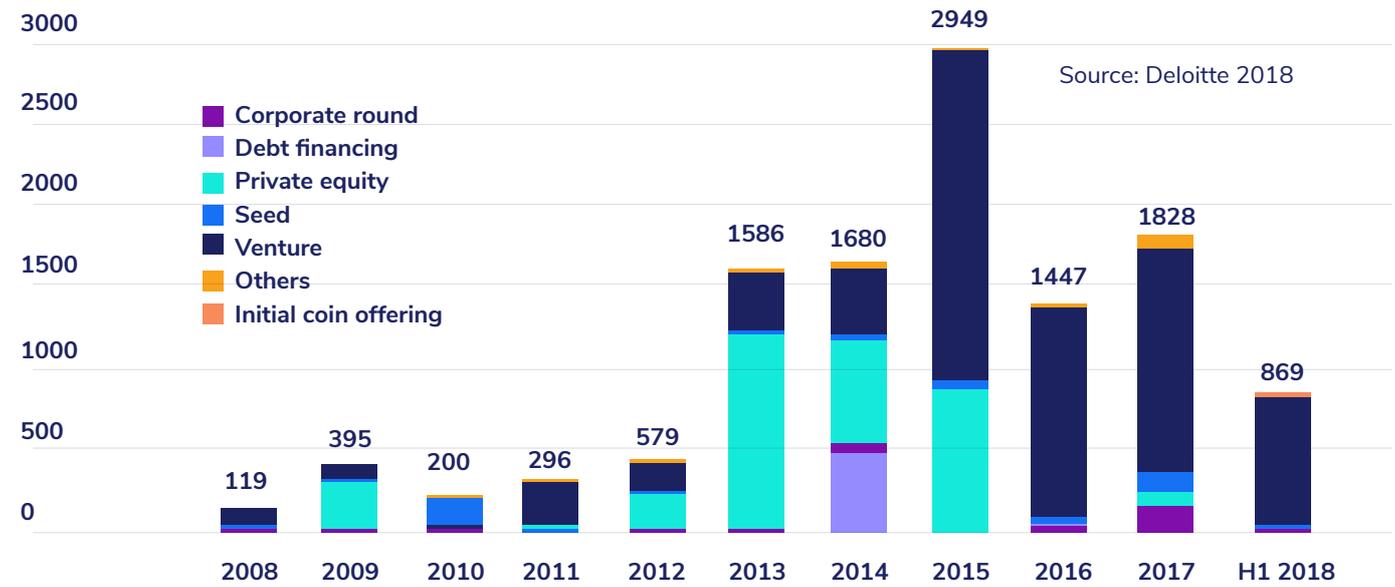
The data above shows that millennials are the generation most likely to share data. Through the data they share, they will get a reward in the form of a lower premium rate. In a survey conducted by Statista in 2017, some millennials will share driving data for a private insurance offer in the survey. The health insurance industry is another field that has utilized insurtech. Still from the same survey, 72% of respondents said they had shared data with their health insurers or would consider it in return for benefits.

Ecosystem

The insurtech sector is made up of full-stack insurers, agents, and brokers. While some of the platforms profiled fit into those categories, others insurtech firms are better described as technology solution providers. The insurtech ecosystem is much more focused on collaboration compared to outright competition with incumbent stakeholders operating along the insurance value chain.

In another example, McKinsey & Company report finds that 61% of all insurtech platforms today offer their services to insurers, 30% are focused on disintermediating the customer, and only 9% of insurtech platforms are aiming to replace incumbents.

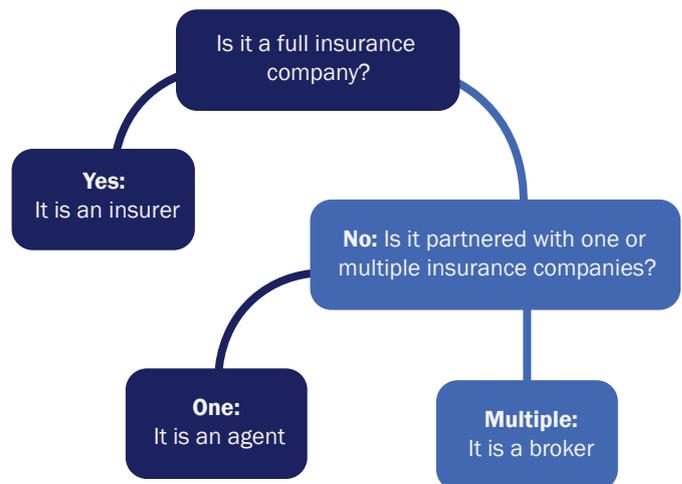
Figure 3. VC Firms dominate insurtech investing, led by incumbents
Insurtech funding by investor type in \$M



There are a variety of actors involved in the insurtech space, but incumbents are increasingly becoming the driving force behind insurtech's growth and development. Investment from incumbent players in the insurance sector continues to make waves.

As reported by Willis Towers Watson, investments by reinsurers are largely concentrated in platforms that enhance product delivery, underwriting, claims management, and other processes and activities. Added by Milken Institute, Insurtech Rising Executive Summary analysis less than 10% of insurtech investments to date have flowed into startups targeting full-scale value chain disruption.

Figure 4. Segmenting the platforms



Source: Milken Institute (2018)

Around 1,500 insurtech startups operate worldwide. More than \$9 billion in capital was revealed to have been committed to over 700 insurtech investments from 2014 to 2017. This new Insurtech comes in at least 3 forms, a number of full-stack insurers, agents, and brokers that offer services in one or more product categories.

In terms of digital process full-stack insurers means fully licensed insurance company, regulated by supervisory authority (e.g. FCA in the United Kingdom, BaFin in Germany, state-based regulators in the United States). Meanwhile, brokers will be stated as MGA or Managing General Agent. MGA usually face the customer and assumes most activities of a traditional insurer. However, partners with a third party risk carrier who becomes the contractual counterpart named in the insurance policy and is ultimately liable for the customers' insurance claims.

Figure 5. The Insurtech Business Models Categories

The insurtech business models can be classified into six categories:



Marketplace/Aggregator

Distribution model with multiple insurance companies and/or products



Insurance Management

Primary focus is on contract and policy management; ranges from mobile-first "digital folders" to enterprise healthcare plans management



Direct Insurer/Tied Agent

Distribution model with a single (or at most a few limited) insurance company (companies)



Peer-2-Peer/Cashback

Distribution model focusing on products that reimburse (partial) insurance premiums or where claims and damages are shared among a closed buyer group



Sales Tools/Software

Insurance tech companies offering tools and software to insurance-related third parties, e.g. insurance companies and brokers



Crowdsurance

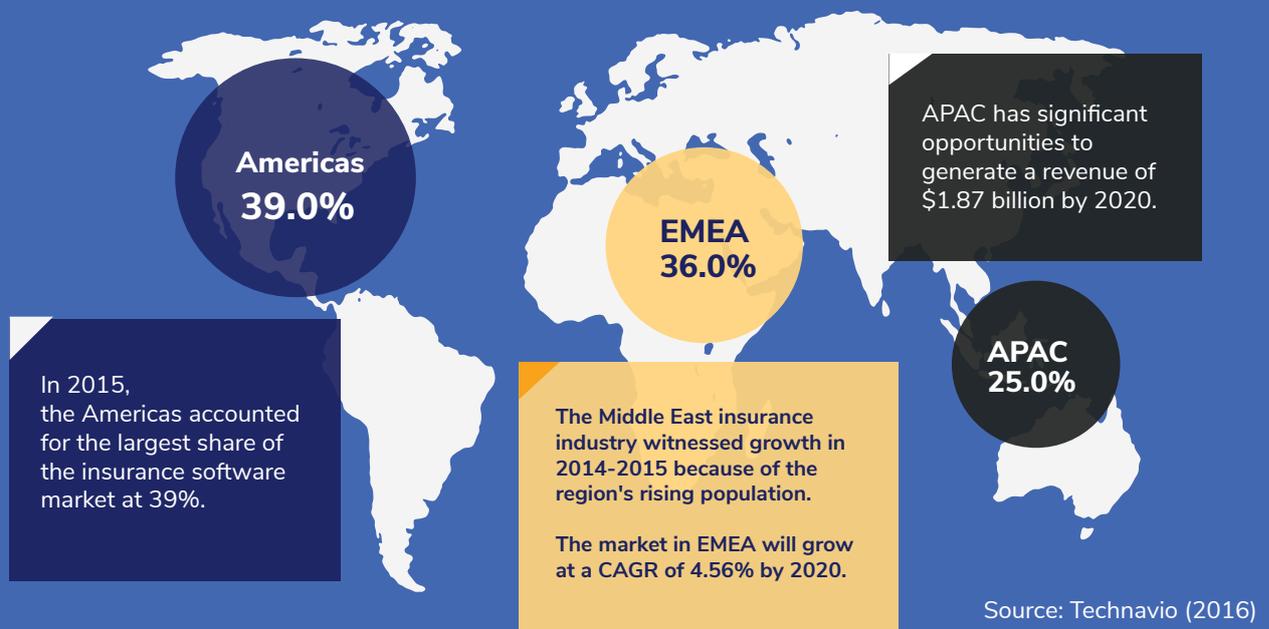
Customers only pay for the true cost of cover. At the end of each month, the cost of any claims is split fairly between customers, with the individual's maximum premium capped at the "market rate". If there is no claim, the premium that month is zero.

Global Insurance Landscape Overview

The insurance industry remains resilient, continuing to generate growth around the world and maintaining overall profitability despite turbulence in the global economy. New competitors may be high-value collaborators in the development of industry ecosystems. Similarly, new technologies that threaten to disrupt the industry will be key enablers of future growth once they are embedded in insurance business models.

New technologies are causing a seismic shift in the insurance industry as AI (artificial intelligence), insurance software, and its related technologies are embedded into the business. Data from Technavio (Figure 6) displays the marketshare of global insurance software in 2015, which highlights the opportunity for insurance software company in APAC to generate \$1.87 billion of revenue in 2020.

Figure 6. Global Insurance Software Market by Geography 2015 (% Share)



In 2018, the Chinese market liability premium was RMB59.1 billion (equal to \$83,8 billion), an increase of 30.9% from 2017, thus it makes China and APAC as the second-largest insurance market in the world, just behind the United States insurtech, as reported by KPMG.

Mature markets in North America and Western Europe required “heavy lifting” to address these trends. With life eroding and P&C flattening, the mature markets have exhibited slower growth rates than insurance in emerging markets. The big growth stories were confined mostly to China and India, which are becoming the world’s fastest-growing country markets for insurance overall. Furthermore, China has rapidly on track to become the largest by 2030.

By knowing those facts, it is expected that growth's center of gravity to continue to shift to Asia and other emerging markets, reflecting not only the growth of the consumer middle class in these economies but also a slowdown in P&C growth in mature markets due to unprecedented advances in technology, for example, risk prevention in factories, homes, and offices and sensors for safer motor vehicles.

The global industry grew by more than 4% in 2017, the same level as its compound annual growth rate from 2010 to 2016, and total premiums reached \$5.2 trillion.

While 2018 and 2019 are shaping up to be banner years for insurers, some concerns are being raised about an economic slowdown, if not a full-fledged recession, as early as 2020. Many are worried about the potential for ongoing disputes between the United States and China as well as other nations over tariffs and trade rules. Meanwhile, some expect the economic stimulus from federal tax cuts and additional government spending to peter out by 2020, while rising interest rates could perhaps discourage consumer borrowing, housing construction, and business expansion.

In fact, Vanguard recently warned that the chances for a recession by late 2020 are between 30% - 40%. It would therefore be prudent for insurers to maintain their growth momentum by continuing to focus on improving operational efficiency, boosting productivity, and lowering costs with new technology and talent transformations, while customizing products and services to meet the evolving demands of the emerging digital economy.

While most insurance companies are constantly seeking for cost efficiencies (through automated robotic processes, for example) and cost variability (such as through outsourcing/offshoring from non-core talent, or moving data and software to the cloud) most also continue to invest in proactive. More insurers are looking to bolster core systems, add capabilities, and enhance customer experience through artificial intelligence (AI), digitalization, new sales platforms, alternative product development, and other innovations. Many are beginning to pivot from investments to support business as usual to financing innovations facilitating more fundamental business model changes.

2019 Insurance beyond Technology Implementation Trends: Highlight & Impacts

Global Insurtech Trends: Zoning from insurtech market share

The United States is still the dominant zoning of insurtech distribution, but the growth trends of insurtech are spread evenly throughout the world. China contributed significantly to the growth of insurtech in Asia. All insurance market zones in the world have their insurtech player names that disrupt the insurance industry. The closely used technology has changed this industry greatly. The following is a discussion of the insurtech landscape and players actively involved from various insurance zones throughout the world.

Figure 7. Zoning of insurtech



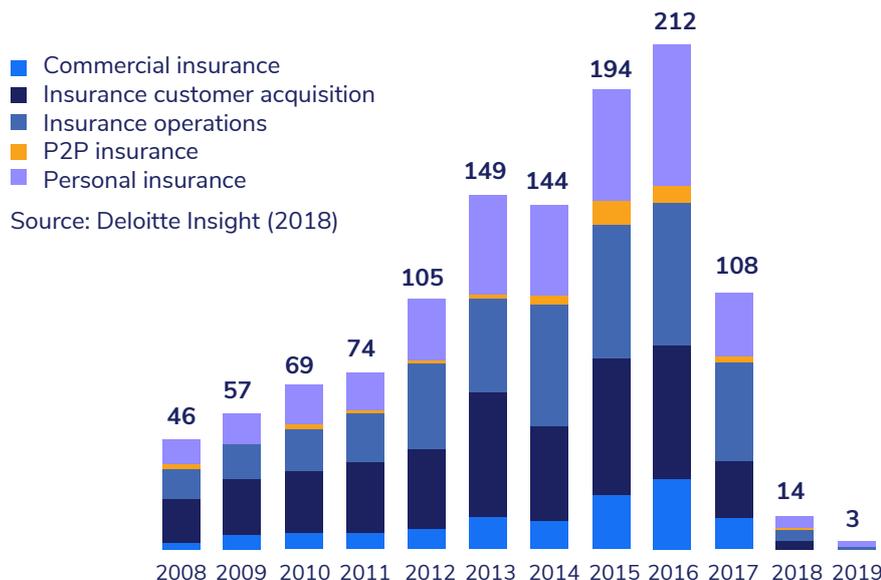
A. The United States Trends

The property and casualty sector remain the biggest insurance sector in the United States. Since 2018, the P&C market’s net income has been soaring. Currently, it’s sitting at \$58 billion, up from \$39 billion in 2017. A 10.5% boost in net premiums was a contributing factor to the market growth alongside the \$3 billion underwriting gain.

