

Insurtech

Shifting Asia



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Shifting Asia is a bi-annual publication
that highlights the impact major trends could
have on Asian markets and investors over
the next 5–10 years.

Previous editions

#2: *How artificial intelligence will
transform Asia*

#1: *Asia's consumer dividend*



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Foreword



Min Lan Tan

“The disruption by insurtech may be more profound in emerging Asia than in the rest of the world.”

Dear reader,

Welcome to the third edition of our bi-annual *Shifting Asia* series. In each publication, we identify major trends that could shape the future of markets and major sectors in the next 5–10 years. Our first two editions covered Asia’s consumer dividend trend and the impact artificial intelligence will have on Asia.* The focus of this issue is an area of “fintech” we find particularly exciting: the potential impact of emerging insurance technologies, or insurtech, on Asia’s insurers and consumers.

Technology has disrupted many industries, forcing incumbents to bow to start-ups and traditional sectors to re-imagine their entire value chain. The insurance industry, with its legacy systems and antiquated business model, is set to face significant disruption in the years ahead. Advances in connected devices like wearables, advanced data analytics and artificial intelligence have already sparked a shift, as leading insurers compete with one another to get ahead of the curve before it is too late.

The disruption by insurtech may be more profound in emerging Asia than in the rest of the world. This mostly youthful growth region is very tech savvy but heavily under-insured, a result of low awareness, low incomes and low insurer penetration. With insurance processes increasingly gravitating to mobile platforms, and insurers’ ability to lower premiums thanks to improved efficiencies in distribution, risk pricing and product development, insurtech has the potential to structurally alter the way Asian consumers view insurance – from a needless purchase to a necessary one. The potential gains to society of greater risk awareness and improved productivity attendant in a better-insured Asia are likely substantial.

In this report, we analyze the role insurtech will play in increasing insurance penetration in Asia and the impact it will have on both insurers and consumers. In our view, the biggest winners from the rise and mainstream adoption of insurtech will be consumers – they will have more personalized solutions and better customer service for lower total costs. Insurers who are quick to adapt, meanwhile, will likely benefit from cost savings, improved profit margins and enhanced brand loyalty. But like all technology-driven shifts, this one will come with costs to employment; we believe 1.5 million jobs in Asia’s insurance industry are at risk of being made redundant by new technological applications in the medium term.

We also draw on the insights of industry veterans and pioneers – they too see insurtech’s rise as inevitable and largely beneficial to both insurers and their customers. Investors would do well to take note of the players that embrace innovation and are leading the industry’s evolution to become a forward-looking, mobile-first market. We hope you enjoy reading this publication, and welcome any feedback that you may have.

Min Lan Tan
Head of APAC Investment Office

A handwritten signature in black ink, appearing to read 'Min Lan Tan', with a horizontal line underneath.

*Please refer to page 2 for links to previous editions.

Executive summary



Dennis Lam, analyst

“Insurtech can completely transform how we buy insurance, how policies are priced and how claims are made in the next five to ten years.”

- **Asia is one of the most underpenetrated insurance markets in the world.** Emerging Asia held 43% of the world’s population but only 13% of total premiums in 2016. Traditional distribution models are costly and inefficient in emerging Asia due to its large populations and geographical dispersions.
- **Insurtech is set to transform the Asia insurance industry.** Connected devices, advanced data analytics, artificial intelligence (AI), and digital distribution channels should result in accelerated market penetration, more accurate risk assessment and pricing, more personalized solutions, more efficient operations and processes, and most importantly, improved customer experience and satisfaction.
- **We believe insurtech could spur total cost savings of around USD 300bn a year for the Asian insurance industry by 2025.** Competitive pressures should drive insurers to pass on a majority of the cost savings to customers, but we still expect the overall profits of Asian insurers to increase by around USD 55bn a year.
- Competition in Asia’s insurance industry will likely intensify as customers demand greater transparency and convenience, more tailored products, easier claims processes and better customer services. **Differentiation in pricing, services and customer engagement can induce meaningful shifts in market share in the medium term.**
- As with many technological advances, **insurtech could put jobs at risk – we estimate 1.5 million in the Asian insurance industry in the medium term**, primarily in the operations and administrative support areas. While the agency channel will continue to play a key role, particularly in emerging Asia, we expect agency forces to gradually shrink as digital distribution becomes more popular.
- Our interviews with three industry veterans and one start-up suggest that there is enormous potential for Asian insurers to expand their digital distribution and embrace “shared-value insurance” to grow market share and improve customer engagement. They expect more insurers to move in a similar direction, but also see **a number of challenges that could disrupt insurers’ digital transformation. These include legacy IT platforms, corporate culture and customer resistance.**
- **Customers will be the biggest winners of insurtech**, benefiting from better services, greater convenience, cheaper premiums and more personalized solutions. Insurers will gain not only greater cost savings but also enhanced perception and reputation. Incumbent insurers slow to adapt to digital transformation could see rapid market share erosion.
- Incentive-based products could lead to positive shifts in customer behaviors. As these products become more prevalent, such changes could potentially occur en masse and have far-reaching implications. **Even marginal changes in the prevalence of fire and car accidents, healthcare costs and employee productivity can yield immense benefit to society.**
- **We expect insurtech to accelerate the penetration of insurance protection in Asia.** As the population of uninsured decreases, the burden on government resources should reduce meaningfully, freeing up excess funding for other public services such as education and infrastructure and benefiting the entire society.

Welcome to the world of insurtech

Joshua climbs into his Tesla and is greeted by a familiar voice.

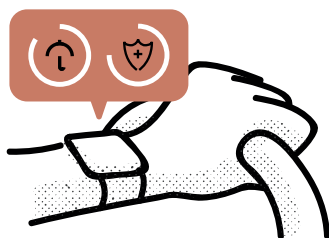


“Good evening, Joshua. Where would you like to go?”

After 12 hours in the office a drink sounds like a good idea. Or heading home to his sofa.



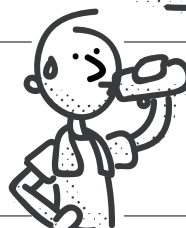
But he's close to locking in another 10% discount on his life and health insurance premiums, and a workout would earn him needed fitness points.