Still In 2018, Prudential Life was hailed as the top insurance company in the United States. On a global scale, the company has over \$1 trillion of assets under management as of September 2019. Berkshire Hathaway, who secured the second spot with \$708 billion of assets, may take the lead in the future. For the second year in a row, launches of new insurtechs have come to a virtual halt, with only a handful entering the market after hitting a high of 212 in 2016.

Figure 8. Insurtech startups reach saturation point after decade of experimentation

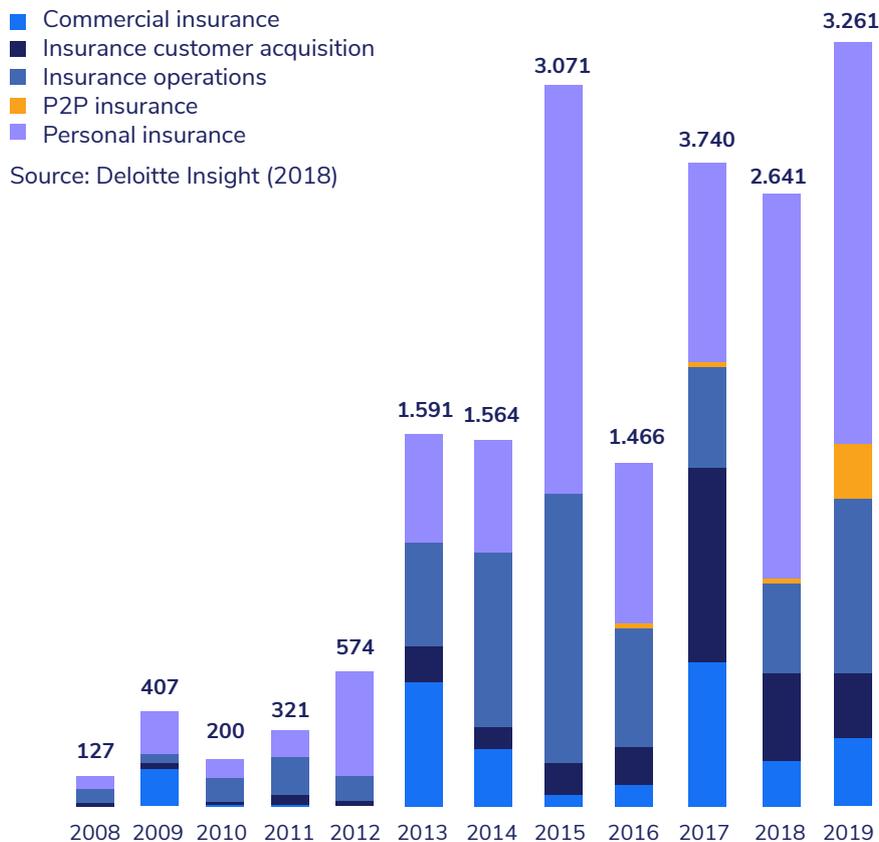
Number of Insurtechs by category, by year companies were founded



However, global investment in Insurtechs continued to surge through the first three quarters of 2019, setting a record of \$3.26 billion with a full quarter still to go.

Figure 9. Financing for insurtech hit highest level in 2019

Insurtech funding by category/investment year (\$M)



Source: Deloitte Insight (2018)

Funding for new technology and innovation in the insurance sector are impacted by the wider venture capital (VC) possibilities in the market. In the United States, insurtechs have benefited from a rich and competitive marketplace for VC funding, and many insurance start-ups have successfully completed a number of funding rounds. On the other hand, some markets do not have a strong VC culture, therefore the approach to raising capital would be different, with public sources becoming more important.

While the breakdown of the investment in the insurance sector is not available, investment in health insurance is considered to be strong and growing, taking up 70% of insurtech investments in the United States. At the same time, investment in startups providing commercial distribution avenues has increased many folds, indicating the strong interest and the number of startups hoping to improve the customer experience.

The insurtech startup landscape in the United States has evolved considerably over the last five years. The landscape of insurance focused startups has broadened significantly to include technologies and digital challengers across auto, home, small commercial, title, life, and more.

Figure 10. Insurance major players in the United States

- 1 Prudential Financial
- 2 Berkshire Hathaway
- 3 Metlife
- 4 American International Group (AIG)
- 5 TIAA Group

Source: Statista

Insurtech Innovation in US

gusto

Gusto, formerly known as ZenPayroll, serves more than 100,000 businesses nationwide. The company provides cloud-based payroll and employee benefits, such as health insurance and automation, ease-of-use, and expert support. It uses its payroll data that algorithms measure to create insurance plans suited for businesses and employees.

oscar

Oscar uses technology, data, and design to offer health insurance products to individuals, families, and small businesses. The company aims to redesign health insurance by taking a customer centric approach. It uses data to build proactive models to optimize the patient-doctor relationship and provide suitable health plans.

brightSM HEALTH

Bright Health is a diversified consumer focused health insurtech startup that provides a broad range of benefits and services to consumers and care providers in local markets throughout the United States. Its individual, family, and Medicare advantage plans are available in 22 markets across 12 states.

outsystems

Outsystems offers a software platform for enterprises that enables them to develop their entire application visually, integrate it with an existing system, and add their custom code whenever required. The company also offers a tool to monitor the performance of apps once they are in production.

hippo

Hippo is a home insurance provider that uses modern technology to provide a simpler process, smarter coverage, and a new approach to caring for people's homes. The company also provides customers with smart home devices and works with them to identify and solve small issues in their homes before they become big claims.

Clover

Clover Health is a data-driven health insurance startup striving to improve the overall state of healthcare in the United States. The company uses patient-centered analytics and has a care management team to identify potential risks a member may face and directly provide preventive care. Its data team helps healthcare professionals in the field intervene directly into patients' wellness to help them avoid acute health episodes.

Root Insurance Co

Root Insurance offers liability coverage for bodily injury and property damage; non-liability coverages for collisions as well as comprehensive coverages & medical payments; personal injury protection; uninsured/underinsured motorist bodily injuries; uninsured motorist property damages; rentals; and roadside assistance.

American Well[®]

American Well is a telehealth platform that connects and enables providers, insurers, patients, and innovators to deliver greater access to affordable, high-quality care. With its belief that digital care delivery will transform healthcare, the insurtech company offers a single, comprehensive platform to support all telehealth needs from urgent to acute and post-acute care, as well as chronic care management and healthy living.

NEXT INSURANCE

Next Insurance is an online insurance platform that helps SMEs and entrepreneurs secure and grow their businesses. The insurtech startup offers services across industries such as beauty, cleaning, construction, entertainment, fitness, etc. Its coverage areas include business insurance, general liability insurance, professional liability insurance, errors and omissions insurance, commercial auto insurance, and workers' compensation insurance.

Lemonade

Lemonade offers insurance to homeowners and renters powered by artificial intelligence and behavioral economics. As a Certified B-Corp, where underwriting profits go to non-profits, the company is remaking insurance as a social good.

Case Study



Metromile is a pay-per-mile car insurance company that charges customers based on the miles they drive. The company believes in the power of data science and machine learning to make car insurance better and less complicated. It has created features such as street sweeping alerts, monthly mileage summaries, and fuel trackers.

Figure 11. Metromile business process

Source : The Digital Insurer (2018)



To enable continuous customer engagement, Metromile use tech in the form of the Metromile Pulse (a device that plugs into the car’s on board diagnostic port) and a smart driving app on the customer’s mobile. They recently announced Series C and D investment rounds that took the total money raised to \$205 million. It is an impressive sum that puts them in the insurtech fund raising upper quartile.

B. Europe Trends

The three largest insurance markets in Europe, the United Kingdom, Germany and France, saw marginal growth in gross written premiums (GWP) across life and non-life segments in local currency terms during the last five years.

In 2018, insurance penetration (gross written premiums as a percentage of GDP) increased by 0.21 of a percentage point to 7.46% and ranged from 0.5% in Liechtenstein to 14.3% in the United Kingdom.

As per the estimates from McKinsey, more than 50% of the sales of online insurance were accounted for by aggregators in Europe, in 2018, such as price comparison websites and insurance company websites have a greater influence on the non-life insurance buyers. Price-comparison websites make it easier for customers to choose commoditized insurance products based exclusively on price.

In terms of market share, the major traditional players are currently partnering with technological companies to gain competitive advantage in the market studied. However, they face stiff competition from mid-size and smaller insurtech companies, which focus on disrupting the market studied by offering tailored solutions.

According to a 2019 report from KPMG, the United Kingdom insurtech market saw over \$1 billion in investments through 2018, which bucked an otherwise downward trend in insurtech investment globally.

Figure 12. Insurance major player in Europe

- 1 **Allianz SE**
- 2 **Assicurazioni Generali SpA**
- 3 **AXA SA**
- 4 **Munich RE**
- 5 **Swiss Re AG**

Source: Mordor Intelligence

Insurtech Innovation in Europe



Single app solution, providing insurance for everything from gadgets and cars to jewelry and furniture. Users can cover multiple items under one provider rather than numerous vendors.

By Miles.

Fair and flexible car insurance for low mileage drivers. Aside from a fixed annual cost to cover your car when it's parked, each policy is paid by the mile.



One-stop app to secure and manage home insurance, providing a seamless process that takes less than four minutes to complete with minimum work on the user's side.



dacadoo
It's all about you.

It developed and runs a fun, easy-to-use and safe way to manage the personal health and well-being of a user, called the dacadoo Health Score platform.



An end-to-end solution for insurers and their customers, automating and personalizing insurance services through integrated chatbots.



It developed the next generation of P2P insurance based on social proof endorsements, fully harnessing the power of blockchain innovation.



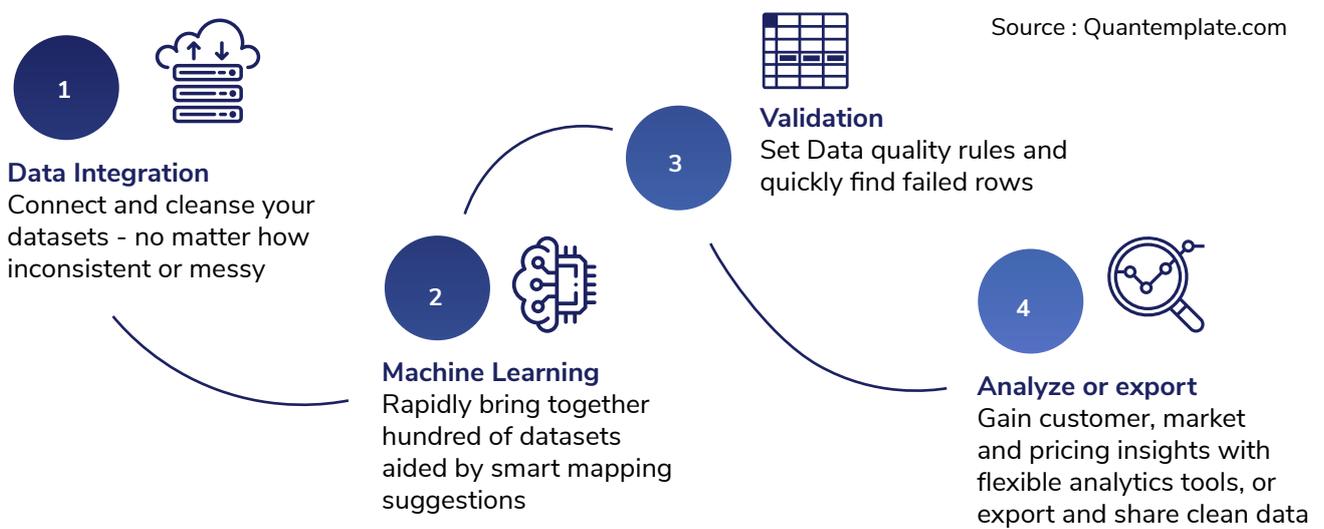
Eliminates the need for expensive security deposits by providing insurance against property damage and late rent payments. Canopy recently won the B2B Insurance Startup of the Year award at the 2018 Insurance Times Tech & Innovation Awards.

Case Study

Quantemplate

Quantemplate, a startup providing self-service, cloud-based automated data solutions for insurers and reinsurers. Quantemplate was founded in 2013 by Adrian Rands and Marek Nelken, and it chiefly develops integration and analysis tools that tap machine learning to derive insights from large data sets. The tools connect, filter, union, clean, and bring together hundreds of corporations using a combination of machine learning-informed smart mapping suggestions and on-the-fly calculations.

Figure 13. Quantemplate Business Process



C. China Trends

In 2018, the Chinese market liability premium were RMB59.1 billion (equal to \$83,8 billion), an increase of 30.9% from 2017, thus it makes China as the second-largest insurance market in the world, just behind the United States. Insurtech, has steadily matured and has become a key driver of growth in the industry.

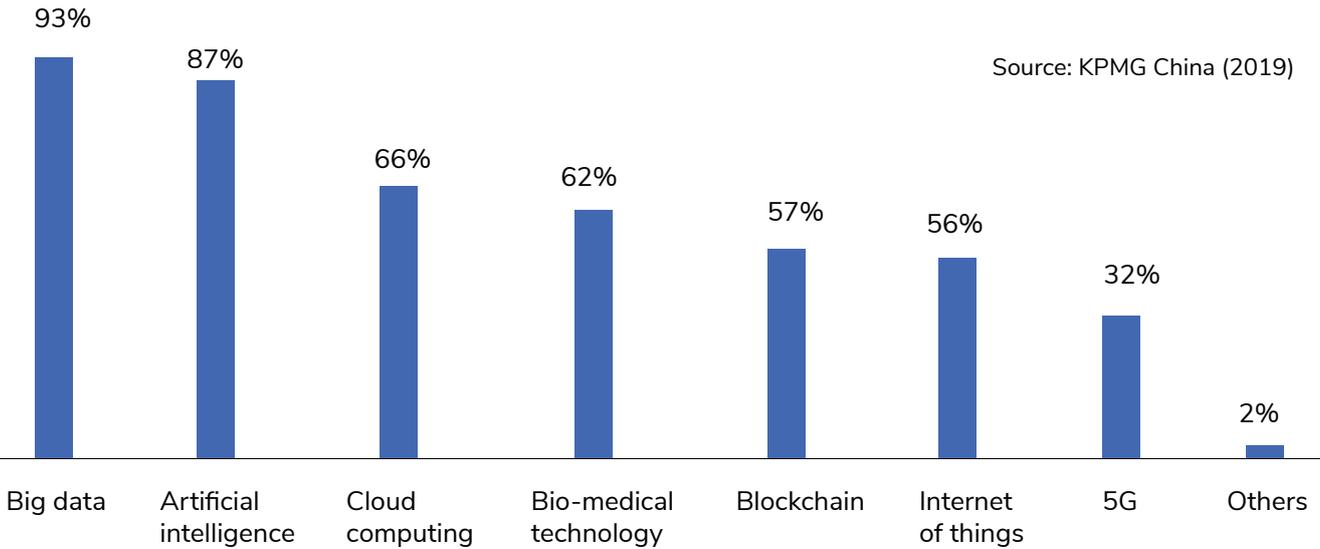
China is the market to watch for digital insurers, demonstrating action in technology at a massive scale. They have built highly automated insurance platforms and have taken a non-traditional approach to fundamental insurance processes such as underwriting, pricing and claims handling.

Issues and opportunity

Only 8% of China's 1.4 billion people have life insurance at all. With over 725 million mobile users, an organized regulatory system supporting innovators, and the development of new services by tech giants like Alibaba, Baidu, and Tencent, the Chinese market is primed for insurtech. Therefore investors and entrepreneurs are taking full advantage of it.

Unlike in Western markets, China's largest companies, both in tech and insurance, are working together to digitize the industry. Therefore, collaborative efforts between the tech giants and the insurance/finance heavyweights lead to digital innovation.

Figure 14. Insurance technologies that will have the biggest impact on the future development of the insurance industry



Source: KPMG China (2019)

Insurtech landscape

Big Chinese insurers such as Ping An Insurance, Taikang Insurance Group, and Sunshine Insurance Group do partner with small innovative companies, but they also aggressively take the lead and drive innovation internally.

There are three fundamental strategies:

Enablement

Enhance the capabilities of its workforce and the efficiency of its operations by deploying such technologies as big data, the cloud, and artificial intelligence (AI) to improve product development, claims management, and customer service.

Integration

Insurer extends the technology benefits of its own value chain to other industries to create ecosystems.

Commercialization

Chinese insurers are pursuing a third, and even more sophisticated insurtech strategy: selling technology products to other industries.

Figure 15. Insurance major players in China

- 1 ZhongAn
- 2 China Pacific Insurance Company
- 3 Ping An Insurance
- 4 PICC
- 5 Taikang Life Insurance

Source: Mordor Intelligence

Figure 16. Key success factors for insurtech in China

1 Technical Capabilities

| | | |
|------------------------|----------------------|--|
| Universal connectivity | Customer analytics | Dynamic pricing |
| Risk management | Automated processing | Big data/AI/ Cloud computing/ Machine learning/IoT |

2 Internet startup-like operating model

3 Access to partnerships and ecosystems

4 Talent and incentive management

Source: Oliver Wyman (2016)

Case Study

ZhongAn

- ZhongAn Online P&C Insurance Co. Ltd. is a Chinese online-only insurance company. Founded in 2013, it was born out of a **collaboration between Ant Financial, Ping An, and Tencent**.
- Its investment raised up to **\$900 million** (2018)
- Boasts more than **400 million customers** with **over 10 billion policies sold** until January 2019.
- In 2016, ZhongAn partnered with Ethereum to establish ZhongAn Technology, an incubator to research **artificial intelligence, blockchain and cloud computing**.
- They analyze **behavioral data from more than 300 partnerships** to identify moments in which the customer can use an insurance product. These digital ecosystems create channels through which the carrier can sell its insurance products.
- ZhongAn has specific and detailed products, with radically unusual policies targeted at younger consumers. For example:

“ZhongAn pays out for delayed flights while customers are still in the airport, sending them electronic vouchers so they can occupy their time by shopping.”

Figure 17. ZhongAn insurance products



Source : Oxbow Partners (2017)

D. Southeast Asia Trends

Background

In the major developing markets of Southeast Asia, urbanization and population increases are driving strong demand for insurance. Singapore, supported by high insurance literacy which has reached 90%, is one of the suitable example for the development of insurtech industry.

Singapore's Policy Pal became the first graduate of the Monetary Authority of Singapore's regulatory sand-box in September 2017. Policy Pal now partners with traditional insurers to offer customers a one-stop hub for them to track all their insurance policies online. They have recorded 9,000 sign-ups as of March 2017.

Malaysia is quite high-regulated, finance including insurance is highly controlled by the government. One form of control is seen in insurance obligations for all vehicles in Malaysia. Meanwhile, in October 2017, Malaysia added Jirnexu as a technology provider to its regulatory sandbox, therefore it could build an insurance e-commerce site that sells insurance from several providers at once.

Thailand's more prominent insurtech startups so far have focused on car insurance, with the insurtech claim startup simplifying the long claims procedure and AgentMate by Appman Co. provides mobile insurance tools for insurance agents to access claims from anywhere.

Issue

Meanwhile, market penetration for insurance is still very low in other countries above. Only 2.1% of Indonesians have life insurance in 2016, according to the 2016 Asia Insurance Market Report, and only 11% have a bank account.

In the Philippines, insurance penetration is only 2% of the population according to the same report. Despite having several leading insurance companies covering health, motorbike and employee insurance, there is still plenty of room for insurance companies to overcome the lack of insurance education and affordability among the population there.

On the other hand, insurtech has a presence that is not even too prominent in Cambodia, Lao, Vietnam, and Myanmar according to George Kesselman, founder of Insurtech Asia, an initiative that focuses on building a regional insurtech ecosystem.

In the Southeast Asian region, this low level of insurance penetration is due to various factors, including low levels of financial education, lack of access to financial services, and fewer affordable insurance packages.

Insurtech is expected to change this landscape by utilizing cellular solutions and big data to provide a more informative and consumer friendly platform and long-term specific risk assessments.

Figure 18. Insurance major player in Southeast Asia



Source: marketing-interactive

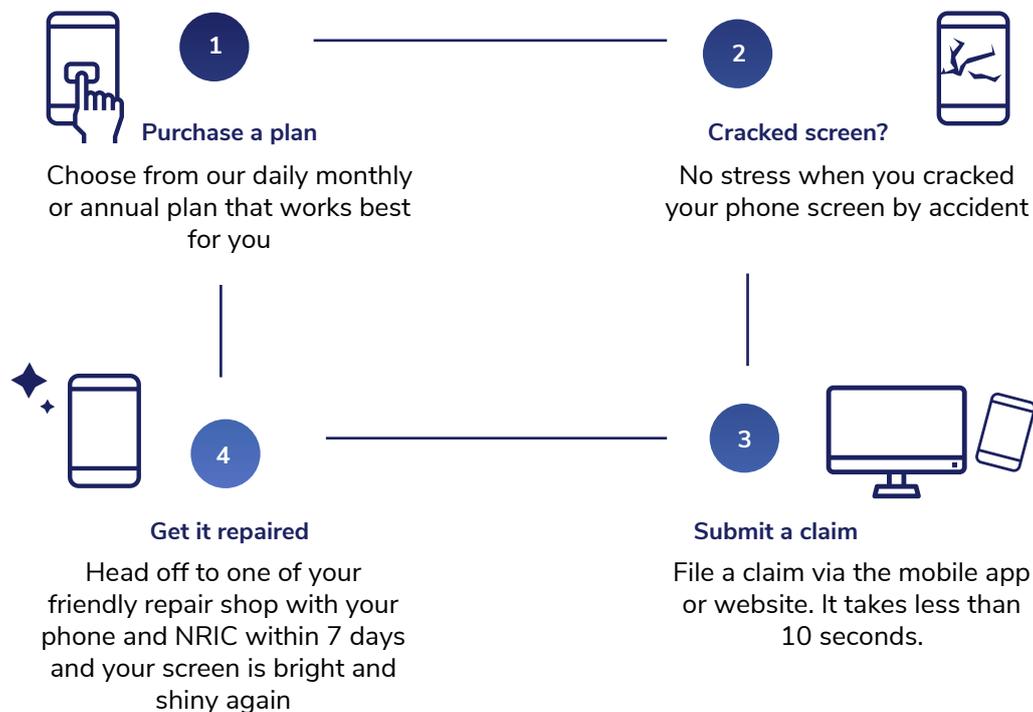
Case Study

Axinan is a full-stack insurance company based in Singapore that provides smart digital insurance for the internet economy. Leveraging big data, considering real-time, and automated claim management, this makes insurance solutions seamless, lightweight, and easy to integrate that provides millions of customers of the leading online platform in Southeast Asia.

Founded in 2016, Axinan first began developing an e-commerce logistics insurance solution, built on a real-time financial engine that uses data to generate dynamic and specific transaction premiums, with a second-digit experience of claims being digitized.

Axinan has since offered a solution through partnerships with Australian shipping aggregators, China Tmall, the Indonesian markets of Bhinneka and Bukalapak, and regional markets such as Lazada and Shopee. Solutions that are easily available to everyday consumers, selected solutions can also be purchased in the Axinan mobile application under its consumer brand, Igloo, an “on-demand lifestyle insurance app” to protect phone screens starting at \$0.20/day. Coverage is underwritten by FWD Singapore.

Figure 19. Igloo insurance claim process



Source: Coverager (2019)

Now after moving to the Philippines, the company has developed rapidly in Indonesia and operates in Malaysia, Hong Kong and Australia with plans to grow to Thailand and Vietnam. Axinan also has technology centers in China and Taiwan.

Series A-funded companies have been invested by leading VC companies such as Linear Ventures and Open Space Ventures. Axinan has also obtained a general insurance and reinsurance license combined with the Labuan Financial Services Authority.

Insurance Landscape in Indonesia

According to various sources, including from OJK, insurance penetration in Indonesia is very low, less than 3% of the total population. With the literacy index still at 15.76% per the year 2016. This low level of insurance penetration is due to various factors, including low levels of financial education, lack of access to financial services, and fewer affordable insurance packages.

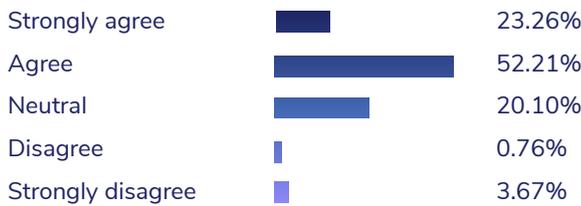
While, in general, insurance penetration is still low, customer's participation in BPJS Kesehatan scheme drives higher familiarity of insurance products, especially health insurance (86% of 1296 respondents who claim to use

the insurance product) according to Dailysocial Insurtech Survey 2019 .

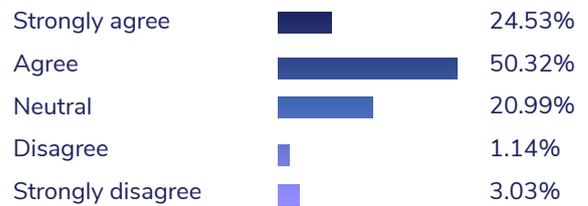
But, the opportunity for growth of the insurance sector is still high. With an average of 5% + annual economic growth, a large population, and an increasing number of middle classes, innovation is the key. This young population is adaptive to technology. With the high penetration of mobile phones, technology will play a big role in helping higher insurance penetration, commonly known as insurtech (insurance technology).

Figure 20. User preferences on insurtech

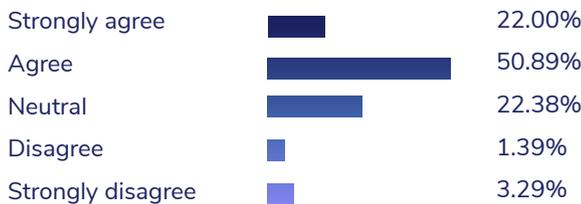
Insurtech makes the registration process and insurance claims easier.



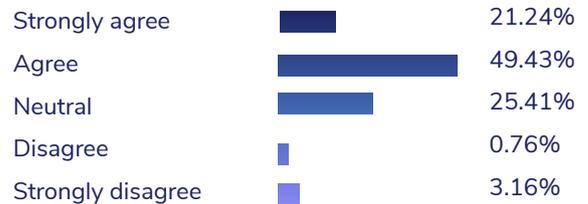
Insurtech features are easy to use



The insurtech that I use has responsive services



The insurtech that I use has a full featured variant and meets my needs.



I recommend insurtech to my colleagues



Source: Dailysocial Insurtech Survey (2019)

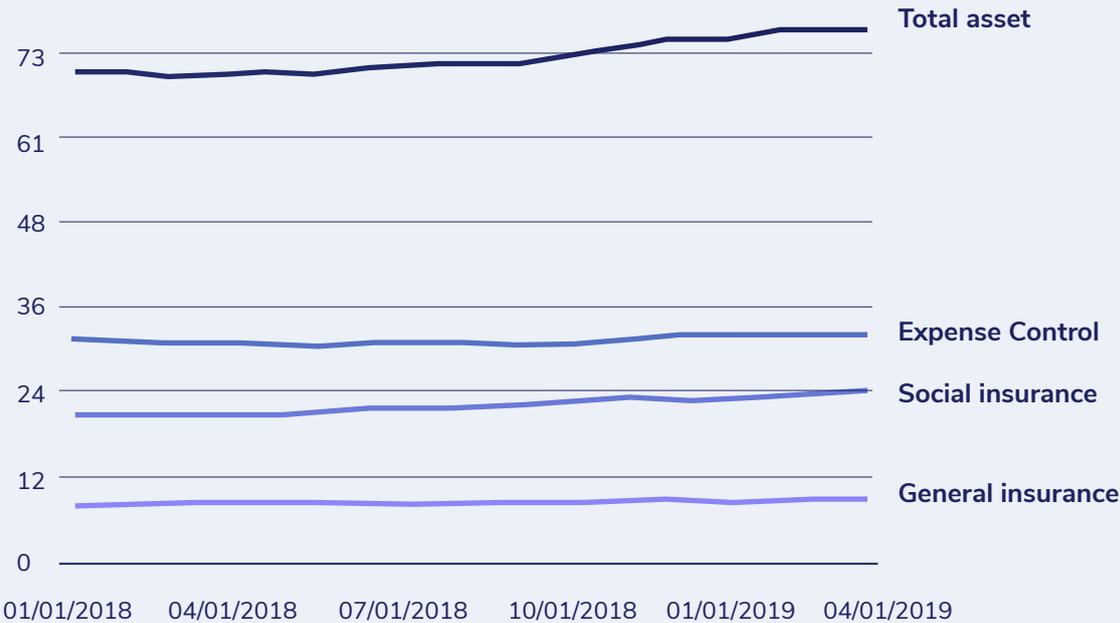
Still from the same report consumers who have used insurtech services showed satisfaction with the products and services that they are using. In the future, technology optimization, whether adopted by traditional insurance or already done by insurtech will bring a new era of the insurance industry in Indonesia.

Quoting from Kompas.com, according to Alberto Daniel Hanani, a Lecturer in Management at the University of Indonesia assesses the performance of the insurance industry since it has been regulated and supervised by the OJK has shown a lot of progress seen from its growth each year.