“Quickest route to Fitty Gym,” he tells his AI assistant.



Joshua's health is dramatically better thanks to all the exercise. He also collects fitness points that give him premium discounts and free coupons.



While the workouts are tough, they're worth it, he thinks.

“ Joshua, please turn left for Carlton Road instead. Your usual route is unusually congested.”



The AI voice annoyed him at first, but he's come to appreciate his virtual driving coach.



Plus his auto insurer provides it free of charge, using it to track his mileage and how safely he drives.

Parking his car across the street from the gym Joshua notices a group of tourists with luggage waiting for a taxi.

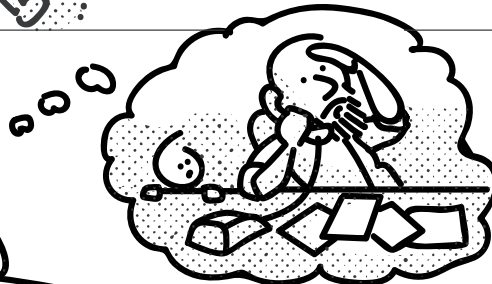


“Oh! I almost forgot!”

He whips out his phone and, with a few clicks, buys travel insurance for his upcoming trip. On his last vacation his flight was delayed and his travel insurance claim was paid even before he boarded the plane.



Inside the gym, after changing, Joshua hits the treadmill to raise his heart rate and step count. He wears his fitness tracker wristband, now as natural feeling as his Nikes as it tallies his fitness points and discounts!



As he runs his mind wanders to the hours his father, rather than doing something beneficial like working out, spent talking on the phone and filling out paperwork whenever he filed an insurance claim.



He's lucky to have access to high tech. It's made his life – and others' – so much easier.

Bringing insurance to Asia's 4.4bn people

“Despite the continued insurance growth in South-east Asia and India, innovation is key to increasing insurability and closing the insurance gap.”

– Dr. Nikolaus von Bomhard, former CEO of Munich Re



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Technology has made our lives easier in numerous ways. Today, we can easily buy clothes, order food, transfer money, find directions and learn a new language all with just a few swipes on our smartphones. While technology has transformed the business models of many industries and companies, the insurance industry is still widely viewed as traditional and low-tech, burdened by long processing times, layers of paperwork and low customer satisfaction. Insurtech could change all of this.

New technologies such as AI, machine learning, connected devices and blockchain can help modernize the entire insurance process, making it easier to shop for insurance products, become insured and file claims. Insurtech can completely transform how we buy insurance, how policies are priced and how claims are made in the next five to ten years. Based on a survey conducted by PwC¹, 74% of incumbent players believe their business models will be disrupted over the next five years.

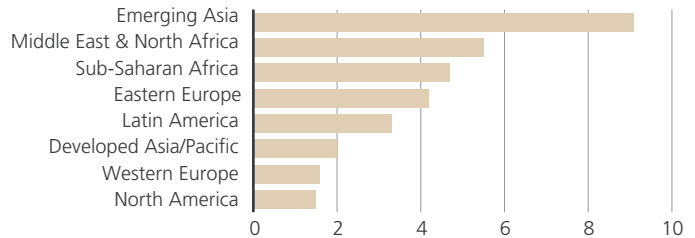
These advances could have the greatest impact on Asia as a whole – the most important growth market for global insurers. According to Munich Re², emerging Asia will be the fastest-growing market for both life and property and casualty (P&C) insurance, with an estimated real compound annual growth rate of 10.2% and 9.1% respectively from 2016 to 2025. Asia will be home to around 64% of the world's middle-class population by 2030, up from 40% currently, according to the Brookings Institution. As disposable incomes grow, the middle class will demand greater protection for their health, wealth, families and property. The strong and sustainable growth outlook over the medium term makes the Asian market an important battleground for insurers.

¹ PwC (2016) Opportunities await: How insurtech is reshaping insurance

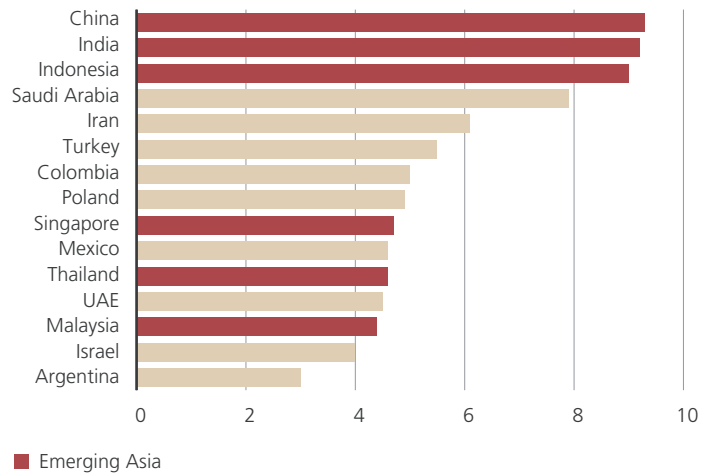
² Munich Re Economic Research (2016) Emerging countries in Asia still linchpin of global premium growth

Growth in property-casualty premiums

Real CAGR 2016–2025, in %



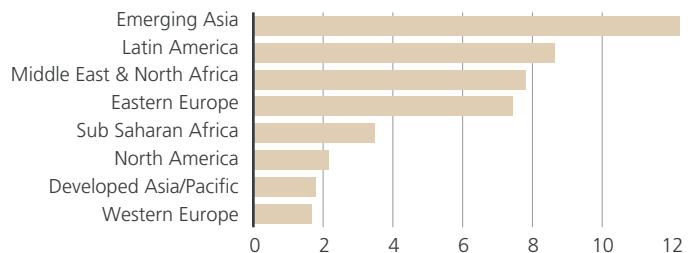
Top 15 markets



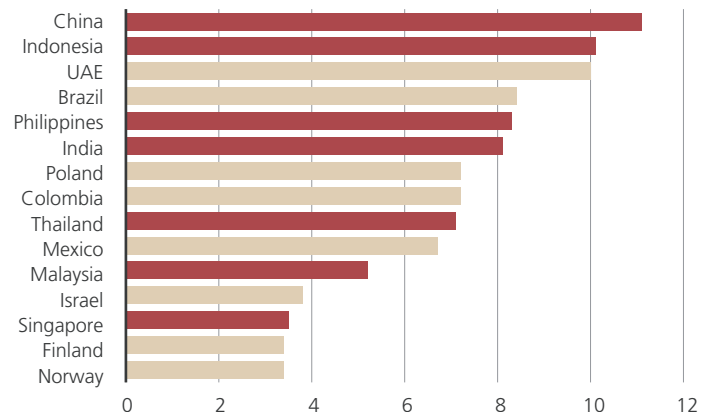
■ Emerging Asia

Growth in life premium

Real CAGR 2016–2025, in %



Top 15 markets

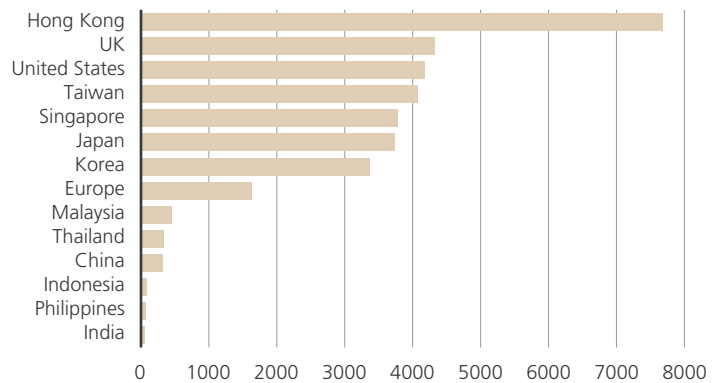


Source: Munich Re Economic Research

More importantly, a large portion of the 4.4bn population in Asia is still underinsured. Insurance penetration (as measured by premiums per capita) in countries such as Indonesia, India, Philippines and China are only a fraction of their Western peers. According to a study by Swiss Re³, the mortality protection gap⁴ in Asia Pacific was as large as USD 58trn in 2014; in India for example, for every USD 100 needed for protection, only USD 7.8 of savings and insurance is in place for a typical household, leaving a massive mortality protection gap of USD 92.2. Low insurance penetration can be partly explained by relatively lower income levels in some Asian countries, but geographical reach also plays an important role. Indonesia is the largest island country in the world with over 18,000 islands, while the Philippines has over 2,000 inhabited islands. The traditional model of insurance distribution – agents, brokers, banks – is extremely costly and inefficient in reaching such an extensive geographical area. Educating and selling to 2.6bn consumers in India and China are no easy feat as well. By making insurance products and services easily and conveniently accessible via mobile devices, insurers can further accelerate the growing protection demand in many Asian countries.

Premiums per capita

In USD, 2016



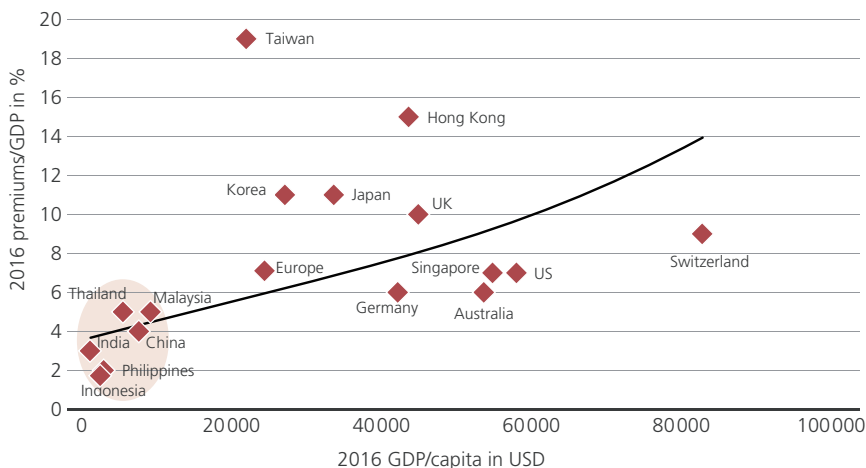
Source: Swiss Re Sigma, UBS estimates

³ Swiss Re (2015) Mortality Protection Gap: Asia-Pacific 2015

⁴ According to Swiss Re, mortality protection gap is measured as "the difference between the resources needed and the resources already available for dependents to maintain their living standards following the death of a working family member."

Premiums-to-GDP vs. GDP per capita

Insurance penetration tends to grow with rising income



Source: Swiss Re Sigma, UBS estimates

Interview – PolicyPal



Val Yap
Founder of PolicyPal

Val Yap is the founder of PolicyPal – a free app that allows users to organize, and track, all their insurance products in one dashboard. Founded in 2016, the startup aims to help customers understand their insurance coverage better. The startup has received seed funding from 500 Startups and some angel investors. It is also participating in the Monetary Authority of Singapore's financial sandbox, where after six months it could test its app for distributing insurance to customers through tie-ups with two insurance providers – NTUC Income and Etiqa Insurance. Yap founded PolicyPal due to her own experience navigating the sometimes-convoluted insurance space when a family member was sick.

Why is Asia an attractive market for insurtech startups?

We see a great deal of opportunities in Asia. The US and European markets are well developed. The opportunity there is to optimize existing policies and for insurers to gain market share. In Asia, the penetration rate is still relatively low. The opportunity in Asia as a startup is in how we can leapfrog the traditional channel and use digital platforms to increase insurance penetration by empowering individuals or insurance companies with digital channels.

For example, the life insurance penetration in Indonesia is less than 2%. How can we as a startup increase penetration there? We look to partner with insurance companies who have a similar vision and idea of online distribution. They could be the right partner for us to co-create new products in the micro-insurance aspect. The sales infrastructure in developing countries is not fully developed, which gives us an opportunity as a digital platform to gain access to those customers.

Do you think online distribution platforms could marginalize or even replace insurance agents in the future?

Some may see us as competing with insurance agents, but we are introducing the hybrid model for customers. Customers can transact general insurance products on our app and buy life insurance products from insurance agents through our platform. It would take time for all the generations to become comfortable transacting online. We work with insurance agents to help educate the public about insurance before customers go online to search for insurance policies and purchase them.