Indonesia Insurance Performance

In general, insurance performance in Indonesia shows growth. Life insurance recorded the largest asset value, with 2.26% YoY growth. But shows the growth of insurance is lower than general insurance and social insurance which rose respectively 8.54% and 13.26% YoY. The total assets of the insurance industry can grow quite significant, but the proportion of total assets of commercial banks is still in the range of 15-16%.

Figure 21. Total assets of the insurance industry in Indonesia (billion \$)



Source: CNBC Indonesia (2019)

Following the global development of various kinds of collaboration and application of technology in the insurance industry has also begun to be executed in Indonesia. Both incumbents and new players are trying to build inventions to increase insurance growth in Indonesia.

Head of Actuarial Department AAJI, Yanes Matulatuwa quoted from Kontan, said that the penetration of Indonesian population insurance has reached 6.6% in the third quarter of 2019. According to him the number of distribution channels is increasing and will facilitate insurance companies in offering products while providing an understanding of insurance benefits to the public.

This is linear with the AAJI projections for 2020 that total double-digit premium growth is contributed by new premiums up 12.9% and advanced premiums 9.7%. It is known that the total premium for 2018 is \$11.3 billion, and it is estimated that by 2020 it will reach \$14.2 billion.



Bancassurance

Bancassurance is one of the traditional collaborations in financial institutions. The global bancassurance market has reached a value of more than \$1,040.7 billion in 2017. Going forward, the market value is projected to reach the \$1,451.4 billion in 2023, growing at a CAGR of 5.7% during 2018-2023. Meanwhile, digital bancassurance channels accounted for only 2% of life sales, where branches and physical advisers remain dominant (85% of sales in 2017) according to McKinsey.

This disparity between other insurance products exists because from the beginning the bancassurance product offering was not done digitally. Banks, have been reluctant to digitize because of the complicated sales process for insurance, thus making the move to digital channels more challenging.

Despite this increase in access to banking and insurance services also slowly brought bancassurance to this transformation. Bancassurance has attracted some of the biggest players in the market and adopted an insurtech business model, largely because of the allure of strategic win-win, faster growth, and economies of scale. In terms of digital, bancassurance can utilize the combined analytic data personalization of each insurer and bank, also omni channel distribution.

Bancassurance operating model

In some cases, banks and insurers have entered into simple 'non-strategic partnerships' in which banks work with multiple insurers with no long-term commitment on either side. Others have struck medium-term 'strategic partnerships' using vehicles such as Distribution Agreements, while those not shy of commitment have essentially married their partner through long-term joint venture (JV) partnerships. There are some ways for operating the model of bancassurance.

1. Partnership strategy

Partnership between corporate groups and the requirement of integration in some level of organisation.

2. Product offering

The insurer offer their traditional product portfolio, create a new portfolio of bancassurance products tailored to the bank, or a combination of both.

3. Branding

Define role of the insurers' brand play in the sales channel or a new 'co-brand' be created

4. Sales channel

Sales channel managed by bank staff only or insurance agents – embedded or via referrals – play a role

5. Sales approach

Sales representatives be opportunistic, responsive or proactive when selling the products.

6. Operating platform

Standalone IT platform or will be integrated into the bank and insurer IT systems.

Asia Pacific

The Asia Pacific bancassurance market has shown a significant growth rate (CAGR of 8.13% from 2013 to 2018), driven by positive macroeconomic trends and increased prosperity.

At the end of 2014, of the top 150 banking groups in the Asia Pacific, MetLife had written nearly 50 different bancassurance partnerships. The top five insurance companies have locked nearly 200 partnerships in the region, with banks binding many insurance companies in these countries.

Bancassurance adoption is uneven in various markets. In South Korea and Hong Kong, for example, bancassurance holds more than 50% of total life insurance premiums. In Japan and Vietnam, it controls less than 10% of the market.

Regulation plays an important role in developing various bancassurance markets. In India, for example, the government wants to increase insurance penetration quickly and insurance regulators (IRDAI) soon expect to open further markets by allowing banks to bind and sell products from several insurance companies (3 Life, 3 General, and 3 Health Insurance). Previously, banks were allowed to bind with only one insurance company in each segment or had to obtain an intermediary license to be able to tie up with several insurance companies.

In China, the utilization of regulations creates several limits on developing bancassurance partnerships. The regulation explicitly requires insurance companies and banks to develop insurance products that are protected by risk and long-term. As well as solvency ratios, cost of sales, matching premium sizes and capital strength needed for high cash value insurance products.

Much like other regions, regulation plays a key role in the development of the various markets. In India, for example, the government is looking to quickly increase insurance penetration and the insurance regulator (the IRDAI) is now hoping to open the market further by allowing banks to tie up with and sell products from multiple insurers (3 Life, 3 General and 3 Health Insurers). Previously, banks were allowed to tie up with only one insurer in each segment or had to acquire a broking license to be able to tie up with multiple insurers.

In China, the implementation of few sides regulations. First, its have created some limitations on the development of bancassurance partnerships. Then, its explicitly requires insurers and banks to develop risk-protected and long-term saving insurance products and to work with no more than three insurers at each outlet. Last, deals with issues such as solvency ratios, sales fees, the matching of the premium size and the required capital strength for high cash value insurance products.

Bancassurance Deals in Asia Pacific

Figure 22. Recent deals in Asia Pacific include:

| Recent deals in Asia Pacific include: | | | | Source: IMAA-Institute |
|---------------------------------------|--|------------------------|---|------------------------|
| Date | Insurer | Bank | Deal value (\$) | Span of agreement |
| May, 2015 | Ageas | EastWest Bank | \$65 million in initial year. Future funding depends on performance of business. | 20 years |
| May, 2015 | Dai-ichi Life Vietnam | HDBank | Undisclosed | 10 years |
| April, 2015 | Manulife Financial Corp | DBS Group Holdings Ltd | Initial payment of \$1.20 billion. Also there will be ongoing variable payments on the basis of success of the partnership. | 15 years |
| January, 2015 | Tokio Marine Life Insurance Malaysia Bhd | RHB Capital Bhd | Approx. \$50 million | 10 years |
| March 2014 | Prudential plc | Standard Chartered PLC | Undisclosed | 15 years |
| December 2013 | AIA | Citibank | More than \$4 billion | 15 years |

In the first quarter of 2019, the life insurance industry in Indonesia earned a premium of IDR46.40 trillion. The bancassurance contribution is 40.9% of the total premium according to Kontan. One company that believes in increased revenue from bancassurance is Capital Life Indonesia. Of the company's total premium, as much as 99% is obtained from the bancassurance channel.

Capital Life Indonesia's Business Director Robin Winata projects that market potential through bancassurance is still large, especially in collaboration with banks and finance companies. Marketing through bancassurance, said Robin, is considered better because it is included in the product and financial planning.

Bancassurance Players in Indonesia

| No. | Insurance Company | CEO/Director | Since | Bancassurance Partner |
|-----|-------------------------|------------------------|--------------|--|
| 1. | PFI Mega Life | Samdarshi Sumit | 2011 | Bank Mega |
| 2. | AXA Mandiri | Handojo G. Kusuma | 2004 | Bank Mandiri |
| 3. | Mandiri Inhealth | Iwan Pasila | 1992 | Bank Mandiri |
| 4. | Sequis | Tatang Widjaja | 2018 | CTBC Bank Mayapada |
| 5. | Generali Indonesia | Edy Tuhirman | 2008 2019 | Bank BTN Bank Mestika |
| 6. | Commonwealth Life | Elvis Liongosari | 1992 | Commonwealth Bank |
| 7. | BRI Life | Gatot M. Trisnadi | 1987 | BRI |
| 8. | BNI Life | Shadiq Akasya | 1996 | BNI |
| 9. | BCA Life | Rio C Winardi | 2014 | BCA |
| 10. | Allianz Utama Indonesia | Jan-Joris Louwerier | 2018 | Maybank Indonesia Bank HSBC Indonesia |
| 11. | Allianz Life Indonesia | Joos Louwerier | 2018 | Bank BTPN |
| 12. | Zurich Topas Life | Franz Bendl | 2018 | Bank Mayapada |
| 13. | FWD Life Indonesia | Anantharaman Sridharan | 2013 | BTN |

Traditional Insurance with Adoption of Technology in Indonesia

Not all traditional players have prompted to use technology, only a few. Although most already have an apprehension that the industry will lead there. However, this awareness is not followed by a significant transformation. Besides remaining constrained by financing, talent war, and market readiness are the reason. Most still play on the website platform in the form of marketing products and product literacy.

Only a few companies have played with their data. One company that has optimized data is Allianz Life Indonesia. According to Joos Louwerier, the company's CEO, Allianz as one of the players with the largest market share in Indonesia has established an innovation lab. They optimize the lab to process customer data, create various product innovations, and consider sales business lines to millennial markets.

Zurich implements different approach. According to Benny Jioe, its Head of Innovation, the process of technology based innovation carried out by the company is still quite dependent to global policy. In 2018 they organized a global scale competition for startups that deal with the insurance sector.

Jagadiri, while many perceived as a insurtech company, still categorized as traditional insurance, because it is a digital product of CAF insurance to target certain segments. Salim Group has 2 insurance companies, CAF and Indolife, with agency distribution model and upper class insurance products. Jagadiri is built with small risk insurance products and purely conducts sales (business processes) digitally.

"We born as an insurance company. We're not originally named as an insurtech. As technology becomes well adapted, then we implement technology to our business process thus it will become one stop solution with variation of insurance products."

————— Yuda Wirawan, Jagadiri's CMO

Insurtech Players in Indonesia

Figure 23. Insurtech Common Products

| Player | Life | Health | Travel | Vehicle | Accident | Property/Disaster | Gadget |
|--------|------|--------|--------|---------|----------|-------------------|--------|
| | | | ✓ | | | | ✓ |
| | | | | ✓ | | | ✓ |
| | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | ✓ | | ✓ | ✓ | | ✓ | |
| | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |

Source: Each website (March 2020)

Not far from the global insurtech landscape. Insurtech players in Indonesia are still dominantly supported by incumbents, traditional insurance players. They started the business as a broker or an online agent of a traditional insurance company. Based on the pattern that transpires, technology optimization will be developed as they get the brokerage license.

Most insurtech players in Indonesia have not yet built a platform in the form of applications. Based on interviews with several players, maintaining insurance customers in the application is arduous. Insurance is not a necessity that transactions are carried out daily. They need to put extra effort into managing them.

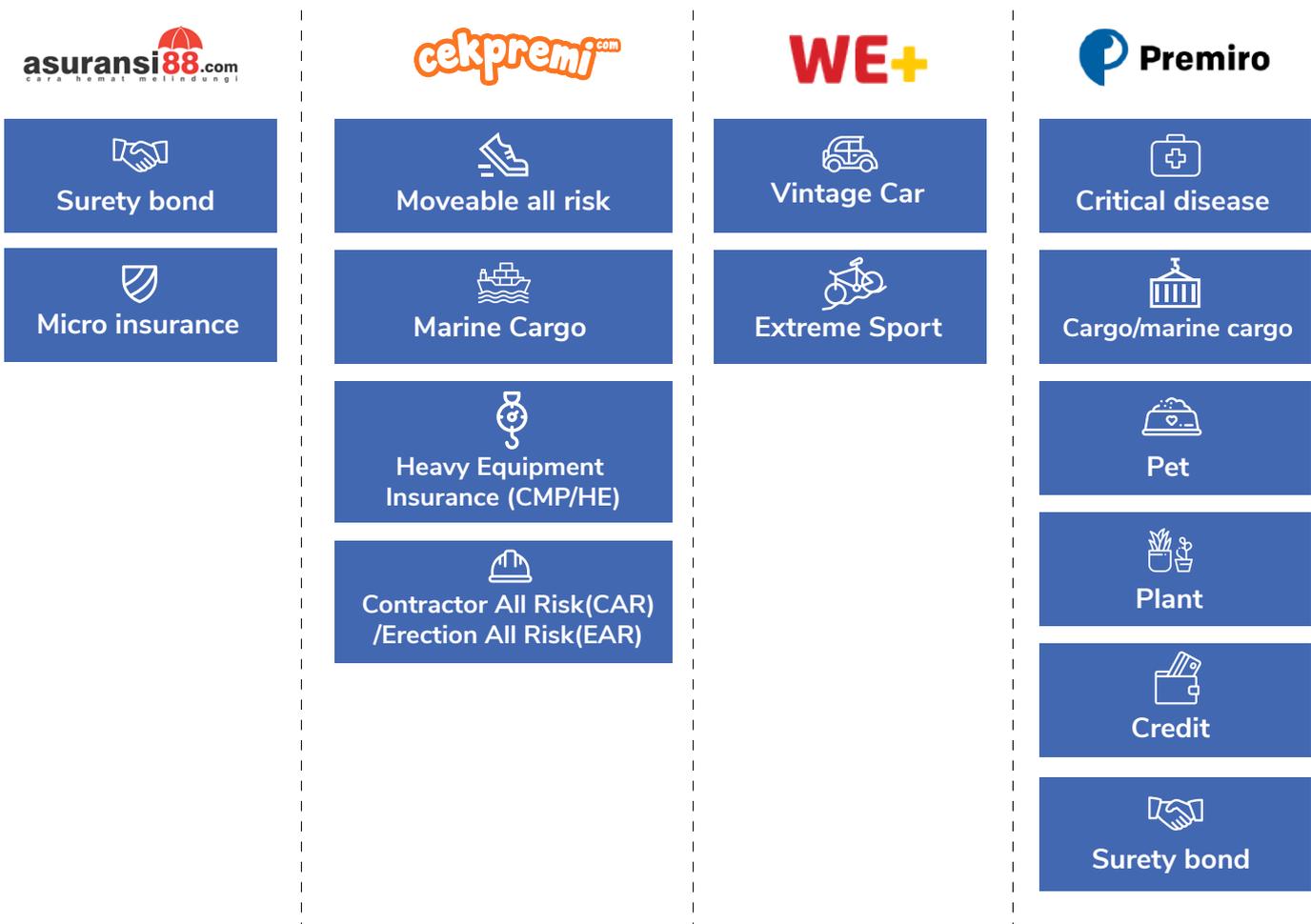
“Insurance products are not daily products that are often purchased, such as digital wallets or flight tickets. Engagement between the customer and insurance company only happens once a year.”

————— Aditya Budi, Premiro's CEO

That is the reason companies do not allocate their resources to build applications if they do not get significant interactions. These insurtech companies will explicate the difference when comparing its product. Apart from onboarding strategy, product diversification shows how insurtech companies spread the risks.

Based on the results of the comparison, the sales platform of each insurtech in Indonesia sells small risk insurance products. The products offered are also still the same as: Life insurance, health, travel, vehicles, travel, accidents and property.