What we provide is the empowerment of distribution both for insurance companies and insurance agents. In Singapore, we have a hybrid model. For general insurance, our customers can purchase policies online via our platform. For life policies, we connect them to agents, so agents can get better leads with a higher conversion rate and better engagement with the end customers. Quite a few insurance companies wish to expand channels and explore different ways to engage the unserved customers. Agents will continue to support their markets. We are here to serve a market that is untapped or unserved, or the customers who prefer self-help services.

One of the reasons for low penetration in Asia is the lack of awareness on the importance of insurance. How would a digital platform help?

A digital platform like ours certainly increases awareness both on new and existing products that customers already purchased. One thing we help customers with is to understand their insurance needs. In our app, you can take a picture of your policies, and within 20 seconds, we can map out the jargon accordingly. Normal customers may not understand the jargon completely, and different insurers may use different terms for, say, critical illness. We help our customers understand their existing insurance portfolios and bring awareness to them regarding what is missing from their current insurance coverage.

We try our best to educate the public about why they need insurance and the types of protection available. In our experience, many people don't really understand what it means to buy insurance policies on a mobile app. The challenge is to get people to understand the new way of getting insurance and insurance products.

What exactly is insurtech?

“We’ve got much more to do. It’s about investing in growth assets. It’s about investing in digital. It’s about investing in automation, new products, and being innovative, and we are certainly doing that as well.”

– Mark Wilson, Group CEO, Aviva plc



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The best way to describe insurtech is to use a simple analogy of a traditional brick-and-mortar retailer. By moving online and using mobile apps, the retailer could leverage its existing operations to potentially target and service more customers. With the data collected through the app and online sites, the retailer can better analyze each customer's tastes and needs and offer products targeted for each individual customer. Now, imagine an insurer making a similar transformation and collecting a number of relevant data points. The end result could be more accurate risk assessment and pricing, more personalized solutions, more efficient operations and processes, and, most importantly, improved customer experiences and satisfaction. Insurtech is, in a nutshell, the technology driving these improvements. Below are examples of how insurtech can transform the key insurance processes.



Product distribution

With mobile apps and online aggregators, shopping for and purchasing insurance policies will become more convenient and efficient. Currently, there are several apps that allow customers to easily compare and purchase insurance products online. The apps can also help customers track and manage multiple policies from different insurers.

We believe most insurers will have their own mobile app with a full suite of capabilities, from product enquiry and direct purchase to claims processing. They could be equipped with AI chatbots to assist with customer queries, as machine learning allows AI to learn from interactions and improve customer services over time. In fact, based on a recent poll by Bloomberg, investors believe that the digital channel will take precedence over agency and broker channels after 2020. The increased transparency and convenience should significantly improve the overall customer experience.



Underwriting and risk pricing

Connected devices allow insurers to access, track and analyze the data of individuals, giving them additional dimensions of knowledge and understanding of their customers. Instead of

pooling risk and calculating average pricing, insurance policies will be priced based on each individual's behavior, risk profile and usage. Gartner estimates that the number of connected devices is growing by 5.5m units per day and could reach a total of 20.8bn by 2020.

Insurers can offer incentives such as discounted premiums or other bonuses to encourage positive behaviors; for instance, in Discovery's Vitality programs (see interview on page 22), insurers offer premium discounts for medical insurance if a customer can achieve certain physical activity targets measurable by wearable devices. In such a scenario, the interests of the customer and insurer are aligned – a healthier customer usually means fewer medical claims.

AI can also capture and analyze enormous amounts of data. By understanding customers better, insurers will be able to identify lower-risk (more profitable) customers and retain them through more competitive quotes and renewal offers.



Product design and development

New developments in the economy, such as the use of drones and the sharing economy popularized by Airbnb and Uber, have spurred demand for new insurance products. In the short term, "on-demand" insurance products are being created as mobile apps allow customers to become insured with a few simple clicks; examples include on-demand pay-per-use insurance for Uber drivers and "hole-in-one" insurance in Japan, which covers the cost of drinks and celebration events for golfers.

As insurers gain a much deeper understanding of their customers – thanks to connected tracking devices and AI – they will be able to offer tailored, personalized insurance that combine several solutions (life, health, auto, home, small business, etc.) into one policy at a competitive price.



Customer engagement

Connected devices and mobile apps will become an important platform for insurers to engage with customers on a regular basis and gain better understanding of their behavior. Through mobile apps, customers will be able to lodge requests, queries or complaints and receive responses in a timely manner. Insurers can also provide useful information and advice on matters such as fitness, weather, traffic conditions and flight delays. The additional services can incentivize positive behavior, cross-sell new products, improve customer experience, and enhance customer loyalty and retention.

In most industries, having direct access to customers often results in better customer satisfaction and improved margins. The increased communication and engagement between insurer and customer – from only a handful of interactions during the life of a policy – will become a key differentiator for insurers in the future, in our view.



Claims processing and operations

AI can help automate many of the administrative processes that are currently performed manually. For example, it can significantly reduce claims processing time by automating much of the claims handling process. Insurers can reap meaningful cost savings and enhance customer satisfaction through quicker response times.

The shift towards automation in operations is already occurring. Fukoku Mutual Life Insurance in Japan recently announced earlier this year that it will replace more than 30 employees in the payment assessment department with AI based on IBM's Watson technology, which the company believes could generate over USD 1m in savings per year. We expect other insurers to follow suit.



Fraud prevention

Predictive analytics can improve the accuracy of identity verification through a number of attributes such as location and online behavior. Blockchain technology can help reduce fraudulent activities, as storing customer and claims information on the blockchain will make it more difficult to use fraudulent identities and to make multiple claims for one accident. Blockchain can also be used to verify ownership, transact valuable items, and authenticate documents such as medical reports.

Example: The future of auto insurance

Auto insurance in Asia is an over USD 200bn business. The standardized nature of auto insurance policies, along with its prevalence and relatively high penetration, means that advances in insurtech can have a more immediate and outsized impact on auto insurance than on other products. The emergence of connected devices, advanced data analytics and AI can significantly improve the risk assessment, pricing and claims servicing of auto insurance⁵. The table on page 13 illustrates how insurtech could impact the lifecycle of an auto insurance policy in the near future.

⁵ We recognize that new autonomous vehicles and advanced driver-assistance systems have the potential to reduce risks of accidents and thus will become an important factor in risk assessment. However, the behavior and usage of individual drivers should still dominate the risk profile and pricing of the auto insurance.

Traditional auto insurance

Future of auto insurance

Mainly through agencies and referrals from car dealers. Some through telemarketing and online channel.

Distribution channel



Primarily through mobile apps and online platforms.

Pricing of auto insurance primarily based on driver's own record of accidents/claims and the car cost.

Underwriting/pricing



Most cars will be equipped with telematic devices to track and collect detailed data on usage and driving habits/behavior. Pricing will be based on usage (e.g. miles driven) and behavior.

No-claims bonus can result in lower premiums.

Incentives



Premium discount for positive behaviors such as safe driving.

Time consuming: need to submit info to different insurers/agents or through brokers to obtain several price quotes for comparison.

Price comparison



Easy. Online aggregators provide price quotes from different insurers in a matter of minutes.

Manual processing of documents and takes days to become insured.

Purchase process



Fast turnaround time. Documents can be submitted through mobile app, taking a few clicks to get insured.

Very little ongoing customer engagement.

Customer engagement



Through connected devices and mobile apps, insurers will be able to regularly provide customers with personalized advice such as routes and road/weather conditions to help avoid accidents and enhance driving experience.

AI can help analyze driving habits, identify weaknesses and help drivers improve.

Cars will be equipped with sensors that can detect collisions and alert emergency personnel within seconds. Insurers will be able to provide quick on-site assistance if necessary.

Time-consuming process with plenty of documentation involving the agent, surveyor and claim assessor. Often takes weeks from accident to claim payment.

Claims



Cars will be equipped with sensors that can measure the estimated damage in the event of an accident.

Claims will be submitted online. More detailed data on the accident allows for quicker and more accurate assessment of claims. Claim cycle will only take days.

Determined by pricing, relationship with agent, and customer satisfaction, particularly if there was a claim.

Customer retention



Ongoing customer engagement helps boost loyalty.

Existing insurer has the most data on driver's behavior and would be in the best position to assess his/her risk and provide more attractive rates and premium.

A game changer for Asia's insurers

"Digital is the main reason just over half of the companies on the Fortune 500 have disappeared since 2000."

– Pierre Nanterme, Chairman & CEO of Accenture



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Let's say insurtech successfully changes Asia's insurance industry for the better. What will the industry look like ten years from now? What does it mean for insurance companies, customers and employees?

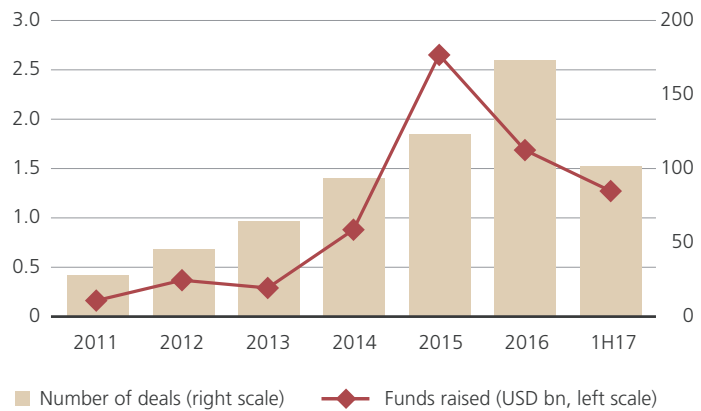
Competition in Asia's insurance industry will likely intensify as new technology makes it easier for customers to compare and purchase insurance products. Customer expectations are rising in Asia as many immerse themselves into the digital world, exclusively shopping and banking via online portals. Customers will demand greater transparency and convenience, more tailored products, easier claims processes and better customer services as they continue to digitize their lives. With the capability to accurately measure risk on a personal level, insurers will increasingly target and compete for "lower-risk" customers, in our view, likely putting pressure on premiums. But we expect insurers to be able to offset the pricing pressure with lower costs from more streamlined operations. The differentiation in pricing, services and customer engagement could induce meaningful shifts in market share over time.

Most insurers are large, well-funded companies with strong balance sheets and the capacity to invest and upgrade their technological capabilities. In addition to convenient, easy-to-use mobile channels, insurers will have to offer differentiated products and services or attractive pricing to gain customer loyalty. As most insurance solutions are relatively similar and easy to replicate, we believe customer data will become a key asset for insurers to offer tailored solutions that are easily priced. Many insurers are already offering discounts to customers who are willing to share data through tracking devices.

Finally, we expect more insurers to offer value-added auxiliary services such as advice on health and fitness and roadside assistance. These services will become more prevalent with AI and machine learning, as customer service and engagement become increasingly important differentiators for insurers.

Thanks to the enormous potential of insurtech and the size of the insurance industry, the insurtech space has attracted a large and growing number of startups in recent years. According to

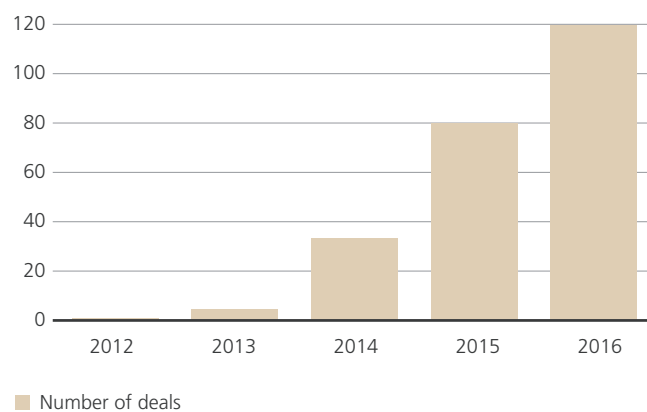
Insurtech global financing trend



Source: CB Insights

Insurer investments in startups

Number of tech investments by insurers and reinsurers



Source: CB Insights

CB Insights, global venture capital (VC) funding for insurtech startups increased significantly from 2011 (USD 140m) to 2016 (USD 1.69bn). Nonetheless, we do not expect startups to successfully challenge the incumbent insurers.