Figure 24. Insurtech unique products



Jagadiri as an insurance company also sells its unique products through the website, like dengue insurance, concerts, and insurance for gamers. Insurtech innovation is also associated with the innovation of its unique products, not particularly about technology. For example, in 2014 ZhongAn offered insurance for football fans during World Cup. There's also collaboration between Axinan, Bukalapak, and Sampo that provides gadget and guitar insurance.

Director of Insurtech at Tanamduit, Itha Sargianitha shares most insurtech players attempt to develop products that is in line with market demands. They established relationships with several communities to find out more specific insurance products and became an issue among these communities, like insurance for pets or plant collections.

“We make unique products that are really needed by the community. We also communicate with insurance providers to reformulate the insurance needs.”

————— **Itha Sargianitha**
Director of Insurtech at Tanamduit

The number of insurtech registered with OJK is still small and potentially increasing in the next upcoming year. Insurtech platforms haven't progressed in the same way as lenders or payment. It is still in the infancy phase and the government is yet to issue specific regulation for insurtech.

Insurtech Platform

| | | |
|---|---|---|
|  <p>Premiro</p> <p>CEO: Aditya Budi Founded: 2015</p> | <p>Insurance Products: travel, vehicle, property, pets, cargo, marine, and customize product</p> <p>Investor: Independent (under brokerage company)</p> | <p>Summary</p> <ul style="list-style-type: none"> • Leadership CEO Premiro is very compliant with the principles of business insurance • They accommodate product customization • Premiro is not technology-centric insurtech, in the early years they focused on strengthening the insurance |
|  <p>Qôala</p> <p>CEO: Harshet Lunani Founder: Harshet Lunani Founded: 2018</p> | <p>Insurance Products: Flight, Train, Gadget</p> <p>Investor: MDI Ventures, MassMutual, Sequoia, Golden Gate Ventures, Central Capital Ventures, SeedPlus, Ganesia Ventures</p> | <p>Summary</p> <ul style="list-style-type: none"> • Focused on developing claim technology. • Limited insurance products that already use claim technology. |
|  <p>PasarPôlis.com</p> <p>CEO: Cleosent Randing Founder: Cleosent Randing Founded: 2015</p> | <p>Insurance Products: Vehicle, gadget, health, accident, property, travel, life, Gojek driver, P2P,</p> <p>Investor: East Ventures, Gojek, Tokopedia, dan Traveloka</p> | <p>Summary</p> <ul style="list-style-type: none"> • They have partnered with several unicorns in Indonesia. • They have integrated their technology with partners. • Expansion to Thailand and Vietnam. |
|  <p>Futready</p> <p>CEO: Sedy Filemon Founder: Sedy Filemon Founded: 2016</p> | <p>Insurance Products: Vehicle, travel, life, health</p> <p>Investor: East Ventures, Gojek, Tokopedia, dan Traveloka</p> | <p>Summary</p> <ul style="list-style-type: none"> • They have partnered with several unicorns in Indonesia. • Expansion to Thailand and Vietnam. |
|  <p>FUSE</p> <p>CEO: Andy Yeung Founder: Andy Yeung Founded: 201 Mobile App: -</p> | <p>Insurance Products: Vehicle, travel, life, health, marine cargo, property, etc</p> <p>Investor: EV Growth</p> | <p>Summary</p> <ul style="list-style-type: none"> • Insurance agent application. The concept is similar to agent model apps such as Kudo or TruMoney but specific for insurance product. • Agent get commission up to 30% for every insurance sales. |

Aggregator

The financial aggregator is a website or platform that informs about financial products, service details, and offers. Its products, ranging from bank loans to credit cards to insurance. The financial aggregator provides comprehensive and complete information without having to personally visit each institution.

In the context of insurance, aggregators can be interpreted as digital brokers and expert advisors that connect customers with product providers. Aggregators have evolved significantly over the past few decades.

Customers increasingly use aggregators both early in their buying journey, to get a market picture, and ultimately, by buying directly from the aggregator rather than the product provider.

Figure 25. Maturing of aggregators

First Generation Aggregator



Second Generation Aggregator



In the first generation, aggregators were only providers of information with some added value through imperfect product comparison tools. In the second generation, this goes beyond price comparison by offering solutions, not just information. This is capable of displaying information that is broad-minded such as service quality and is integrated into the partner provider value chain. It can also offer web analytic services that help participating insurance companies optimize their products according to customer needs.

On average, aggregator players in Indonesia who sell insurance products have reached the second generation. To arrive at that stage, each aggregator must get an actual-licensed brokerage. At least, by getting the license, this aggregator can do the closing or transaction of insurance products. Without that they only become a marketplace.

Aggregator in Indonesia

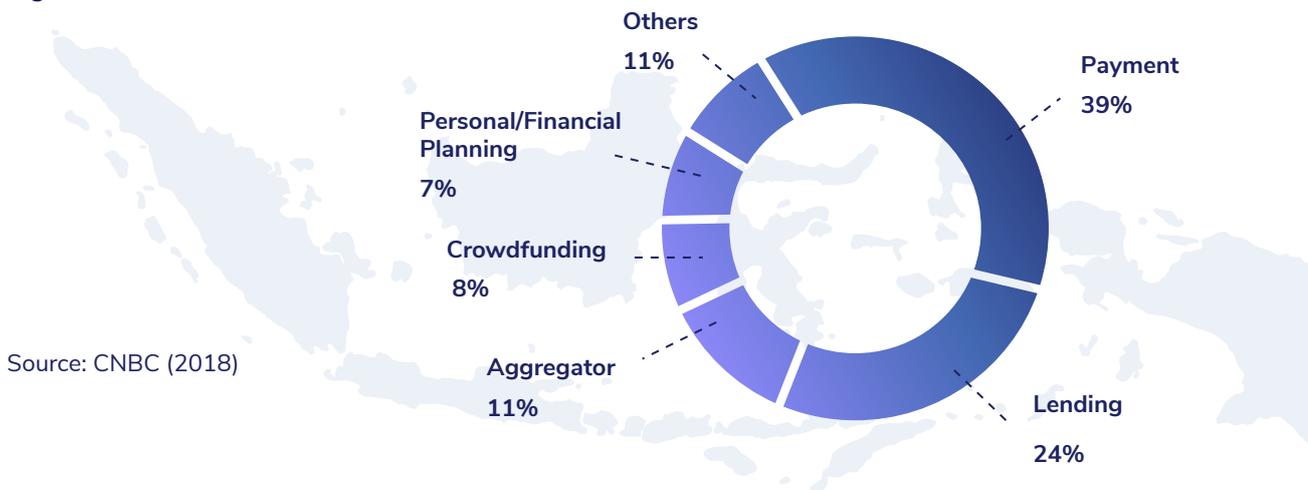


Based on OJK, aggregators are two of the 15 clusters of fintech companies that provide the most benefits in 2018. This sector has the potential to grow even greater.

For many insurance companies, the aggregator has become the business side facing customers. This change has led to a strong network effect: increased use has led to more product providers to use aggregators as sales channels while increasing market coverage attracts more users. Increased coverage also leads to better conversion rates, effectively reducing acquisition costs for the aggregator.

The result is an extraordinary business model for aggregators, according to McKinsey analysis, typically enjoy high-profit margins of up to 40% of earnings before interest, taxes, depreciation, and amortization (EBITDA) as well as spikes in M&A interest from potential acquirers.

Figure 26. Fintech business in Indonesia



Tech Enablement

The tech enablement is to help companies shaping technology. They become vendors who volition execute this. The form of technology they offer is an end to end solution where each collaboration has a different level of integration. It can be a certain insurance product or an entire service from an insurance company but within a particular period.

One example that has happened is collaboration with Bukalapak Sampo Insurance and Axinan. The insurance product they agreed was insurance to guarantee damage to the goods for the customer. Bukalapak as a sales or e-commerce platform, Sampo as an insurance provider, and Axinan as a technology provider that will assist the claims process.

As tech enablement, Axinan functions as the party that will analyze claims, commencing from account verification and administration to analyzing the damage over items to be claimed.

Till now the startup as tech enablement which operates in Indonesia is Axinan. Singapore-based full stack firm that focuses on big data leverage, real-time risk assessment, and automated claims management to create seamless, lightweight and easily integrable insurance solutions. They have operated in several countries in Southeast Asia's online platforms.

Insurtech Era: How Technology Drives the Innovation of Insurance Industry

Insights on Current State

The effect of new technologies on the insurance industry is potentially huge. Machine learning and AI-related technologies provide better analytics for pricing premiums. At the same time, these technologies could be embedded, for example, in new devices like wearables which allow insurers and customers to start focusing on risk prevention rather than risk management. The consequence: Frequencies of claims should come down, though losses per event might go up.

A case in point is the mobility revolution with its promise of less accidents by automatic driving but potentially huge losses in the case of a system wide breakdown. Furthermore, new technologies are being used to optimize costs along the entire value chain, not only for underwriting. Equally important are simplified distribution, such as one click distribution platforms and automated claims handling. All these developments point to suitability of target market needs.

On the other hand, new technologies are also creating new products, from cyber security to usage based insurance, generating new demand for insurance. Cyber insurance, for example, offers huge opportunities, from insurance against cyberattacks to the protection of customer's digital identities. And there is no denying that there will be a wider customer reach with digital platforms, both in the developed world and, in particular, in emerging markets.

On retail insurance sides, insurers should be upgrading not only their technology systems and operating models, but talent capabilities and workplace policies to resolve an expected exodus in baby boomers and a widening digital skills gap.

How well insurers resolve the "synthesis challenge", integrating innovation in technology, talent, and business

models into change-resistant legacy environments, possibly the biggest success factor for the industry in the decade ahead.

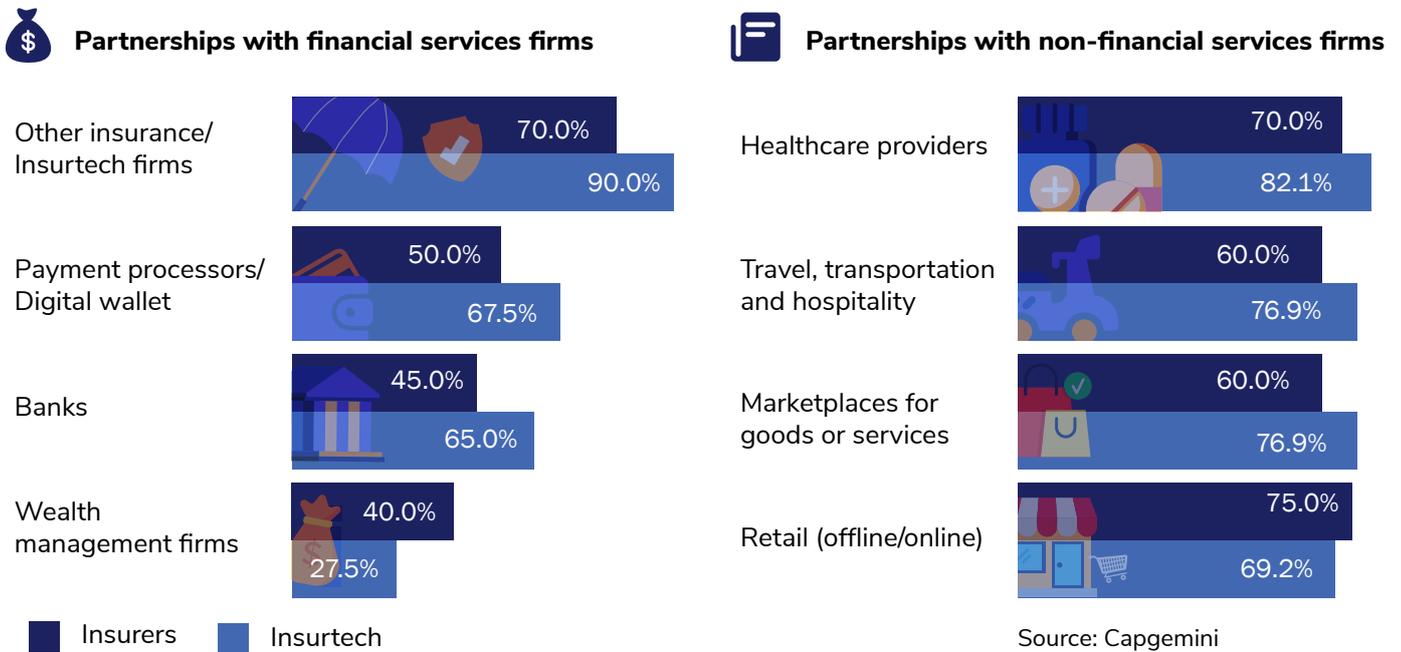
In regard to business insurance insights, business insurance coverage protects businesses from losses due to events that may occur during the normal course of business. There are many types of insurance for businesses including coverage for property damage, legal liability and employee-related risks. Companies evaluate their insurance needs based on potential risks, which can vary depending on the type of environment in which the company operates.

Insurers worldwide understand that to stay relevant and remain competitive during these challenging times, they need to transform their business and IT departments to gain greater integration and flexibility. Unfortunately, aging legacy systems, numerous manual processes, increased data protection and regulatory requirements, culture issues, lack of innovative mindset, talent shortage, and resistance for data sharing and utilization across business units all act as barriers to transformation.

Insurers across the globe realize that they cannot afford to wait for the perfect strategy to kick-start their transformation journey. The need of the hour is to build and deploy digital capabilities while also tackling the barriers. Forward looking insurers are doing exactly that.

Based on survey conduct by Capgemini in 2019, both established insurers and newcomers say they are ready to work with one another. A survey conducted as part of the research paper found that 70% of insurers and 90% of insurtechs are willing to collaborate.

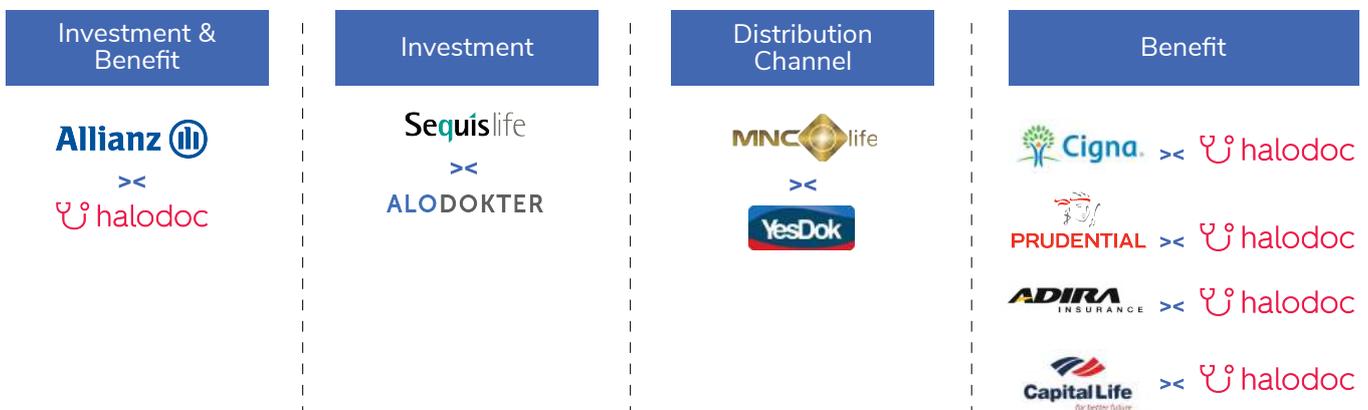
Figure 27. Partnership interest of the insurance industry players, insurer vs insurtech (%), 2019



The limited number of insurtech in Indonesia does not dampen insurance innovation in the digital field. There are many patterns of cooperation between companies, both fellow insurance companies or with other than insurance companies. The following are various forms of cooperation that have been established, especially in Indonesia.