Insurance in Asia is a consolidated industry with high barriers to entry, from regulations and capital requirements to distribution and claims experience. Incumbent insurers have large databases of proprietary data, proven methodologies for risk assessment, a cost and scale advantage, and in-depth understanding of various industries and product segments – all of which are near impossible to replicate overnight by an insurance start-

Select accelerator and incubation projects by insurers/reinsurers

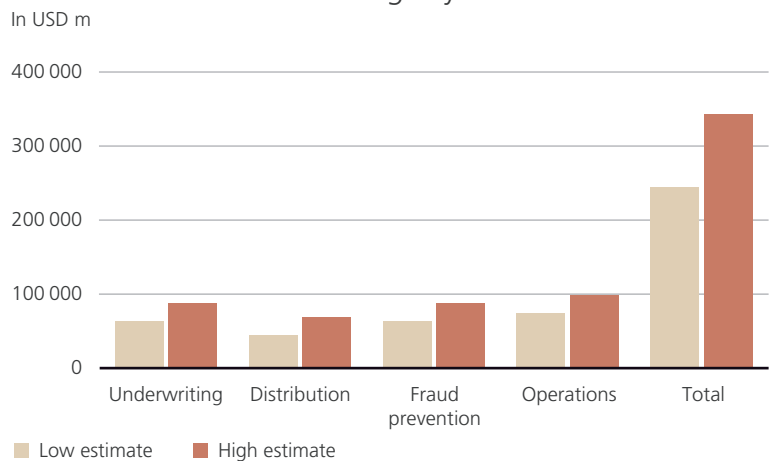
Insurer/Reinsurer	Initiative	Type
AXA	Kamet	Incubator with EUR 100m budget
Allianz	Allianz Digital Accelerator	Incubator/Innovation lab located in Monaco
Aviva	Aviva Digital Garage	Incubator/Innovation lab located in London and Singapore
AIA	AIA Accelerator	Startup accelerator partnership with KPMG Digital Village
Swiss Re	InsurTech Accelerator	Startup accelerator
MetLife	LumenLab	Innovation lab located in Singapore
Manulife	Lab of Forward Thinking (LOFT)	Innovation lab located in Singapore

Source: Company reports

up. Instead, we see insurtech startups as viable partners of incumbent insurers that can offer novel solutions to improve certain products or processes along the value chain. For example, Singapore-based startup PolicyPal (see interview on page 9) works with incumbents to distribute different insurance products through its online app, helping incumbents expand their distribution channel in a cost-efficient manner.

Many incumbent insurers in Asia have invested in startups and/or launched their own innovation research labs and accelerator programs. They are also investing in non-insurtech startups in areas like healthcare, e-payments and data security, all of which can have important applications in insurance.

Estimated annual cost savings by 2025



Source: UBS estimates

We expect insurtech to drive substantial cost savings for the industry in Asia, primarily in the following areas:

- **Operational efficiency:** automation and streamlining of processes;
- **Underwriting and risk selection:** improved pricing, better risk monitoring, and lower claims;
- **Fraud prevention:** improved fraud detection and lower claims costs;
- **Marketing and distribution:** targeted marketing, more effective cross-selling, and improved customer retention.

Through advances in insurtech and the mainstream adoption of new technologies, we estimate the total cost savings for Asia's insurance industry could be around **USD 300bn a year by 2025**. The increased competition will likely drive insurers to pass on a majority of the cost savings to customers in the form of lower premiums and value-added auxiliary services. Thus, we expect the Asia insurance industry to increase its overall profits by around **USD 55bn a year by 2025**.

Beyond the financial gain, insurtech will likely bring significant disruption to the workforce. We estimate that Asia's insurance industry currently employs around 8.5m people, with over half engaged in sales and distribution functions.

According to McKinsey⁶, up to 25% of full-time positions in the insurance industry may be consolidated or replaced over the next ten years, primarily in the operations and administrative support areas, where job functions can be replaced by AI and automation.

On the distribution side, we believe the agency channel will continue to play an important role in Asia, particularly in many emerging Asian markets where lower-income customers generally require more extensive education from agents through face-to-face interaction. Nonetheless, as the digital distribution channel becomes more popularized, agency forces should start to shrink gradually.

According to our estimates, around 1.5m jobs in Asia are at risk of being made redundant through the adoption of insurtech technologies in the next five to ten years.

⁶ McKinsey (2016) Automating the Insurance Industry

Interview – Gen.Life Limited



Steve Monaghan
Chairman & CEO
of Gen.Life Limited

Steve Monaghan is chairman and CEO of Gen.Life, a limited partner and investment committee member in True Global Ventures, vice chairman of Borderless Healthcare Mobile China, co-chairman of HK HealthTech Association, a board member of Pulse Global and a private investor in artificial intelligence, life sciences, healthtech and fintech.

At AIA Steve and the Edge team built Asia and Oceania's leading corporate Accelerator, oversaw the first Insurance company to join the R3 blockchain consortium, pioneered digital health in Asia and initiated the company's journey into Artificial Intelligence. Steve created Gen.Life, a Silicon Valley based start-up in which AIA became the lead investor, to create an R&D capability for insurers around the world in artificial intelligence and blockchain.

With new technologies such as AI and wearables being applied to the insurance industry, what kind of IT upgrades do insurers need?

If we think about the capabilities you need to take advantage of these large amounts of data and new technologies, you really cannot plug a digital system onto an analog background. For instance, AI has enormous potential in insurance, but it is very hard to superimpose AI on legacy systems that weren't designed for AI and high velocity data.

We are set up to be the R&D center for insurance companies. We are working with insurers to build that next generational stack based on high velocity information to evolve new new products and services. Insurance today is still a very analog business. It is still used to interacting with customers once or twice a year in a very low velocity manner. But then, the future of insurance is a high velocity information business.

Which part of the insurance value chain will see the biggest impact from insurtech?