Partnership between insurance player and healthtech

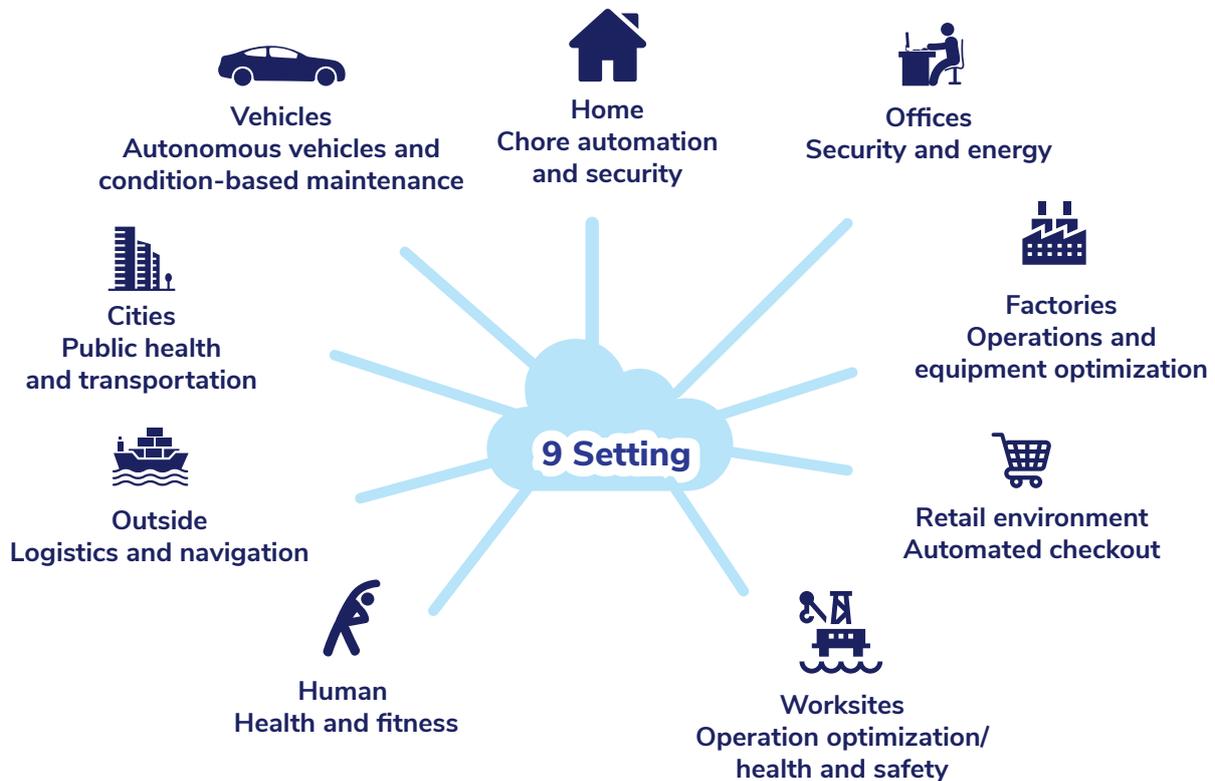
Figure 28. Partnership between insurance player and healthtech



Some insurance companies were already running collaborations with various schemes. Allianz through the Allianz Group Digital Investment Unit in mid-2019 announced an investment in the Halodoc. In addition to funding, Allianz also expands the Allianz Hospital Assistance program by integrating Allianz health insurance into the Halodoc application. Allianz customers can get health care facilities from Halodoc directly through the Halodoc application.

A similar system of integration was also carried out by several other insurance companies such as Cigna, Prudential, Adira Insurance, and Capital Life. Another form of collaboration was demonstrated by MNC Life with Yesdok. Through the Yesdok application, MNC Life opens new distribution channels. Prospective MNC Life customers can purchase health insurance packages on the Yesdok application. Sequis, which has been aggressively rebranding in 2019, in the same year also recorded giving funds to Alodokter.

Figure 29. The Internet of things and insurance industry



Source: McKinsey Global Institute (2015)

When discussing a larger ecosystem, insurance interacts with many industries. Collaboration does not only involve players who are engaged in the insurance industry. Looking at the current collaboration, insurance big players in Indonesia are trying to take advantage of the immense momentum from the existing super apps ecosystem.

Collaboration between Insurance Player with Unicorn Startup

Figure 30. Partnership between insurance player and unicorn



As has been established between AIA Indonesia, members of AIA Group Limited, and Gojek, it was announced a strategic partnership. As part of the partnership, AIA Indonesia will be the main pillar of Gojek financial services strategy, by providing life and health and health insurance services to users, drivers and traders throughout Indonesia.

Gojek and AIA Indonesia will work together to design and develop health propositions, improve AIA Indonesia health programs and the Gojek ecosystem, to help encourage Indonesian people to live healthier, longer, better lives. The partnership also aims to increase awareness of life and health insurance solutions in the country. The same strategic partnership was also formed between Allianz through PasarPolis with Gojek.

Adira Insurance collaborates with Traveloka Protect which is part of Traveloka to provide car protection services. Through this partnership, Traveloka customers can use car protection services from the Traveloka platform application and integrated system.

In April 2018 Tokopedia officially announced its partnership with Tokio Marine Indonesia in providing Retail Logistic Insurance for Toppers (Users of Tokopedia, red). Tokio Marine Indonesia will serve as insurer to protect against potential damages and loss of goods purchased by Toppers during the delivery process. In the following year, Tokopedia announced another partnership with Prudential. In this partnership, Tokopedia acted as one of Prudential's distribution channel.

Bukalapak together with Allianz Indonesia in May 2019 announced their collaboration and the launch of a joint-product: 'Buka Proteksi Diri'. Buka Proteksi Diri is a health insurance product that offers an end-to-end digital experience for customers through the Bukalapak marketplace application. The customer journey starts with the customer filling in the online registration form, premium payment and receiving the e-policy in case of claims, customers submit their documents online.

Still in the same year, Sampo Insurance Indonesia was officially introduced as a shipping insurance partner of Bukalapak, along with an insurance technology company, Axinan. This collaboration provides digital protection solutions in the form of shipping protection for customers and also Bukalapak merchants. This partnership allows dynamic pricing features that can be adjusted to the price of goods and supported by an integrated claims management system, especially for electronic goods.

Partnership between insurtech player and another platform

Figure 31. Partnership between insurtech player and another platform



Aside from traditional players, insurtech is also quite active in partnership with various platforms, starting from super apps, aggregators, and even other insurtech players. Qoala is officially an insurance service provider in Grab, as an effort to strengthen Grab's position as a super app. Insurtech services are available in the form of shuffle cards on the main page of the Grab application. The insurance products available for now are only mobile screen protection insurance.

Premiro, which was founded by an insurance brokerage company, is quite active in collaboration. Currently, Premiro has collaborated with Tanamduit, Jagadiri, Cekaja, and several other B2B businesses. The same thing was also done by PasarPolis, as a new player in the insurance industry PasarPolis netted cooperation with 3 unicorns in Indonesia, Gojek, Traveloka, and Tokopedia and several other platforms. In the fourth quarter of 2018, PasarPolis recorded a premium of Rp50 billion and sold more than 1 million insurance policies.

Based on the collaboration types above, at least are divided into 2 major types. The first is a strategic partnership. It is a relationship between two commercial enterprises, usually formalized by one or more business contracts. A strategic partnership will usually fall short of a legal partnership entity, agency, or corporate affiliate relationship. Second, investment, in the case of insurance, investors can be from the incumbent or other sectors that have the same mission.

So far the insurtech companies decline to reveal their numbers. While the month-to-month traction may be somewhat promising, it indicates the current number of transactions and nominal is still small if compared the whole marketshare.

Challenges in Insurtech Innovation

Opportunities bring more players and offerings. Competition in the insurance market could rise. In fact, new rivals might even be from outside the industry. From tech giants in China and the United States, to insurtech startups. Established insurers such as AXA Mandiri, Sequis, Allianz, Mandiri Inhealth have already started partnering with newcomers. Any 'disruption', however, is likely to be more in the distribution model rather than in the products themselves.

According to DSRResearch's analytical research, there are challenges in observing insurtech innovation in Indonesia, such as:

The problem to addresses

The low penetration of insurance in Indonesia is clear enough to explain insurance challenges towards insurance industries. According to a survey conducted by OJK in 2016, the financial literacy index of the insurance sector only touched 15.8%. For everything outside of BPJS (mandatory basic health insurance in Indonesia), insurance penetration in Indonesia is as low as 2%. Only 4.5 million out of 264 million Indonesians carry any additional insurance policies, most commonly life insurance.

Since the high internet penetration in Indonesia, several insurtech players have slowly emerged. The business processes and products offered are not yet diverse. Most are in the form of marketplaces and some of them offer claim service handling solutions.

Insurtech itself is present by disrupting the process in the insurance chain which was previously still manual towards digital. The presence of insurtech does not necessarily cure current conditions in the insurance sector, but slowly brings change.

Figure 32. Insurance chain



1. Registration

Insurance is one of the highly regulated businesses even beyond banking. Started from registration, underwriting calculation, and claims. Most of those processes are still done manually. Many manual tasks such as data entry, customer service are being handled inconsistently, which turns to inefficient flow of information. In the frame of digitalisation those things are one of the big issues that needs to be simplified to achieve efficiency.

Solutions that can be offered at this stage are registration automation and chatbot usage. The number of different insurance information products needs to make chatbot as one of the important features in the insurance sales and claim platforms. The level of chatbots ability to solve any problem can vary, this depends on the technological capabilities behind it. This feature can be an alternative solution that can be considered by insurtech and insurance companies.

2. UI/UX Design

The largest percentage of the population is the baby boomers, but the fastest growing population is the millennials. Their experience in browsing the internet requires more experience including the appearance of insurance products. It is still too late to be caught by some insurance players.

“It started with an evaluation that our products were favored by older people, and younger ones were a marked minority. Then we invited people of all age segments to provide inputs on what is important and usable by them. Based on that we overhauled our mobile app UI/UX to better cater for users regardless of age segments.”

————— **Andang Nugroho**
Head of IT Mandiri Inhealth

3. Customized Product Development

Most of the established insurtech business models begin by changing the transaction experience. They offer a more seamless and digital-based model. Insurers must also record how customers interact with old models to provide the product they want when they want it. This requires segmenting customers according to their behavior, how they interact with insurance companies or influence risk in their policies, rather than the traditional categories of age, gender, location, ethnicity, etc.

Traditional insurance assumes that millennials want life insurance, without recognizing that their wages and benefits packages are not nearly in line with previous generations. Traditional insurance also fails to realize that the majority of the time for millennials is spent connected to their mobile devices and online. In both cases, millennials have different insurance needs than their parents or grandparents.

4. Unimpressive Pricing Offerings

Calculation of the existing premium still depends on several factors. Through certain calculations these factors are defined into a number of absolute formulas. These formulas become insensitive to the actual risk in each customer. Because of this uncertainty, insurance companies tend to charge a flat rate with a grouping of risks that they can read.

This is certainly not fair for those who do have a low risk value. Therefore it needs to be considered for insurance companies to utilize technology efforts to provide a more comprehensive premium calculation. They can started partnership with wellness tracker app which covers nutrition, physical activity, emotional aid, and health management.

5. Lack of System Integration

Real scope of digital transformation is harder to accomplish because it means changing the culture and the behaviors of people and potentially, even the core business and operating models. Companies are suffering the negative effect of a disconnection between the IT role and the business strategy, which, in return, increases data fragmentation, security and compliance risks and decreases transparency and clarity across the whole organization. The growth of unstructured data including brokers and agents, is unstoppable and unavoidable. All data come from several sources, different in volume, size, formats and type.

6. Less Fraud Prevention

The potential for fraud detection has been derived from agents who must rely on several facts and a large amount of intuition. As new data analysis technologies develop, tools have been introduced to enable more comprehensive fraud review and detection. As stated by Tommy Martin, Qoala's COO, they will develop technology to read the damage to cars and motorbikes to process claims with the help of smartphones.

“Cars and motorbikes have the same concept. The damage can be seen outside, people who want to claim just take a video and we can analyze the damage. Maybe we can not give approval but we can provide information to insurance companies so they can approve when they get information from the system.”

————— Tommy Martin, Qoala's COO

7. Long Claim Process

The functions of actuarial and underwriting within insurance companies are fundamentally changing as a result of the transformation occurring alongside the adoption of technology. Insurers require big data, but while data aggregation results in the law of large numbers and predictive analytics can reduce the need for underwriting in certain generic cases, these roles are expected to remain central to the digital organization.

Underwriters and actuaries will likely have a new role in which their specific data science skills can be applied. Rather than being replaced by black boxes, they will likely lead the charge in reassessing and enhancing the statistical approach to traditional underwriting, armed with a treasury of data. Beyond this revitalization of statistical analysis, certain specialized lines and heavily manuscripted endorsements, such as shipping, will likely still require the old methods to be applied as there will likely not be sufficient data to underwrite.

“Some claim processes still require customers to wait up to 14 days. This certainly becomes one of the challenges for insurance companies. Now, there is still a manual check to avoid the possibility of fraud.”

————— Yuda Wirawan, Jagadiri's CMO

Innovation Outlook

Challenge?

Registration

Solutions?

Automation, Chatbot, Omni Channel

Aggregator

cermati tonamduit cekaja.com

Chatbot

BJtech
an artificial intelligence company

Kata.ai

AiChat

Vutura

Bahasa.ai

Insurtech

Premiro

FUSE

asuransi88.com
CARA HEMAT MELINDUNGI

WE+

PasarPôlis.com

Qôala

cekpremi.com
Portal Asuransi No. 1 di Indonesia

Futuready

Challenge?

- Product Diversification
- Expensive Premi

Solutions?