It has to be underwriting – understanding, predicting risks and lowering claims. The industry is used to underwriting risks by looking backwards. Take stomach cancer for example. Your family has a history of stomach cancer, so if we look backwards we know by the time you are diagnosed you have a 84% chance of dying [from the disease]. But new and emerging technologies can help monitor your health, diagnose conditions and pharmacogenomics can help you find the right kind of treatments – both treatment costs and chance of death become much lower. Emerging technologies help you

monitor and respond to your health on a real-time basis, and the cost of that technology will continue to fall. AI's ability to distill signal from noise will be critical. AI can handle large amounts of data within such a short time-frame that could not be dealt with before. With AI, you have a good opportunity to offer personalized, tailored insurance solutions. Insurers will stop underwriting risks by looking backwards and start underwriting risks by looking forward.

How will technology change the distribution model of the insurance industry?

Think about the travel industry and travel agents. Today, the majority of that market is done through direct sales. Think about computers. At first you need a middleman to distribute computers and maintain the relationships. Today, most of that market is also done through direct sales. The transition will happen in the insurance industry as well. In 15 years' time, people will discover that their primary channel of distribution is now their secondary channel. But there will be specialist roles, like experts in Apple stores. There will always be relationship managers selling high-value products and solutions.

The key is: how do you create simple tools to allow people to engage in simple problems? That is 80–90% of the insurance industry. You have to make it simple and easy to become insured. Just like Amazon's One Click. Today it is not very easy to buy insurance, but we have the technology to make it simple and easy.

How should we think about think dynamics between startups and incumbents?

I think it has to be through collaboration and combination of technology and expertise. For us, we can help develop great technology but we need to utilize the expertise and datasets of the insurers to help build that next generation capability. You cannot develop an algorithm outside and pray that it works with the systems and datasets of the insurance company – it just doesn't work. Insurtech and insurers have to partner and collaborate. We can add value on the outside because we can move and progress much faster doing R&D outside than within an insurer.

Investing in startups accelerates your learning. Once you have a stake, your interest in learning increases exponentially. But how do they ensure the technology can be applied to their own platform? I ran accelerators and saw some great innovative ideas. The challenge is that a lot of effort goes into building out a great front-end application that does not really combine well with slow-moving legacy infrastructure.

What is keeping the large insurers from adopting new technologies today?

Culture and the learning required to understand these new technologies. Many large insurers are incredibly successful companies. When you have a momentum of success, you try to embed the reasons that got you there. That becomes your culture of success. But now you have this high velocity technology that you don't fully understand. If your board or executive committee does not fully understand the technology, the only responsible

decision has to be to say no or request more information, which dramatically slows adoption. When it comes to technological advances, organizations are limited by their own learning and their investment in learning, and oftentimes that investment is not high enough.

Customer behavior is often the gating item of adoption, not technology. Amazon was available for years before consumer adoption accelerated. Ultimately, it goes back to another big driver of human behavior, which is laziness. We default to the behaviors driven by the easiest experience. This is what accelerated adoption at Amazon. One click. Easier than driving to a mall. When we create an asymmetry around customer experience in insurance, that will trigger the behavioral shift in demand.

The challenge of embracing modernity

“People think innovation is just having a good idea, but a lot of it is just moving quickly and trying a lot of things.”

– Mark Zuckerberg, CEO of Facebook

Insurance is still considered one of the more conservative and archaic industries, though it seems like many industry executives understand insurtech’s potential. The technology – wearables, connected devices, AI, blockchain – is generally available already. So what is holding the industry back?

First and foremost, many insurers in Asia have a risk-averse culture that could suppress innovation. A viable digital strategy requires full support from senior management and cooperation with different functions, which could be challenging and time-consuming, especially within large organizations – and many of the insurers in



fololia

Asia are large, multinational organizations. The large investments and commitment required can also slow down insurers' digital transformation. In addition to spending large amounts of capex on IT systems, the restructuring costs required to streamline the administrative and operations workforce could also be considerable. Currently, many large insurers have invested in innovation labs and startup incubators. It remains to be seen whether these initiatives and investments can reap positive outcomes for their businesses, and more importantly, whether any failures or setbacks will slow their investments in insurtech.

On the execution side, most Asian insurers have legacy, decentralized IT systems that do not support the functionalities required for a fully on-line, streamlined insurance purchase and servicing platform. Many systems will require an overhaul to incorporate new technologies like AI and machine learning. It could easily take months to transform legacy systems into cutting-edge IT platforms required by modern insurtech functionalities.

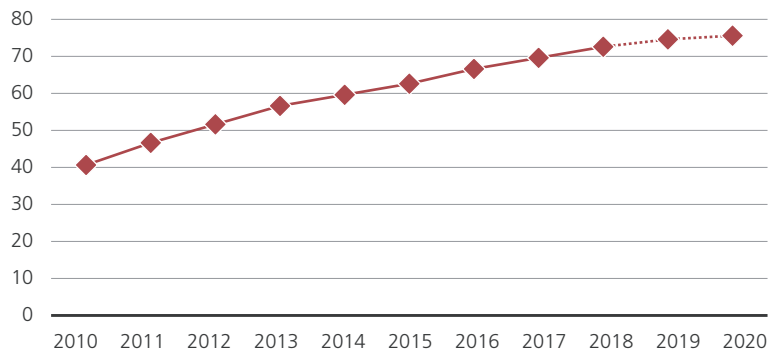
Customer adoption can also be a key obstacle. The next generation of insurance products and tailored solutions relies heavily on customers' willingness to share private data with insurers. While Discovery's Vitality program has garnered some success in this area, for example, insurers have only introduced wearables and connected devices to their customers in recent years. And we have yet to find out the types of personal data that customers are comfortable sharing with insurers on an ongoing basis. Insurers will also need to convince customers that their data can remain within a private and secure domain.

Finally, insurance remains a heavily regulated industry in Asia. Insurance regulators will need to maintain an environment that is supportive of innovation, especially as the industry will likely introduce a number of new products and solutions in the coming years.