- Collaboration with Healthtech
- Wellness apps

Healthtech

ALODOKTER

+Pesanlab

konsula

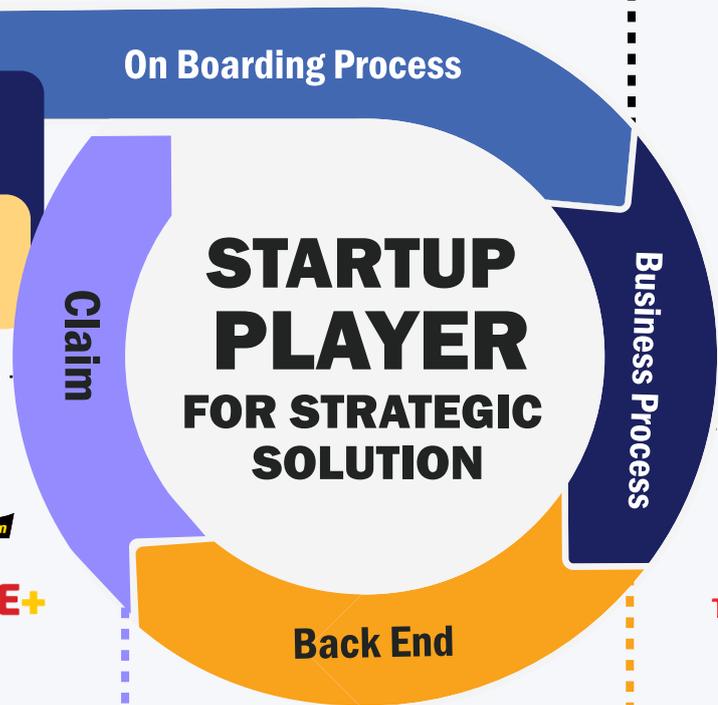
halodoc

Challenge?

Inconvenient Claim Process

Solutions?

AI/Big Data, Optical Character Recognition (OCR), Omni Channel



Insurtech

asuransi88.com

Qôala

Premiro

PasarPôlis.com

lifepal

cekpremi.com

WE+

Futuready

FUSE

Wellness App

MEDIGO

Aggregator

cermati cekaja.com

tonamduit

THEFITCOMPANY

STRONGBEE

Doogether

AI

nodeflux
Extending Vision Beyond Imagination

Axinan
Smart Insurance for Digital Economy

diligence.ai

Underwriting Fraud Prevention

Solution?

Big Data/AI

Axinan
Smart Insurance for Digital Economy

FITNESIA

A. New Discoveries & Strategic Innovation

Innovations:

1. Chatbot and Registration

The global insurance industry is focused on leveraging the benefits of a digital environment. The development and adoption of technology such as insurtech partnership has a clearly defined progression. The first of these two phases began with a focus on digital distribution and data, the second was heavily focused on sales and marketing.

In the first phase, the underlying insurance product remained more or less the same, but some parts went digital. The second has seen the emergence of risk carriers that are changing the underlying insurance product and using insurtech to automate the value chain. This second phase has seen considerable advances in new sources of data and the ways in which data is processed.

Adoption is not a simple case of bolting on a few peripheral systems. Or be seen as a chance to refresh the business in a piecemeal fashion by simply moving traditional business online. It offers the opportunity and requires total transformation of the existing business model. How insurance companies handle this repositioning of the business strategy will likely determine whether they are considered a tinkerer or transformer and indicate how sustainable their business will have become. Insurers must have a digitally focused and automated digital-first/customer-first business that would be comparable to the tech giants of today.

2. Customized product development

In addition to shifts in the onboarding process, the insurer needs to capture the customer's track record comprehensively. Reflecting on existing Insurtech products, to attract wider customers, therefore more product criteria are needed. Insurers can allow customers to choose the product that is most appropriate for them, by adjusting the risk and needs of different market segments.

Technology in the insurance sector currently has a lot of processing earlier data from insurers by combining various sources to make machine learning. Later, this machine learning will be the main capital to arrange insurance product customization.

3. Product diversification

The urgency to release unique products is needed as an insurance company strategy to capture the millennial target market. Players in the insurance sector believe that creating unique products and relating to them is one way to introduce and educate insurance products. In terms of risk calculation, this unique product is still in the small risk category.

In Indonesia, unique insurance has begun to emerge such as concert insurance, insurance for gamers, pets, and others. In order to truly enter the ecosystem, more players need to participate in releasing these unique products. Even if it reflects with other countries, many of them involve technology to make this unique product.

4. Competitive Premi

The calculation of the existing premium still depends on several factors. Through certain calculations, these factors are then formulated into several absolute formulas. These formulas become insensitive to the actual risk in each customer. Because of that uncertainty, insurance companies charge the value of hits with a grouping of risks that they can read.

There are several ways to overcome it, by utilizing technology as below. The point is, the more factors that are detected, the more different the determinants of risk will be seen. Therefore the price of each customer will be different.

Most of the tech to be deployed in the next phase is expected to be on value chain innovation, to reduce cost, improve efficiencies and generate ecosystems that will support future insurance industry developments. These transformations can launch quicker, meet customer needs better, capitalize on a broad range of existing data and build on practical experience. Building a platform business requires state-of-the-art technology and very fast and flexible time to market. This is not achievable on legacy systems alone. Insurers will have to invest in customer-facing digital platforms, intelligent automation to streamline processes, and develop smart contracts for claims and predictive underwriting.

The first step is to define a process, determine the problems that need to be solved and decide what opportunities can be harnessed. Then observe what can be eliminated, what can be automated, what can be outsourced, and avoid insurtech that offers proof of concept in favor of proof of potential return on investment. Traditional insurance companies must fundamentally change their business models, moving from conventional operations to fully connected transformation. This requires a cultural change, to focus away from product and to organize themselves entirely around the customer, their experience and outcomes.

a. Wellness App

Connected devices and wearables provide deep insights into the customer's physical condition, like blood pressure, temperature, pulse. The insurer can even explore the client's lifestyle patterns, such as the number of steps per day, or how often and how long it takes someone to brush their teeth.

Most wellness apps provide users with access to regular exercise programs. The program they provide is in the form of exercise challenges for a healthy lifestyle. Insurance can utilize the calculation from the Wellness App as a form of price compensation for users who reach the target challenge.

Players in these scope:



Wellness Technology itself is a startup that focuses on the lifestyle of the community as a whole, both physically, mentally, socially and spiritually through 5 business lines consisting of Kredo Aum (Fitness Tech Distributor), 20Fit (MicroGym), Fitstop (Gym), Fit Lok- Kal (healthy food) and Fitmee (healthy instant noodles from konyaku jelly).



Indonesia's Sport & Wellness directory and on-demand booking application with complete service. They aims to connect service providers such as Private Trainer, Health Practitioner, Sports Facilities (Studio, Gyms, Courts, etc) to the community. More than 700 sports facilities & activities are now accessible and can be booked by customers instantly.



A sports platform that makes it easy for users to access information about places to exercise. Starting from the price, the type of exercise performed, schedule, photos, addresses, promos, events, ratings, and reviews.



Reservation platform for salons, spas and rides without having to call in advance and pay for membership. This platform offers a 30-70% discount compared to coming directly to the place.

b. Healthtech

To cut the costs of examinations and treatments in hospital insurance can do collaboration with healthtech companies. The scheme provided is to advise customers to consult with online doctors rather than directly go to hospital or clinic. By this scheme Insurance will save the cost of coverage. On a large scale, these calculations should be able to help insurers set a more competitive premium price. It is also useful as a form of abusing insurance prevention.

Players in these scope:



Healthcare network platform. HaloDoc connects users to a network of 19,000 licensed doctors, 1,000 certified partner pharmacies through medical delivery service ApotikAntar, and licensed medical laboratory services. Users can communicate with these medical professionals via chat, video and voice call.



Health platform that connects patients, doctors, and various other health services.



SaaS solution to enhance the quality of healthcare services in Indonesia



Platform for ordering Medical Tests and Medical Checkups from Clinical Laboratories in Indonesia.



Medigo is a partner for hospitals and clinics in optimizing health services for patients. Includes a good standardized digital filing, referral management, connection with guarantors (including BPJS)



Konsula Search is the # 1 directory of doctors in Indonesia, a pioneer in online appointment services for doctors and other health professionals. Konsula Connect is a cloud-based online software aimed at making it easier for doctors, healthcare workers and health facilities to manage their practices more efficiently.

5. Back End Process, System integration, Fraud Prevention, Data Centric Business

Artificial Intelligence (AI)

Artificial Intelligence (AI) uses machine learning algorithms to speed up the data analysis process, better recognize hidden patterns and make accurate predictions. It is not only a crucial component for insurance companies to handle large amounts of data efficiently and effectively but also supports in automating many processes, such as onboarding and patient history investigation.

Players in these scope:



OctoPi uses NLG (Natural Language Generation) algorithms to generate insights on the data assets in addition to providing advanced analytics which give companies in the Telecommunication, Retail, Pharmaceutical & Finance verticals mission critical business intelligence



Artificial Intelligence company, focused on understanding human conversation so we can empower the way humans collaborate with technology. Kata.ai's Natural Language Processing (NLP) technology powers multi-purpose intelligent virtual assistant



Developing deep learning computer vision to provide Intelligent Video Analytics (IVA) solutions toward complex issues faced by multi-sectoral industries and modern society



Singapore-based full-stack insurtech firm that enables smart, digital insurance for the Internet economy. They are focused on leveraging big data, real-time risk assessment and automated claims management to create seamless, lightweight and easily integrable insurance solutions covering millions of customers of Southeast Asia's leading online platforms.



Artificial intelligence applications software that is easier to integrate into your existing processes detect car damage, plates, colour, Indonesia's roads, or even people (with gender) detection and person's ID tracking.

6. Claim Process: Claim Automation & Fraud Prevention

The functions of actuarial and underwriting within insurance companies are fundamentally changing as a result of the transformation occurring alongside the adoption of technology. Insurers require big data, but while data aggregation results in the law of large numbers and predictive analytics can reduce the need for underwriting in certain generic cases, these roles are expected to remain central to the digital organization.

Underwriters and actuaries will likely have a new role in which their specific data science skills can be applied. Rather than being replaced by black boxes, they will likely lead the charge in reassessing and enhancing the statistical approach to traditional underwriting, armed with a treasury of data. Beyond this revitalization of statistical analysis, certain specialized lines and heavily manuscripted endorsements, such as shipping, will likely still require the old methods to be applied as there will likely not be sufficient data to underwrite.

Case Study

Bancassurance: Generali X OCB Vietnam

Background

After 2 years of collaborating with OCB as a distributor of Generali Vietnam, they decided to strengthen business relations at the end of 2019. They announced a 15-year strategic exclusive bancassurance partnership. Under the agreement, OCB will be the exclusive distributor of Generali Vietnam's life and health insurance products to meet customers' needs in healthcare, protection, savings and investment. This will be one of the largest bancassurance agreements to be conducted in the Vietnam market.

The exclusive partnership between OCB and Generali recognises the increasing development and success of the bancassurance model in Vietnam. Additionally, both partners will develop financial and insurance plans, boost distribution channels, and encourage the use of digital technology, aimed at improving overall customer

experience. This commitment is based on mutual strengths in data analysis, digital capabilities and shared focus on customer centricity.

On the basis of this collaboration they created exclusive applications for the sake of creating ecosystems. Their biggest investments is GenVita. This mobile app is a one-stop digital ecosystem for existing and prospective customers. Apart from being an online information and service hub for policyholders, GenVita offers outstanding features to health-conscious users by allowing them to speak directly to the doctors, get advice from health and financial experts, and track their daily running or walking. Users can also learn more about our products and purchase them online via the system. They are about integrating both of systems, including many of GenVita's interesting features, with OCB's OMNI system, in order to offer the best customer experience.



OCB was established in 1996, after 23 years of operation and development, OCB has nearly 200 trading units in all major cities and economic zones in the country with more than 6,000 staff and VND 10 billion in equity (equivalent to approx. \$450 million.).



Generali Vietnam is a member of Generali Group. After 8 years of operation, Generali Vietnam currently has a nationwide network of over 60 GenCasa (agency offices) and customer service centers, serving approximately 200,000 clients including individuals and insured members of domestic and foreign businesses in Vietnam.



Healthtech Insurance: Oscar

Oscar Health Insurance is a technology-focused health insurance company founded in 2012, and is headquartered in New York City. The company focuses on the health insurance industry through telemedicine, healthcare focused technological interfaces, and transparent claims pricing systems. It was founded in 2012 by Mario Schlosser, Josh Kushner, and Kevin Nazemi work with 3,500 nationally ranked doctors across 140 specialties, they are partnered with more than half of the top 20 health systems in the United States.

Figure 33. Oscar mini landscape



Figure 34. Value Proposition

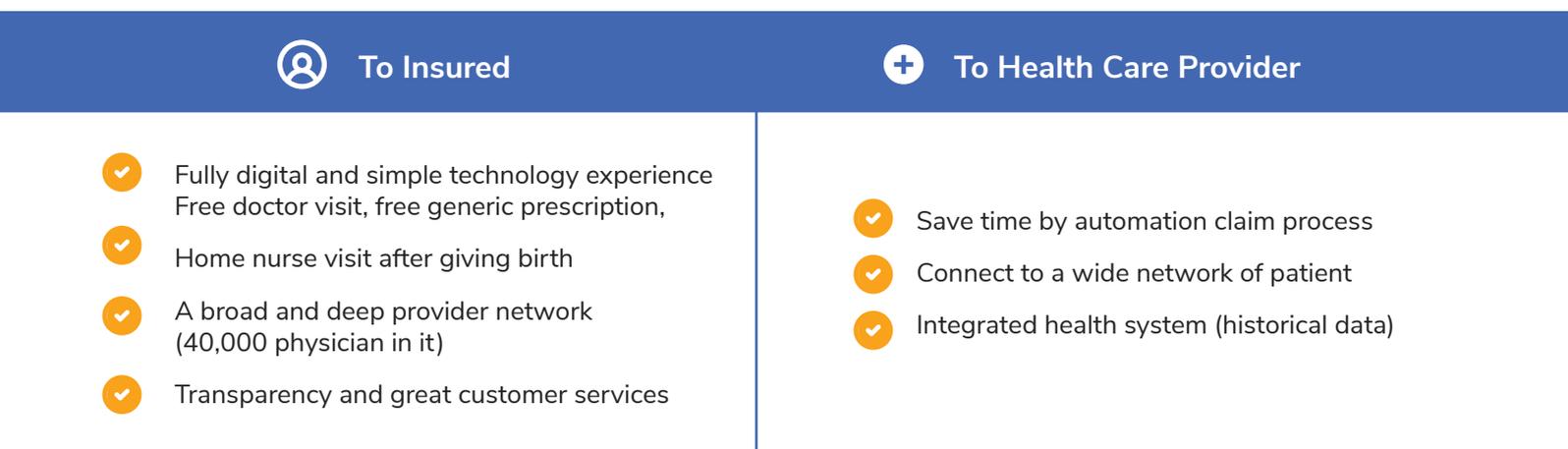
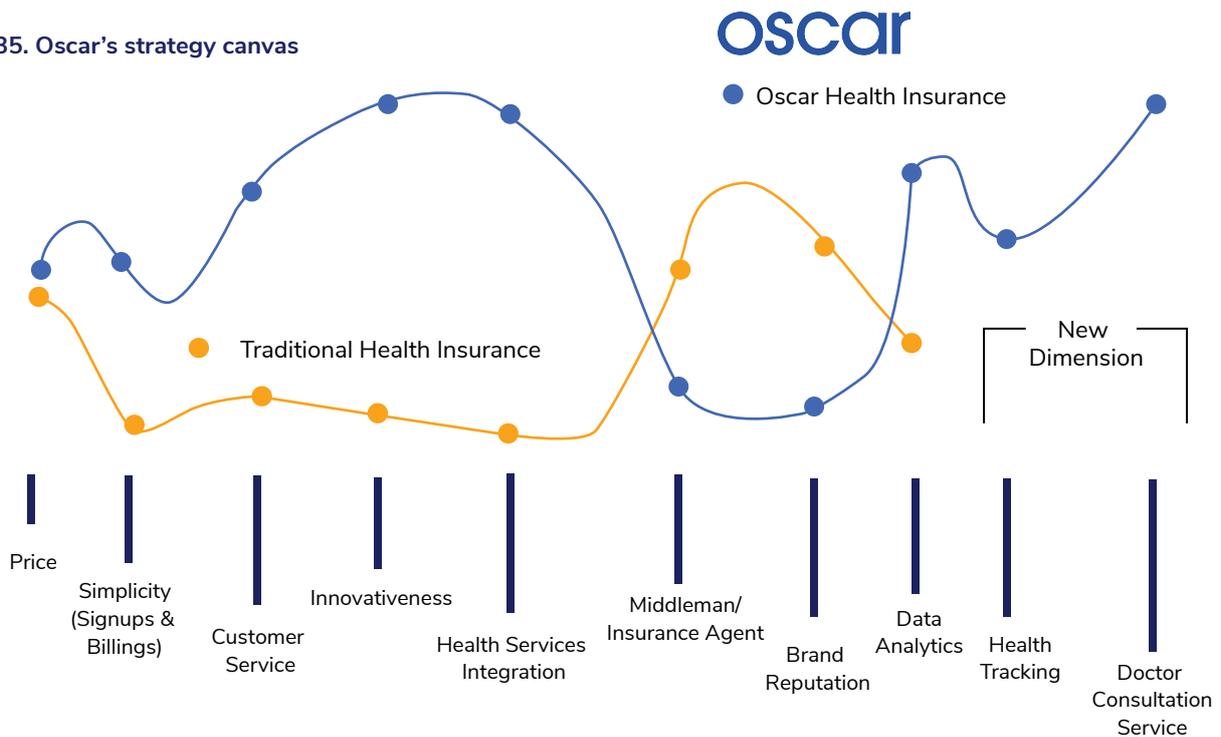


Figure 35. Oscar's strategy canvas



Source: Jeffrey Funk Business Models, Associate Professor at National University of Singapore

Oscar offers a better value proposition because it integrates technology to make the health insurance simple, friendly and human. Technology, transparency, and hi-touch are its watchwords. The company focuses on the health insurance industry through telemedicine, remote clinical services for diagnosis and monitoring and healthcare-focused technological interfaces, and transparent claims pricing systems. All of the efforts ultimately bring significant results. Their age range is fulfilled with the majority of Oscar members coming from 26 to 35 years old.

Wearable Tech

Cardiogram is the artificial intelligence-driven heart rate-tracking software from a tech startup based in San Francisco and Oscar announced that, Oscar will now cover Cardiogram Care. Cardiogram Care uses the heart rate sensor on popular wearables, like Apple Watch, Garmin, and WearOS by Google. These wearables to identify patients with undiagnosed diabetes and atrial fibrillation and guide them to clinically-appropriate care. This preventive monitoring and testing will be offered for free to Oscar members, with no copay or deductible.

By using this devices Oscar can get more patients to the treatments they need using devices they already own, delivering a fundamentally better type of health insurance today and preventing costly complications tomorrow.

As of 2019, the company had raised \$1.3 billion, and was valued at \$3.2 billion.

Investment

Figure 36. Oscar funding

| Year | Funding |
|------|--|
| 2014 | \$30 million Series A round, led by Peter Thiel's Founders Fund |
| 2015 | \$145 Series B round by Formation 8, Horizons Ventures, Wellington Management Company, and Goldman Sachs |
| 2016 | \$400 Series C round led by Fidelity Investments |

P2P Insurance: Lemonade

Lemonade Insurance Company is an American property and casualty insurance company headquartered in New York City offering renters and home insurance policies for homes, apartments, co-ops and condos. They were founded by Daniel Schreiber and Shai Wininger-launched and the first product was launched on September 21, 2016 in New York City. As of January 2019, Lemonade offers renters and home insurance policies in Arkansas, Arizona, California, Connecticut, Georgia, Iowa, Illinois, Indiana, Maryland, Michigan, New Jersey, New Mexico, Nevada, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Washington, D.C., and Wisconsin and in Germany.

Lemonade created a new business model for insurance based on behavioral economics and technology. The company uses artificial intelligence and chatbots to deliver insurance policies and handle claims for its users on desktop and mobile (through its iOS and Android applications) without employing the use of insurance brokers. As a full-stack insurance company, Lemonade underwrites its own policies and is reinsured at Lloyd's of London.

Figure 37. Lemonade funding

| Year | Funding |
|------|---|
| 2015 | \$13 million in seed funding from Sequoia Capital and Aleph |
| 2016 | \$13 million in funding from XL Innovate (part of XL Group), followed by a \$34 million Series B funding round in December led by General Catalyst with participation from Thrive Capital, Tusk Ventures, and GV (formerly Google Ventures), the VC arm of Google's parent company Alphabet Inc |
| 2017 | \$120 Series C round by Softbank |
| 2019 | \$300 million Series D round by Softbank, Allianz, General Catalyst, GV, OurCrowd, and Thrive Capital |

Business Model

Lemonade is a peer-to-peer insurance provider. This means that when policyholders pay their premiums, those premiums go into a collective pool. They keep a flat 25% fee of a customer's premium while setting aside the remaining 75% to pay claims and purchase reinsurance. Unclaimed premiums go to a nonprofit of the user's choosing in an annual "Giveback." When users sign up for a Lemonade insurance policy, they are able to select a nonprofit you care about and once a year the insurance company will give back unclaimed money to that cause. In 2019, they gave over \$600,000 to nonprofits.

Lemonade uses money from that pool to pay claims for policyholders who suffer covered losses. Lemonade also takes a flat fee off each premium to cover salaries, business costs and technology updates. If the cost of claims exceeds the premiums paid by policyholders, reinsurance is used to cover those claims.

Figure 38. How peer to peer insurance works

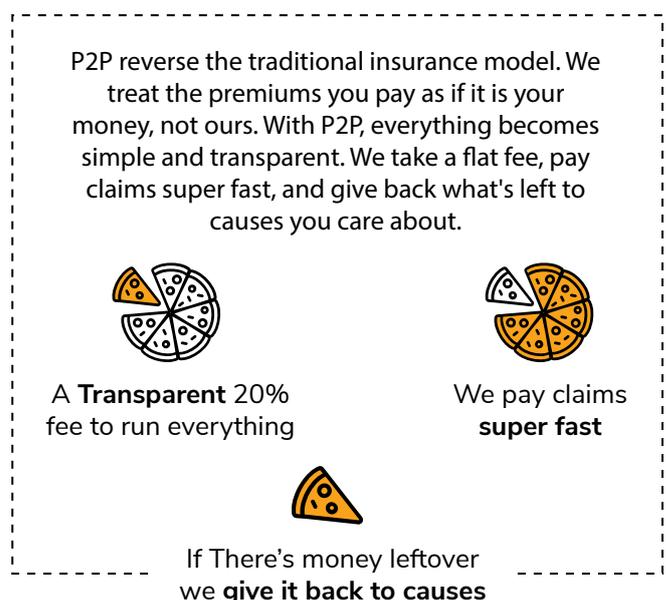
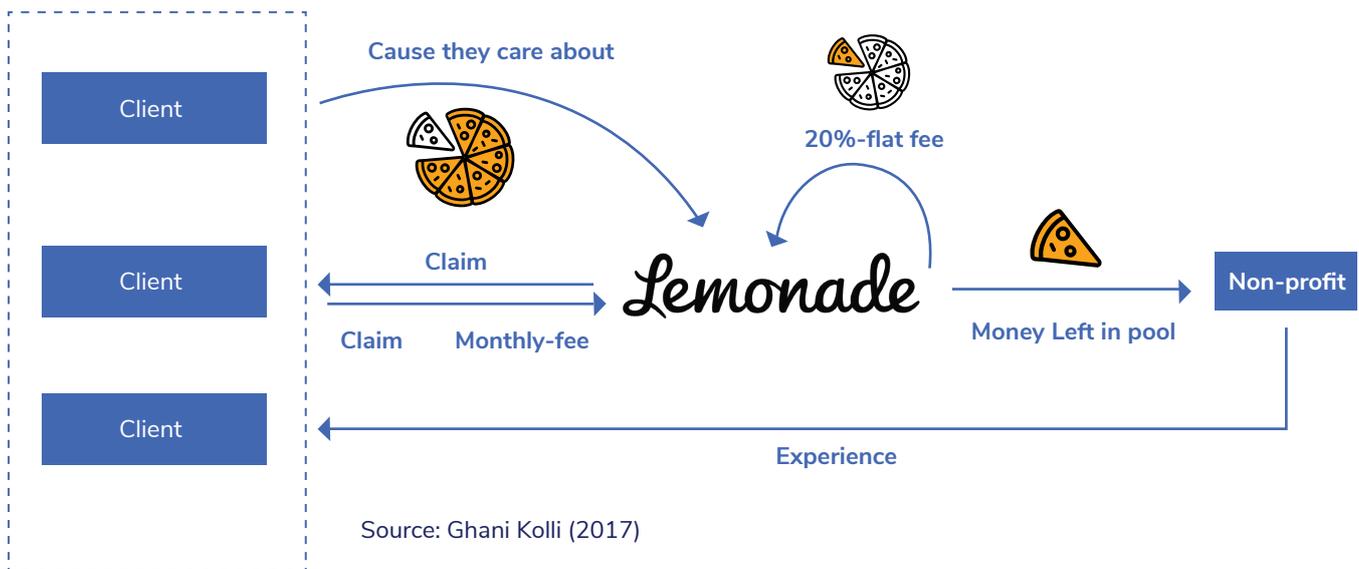


Figure 39. Lemonade business model



How do they make money?

Lemonade takes a 20% flat fee on the monthly fees paid by each P2P group assuming that their claims do not exceed 80% of their contributions

Other companies with similar business model

- Friendsurance
- Humble Bundle

Business model characteristic

- Combination profit & non-profit
- Flat free

Technology

Lemonade uses artificial intelligence in the form of chatbots and machine learning to provide insurance policies and handle claims, replacing brokers and paperwork traditionally associated with the process. When a customer applies for insurance, the company's software pulls data and cross-references information about a particular home or neighborhood from a variety of sources. Policyholders file claims through Lemonade's app with the company's chatbot 'A.I. Jim' who reviews the claim, cross-checks it with the policy, runs 18-fraud algorithms, and determines whether or not to approve the claim.

Behavioral economics

Lemonade uses behavioral economics research to displace fraud and conflict while aligning interests to remove motivation for not paying claims and keeping the inclination to defraud an insurer in check. Integration of these principles are found in Lemonade's policy purchase and claims processes, with users signing their name on a digital pledge of honesty at the start of the claims process - rather than the end - and speaking into a camera to file a claim rather than using forms. The company is also applying principles of behavioral science to itself, publishing articles on data surrounding customer growth, and bank account balances, among other topics.

Social Good

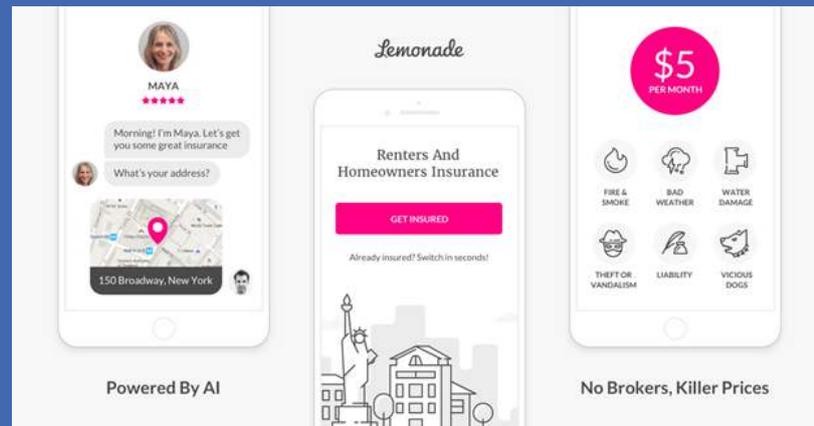
Lemonade Inc. which is registered as a public benefit corporation, has a stated mission of "transforming insurance from a necessary evil into a social good". This includes the Giveback, the charity component of the business model which is also an attempt to mitigate fraudulent insurance claims. Upon signing up for Lemonade, users select a nonprofit or charity that will receive payouts on an annual basis from the unclaimed premiums (also known as underwriting profit) of their respective cohort.

Companies Chosen by Lemonade as Annual Donation Target

1. Charity: Water,
2. Citymeals-on-wheels,
3. New Story,
4. Robin Hood Foundation,
5. Women in Need (WIN),
6. ACLU,
7. American Red Cross,
8. Code to Inspire,
9. Evolve Creative Alliance,
10. Feeding America,
11. Make-a-Wish Foundation,
12. MEET - Middle East Entrepreneurs of Tomorrow,
13. New York Society for the Prevention of Cruelty to Children,
14. Teach for America, and The Trevor Project.

Within the first 48 hours of launching in New York in 2016, Lemonade reported that 36,000 people visited their site, 140 of whom purchased policies equating to \$14,300 in gross written premiums. After the first 100 days, the company released a follow-up report noting that 2,000 people had signed up for Lemonade, with over 80% of this statistic composed of first-time insurance buyers. By June 2017, 14,315 customers had signed up for a Lemonade insurance policy.

Lemonade was recognized as one of the NYC startups ready to take on 2017, by Inc. It was also recognized as one of the top 25 tech companies to watch, by the Wall Street Journal.



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