Despite the challenges, there are also several key tailwinds for insurtech in Asia, such as rising mobile penetration. According to GSMA⁷, mobile penetration in Asia Pacific will rise to 75% by 2020 from 66% in 2016, an increase of 460m unique subscribers, with India, the Philippines

Mobile penetration in Asia Pacific

In % of population



Source: © GSMA Intelligence (2017)

and Indonesia experiencing the greatest increase in smartphone adoption during this period. The mobile channel will become a critical gateway for insurers to raise awareness, educate customers, distribute products and provide services.

In addition, the rising influence of the millennial generation (those born between 1982 and 1998) is another positive driver for insurtech in Asia. According to Accenture, millennials account for more than 45% of the population in Asia Pacific and are projected to have USD 6trn in disposable income by 2020, more than any previous generation. Millennials are not only more comfortable with new technology, but they are also more willing to share personal information in exchange for convenience, financial incentives or more personal services, based on a study conducted by Columbia Business School and Aimia. We believe millennials will become early adopters of insurtech and eventually drive the next generation of innovation: mobile-based insurance products that pull data from connected devices.

⁷ GSM Association (2017) The Mobile Economy Asia Pacific 2017.

Interview – Vitality



Dr. Shrey Viranna
CEO of Discovery Vitality

Dr. Shrey Viranna is currently the CEO of Discovery Vitality. He previously led the Discovery Health Services Division where he launched HealthyCompany (Discovery's new corporate wellness program), Discovery's new speciality pharmaceutical business and developed Discovery's Home Angel which aims to provide home based nursing care.

Prior to joining Discovery he was a partner at McKinsey & Company where he led the health consulting business, Sub-Saharan Africa healthcare practice. He also established an implementation practice with a strong operational bias. During his 12 years at McKinsey, he held a number of leadership positions with a strong focus on social development.

Can you discuss your model of shared-value insurance and how you incorporate wellness to your customers?

Viranna: Over the last twenty years, since our Vitality program was launched, it has evolved to become a behavioral economics-based wellness business model. The underlying thinking is that by shifting wellness, such as increasing physical activity and improving nutrition, and focusing on preventive measures, we are able to shift the morbidity and mortality profiles of our customers, unlocking a unique, powerful and dynamic form of insurance that actively promotes health and monetizes health engagement. Essentially, the model guides, incentivizes, and provides clients with access to a broad range of wellness and prevention tools to get them to live longer, healthier lives.

We call it shared-value insurance. By making the customers healthier, we improve their risk profile, which leads to lower healthcare costs, resulting in improved profitability for the insurer. A portion of this actuarial saving is channelled back into funding the incentives that drive positive behavior change – creating a virtuous cycle. The benefits are shared between the insurer as well as customers and society, in the form of improved health, financial rewards, and greater productivity.

Mill: Vitality is quite different from a loyalty program. Through the application of the model, we have been able to demonstrate the correlation between health and wellness behavior with mortality and morbidity in a very rigorous way. Several independent studies have helped to show the tangible benefits of Vitality impacting people's lives, for instance, that Vitality members experience 30% lower hospitalization costs and live on aver-

age 13–21 years longer than the rest of the insured population.

In your experience, are customers generally willing to provide personal data in exchange for financial incentives?

Mill: Providing incentives is a key pillar of our program. Our customers earn points and incentives through achieving certain goals in physical activity, for example. We are very transparent with the kinds of data we seek from our customers and for what purpose, and we obviously obtain consent from customers to allow us to collect relevant and appropriate health-related data.

Maintaining our customers' trust is paramount and the principle will always be the carrot over the stick – to achieve the best behavioral outcome. We're obviously incredibly careful with the management of personal data. The volume of data we are able to track has grown over time as technologies have evolved, and with the rise of wearables, we find people are becoming more comfortable with sharing personal information.

You have applied this model of shared-value insurance in other markets. What are some of the similarities and differences?

Viranna: On top of our wholly owned businesses in South Africa and the UK, we have partnerships with leading insurers in North America, Europe, Australia and Asia. We have demonstrated success in many different markets, and it's very exciting to see the model being scaled and applied in new ways. Through our existing partnerships, Vitality forms the basis of an integrated



Brett Mill
Head of Actuary, Vitality

Brett graduated from the University of Witwatersrand with a Bachelor of Economic Science degree. In 2001, he was admitted as a Fellow of the Faculty of Actuaries and a Fellow of the Actuarial Society of South Africa.

He joined Discovery in 2001 and has held various positions in the company in health risk management, strategic finance and Vitality. He is currently Chief Actuary of Vitality.

insurance offering to reach thousands of insurance customers. And it continues to grow, for example, we're working towards the third country launch of Generali Vitality in Europe, with Austria going live in October. We plan to introduce a new partner group next year in Japan with Sumitomo, and have announced a new strategic model in partnership with Hannover Re to deliver a cloud-hosted Vitality solution, with potential to reach another 150 countries.

Vitality launched in Hong Kong in 2015 and today Vitality-integrated insurance products are live in six AIA markets. Vitality Active Rewards, which rewards members for reaching short-term activity and health goals, is rolling out in an additional three markets. Vitality has shown that when people are properly incentivized to improve their health with evidence-based rewards, they can be motivated to create healthy habits.

We believe it has the potential to really change insurance, on a global scale, for good.

Mill: We recognize you can't just take line-for-line what works in one market and transport it directly to another market. But the underlying principles – using incentives to drive behavior and achieve shifts in risk profiles – that is easily transportable. The key is how you incentivize behavior in different markets, which needs to be customized. The way Vitality works in the UK is slightly different from how it works in South Africa and the US, but the underlying principles are similar.

How do you see life insurance products evolving in the future?

Mill: More insurance companies will become interested in wellness. We started the program 20 years ago, and people often looked at Vitality as a loyalty program. Today we are seeing different health insurance programs focusing on wellness and prevention. That trend continues and becomes more prominent through the use of wearable devices.

Viranna: I think shared-value insurance will become more commonplace as people understand the commercial and societal implications for the insurers by being able to change the risk profiles of customers. Alongside government, life and health insurers have a unique opportunity to monetize better health. This, coupled with the increasing demand for companies to contribute positively to the communities and societies in which they operate, equals an opportunity to deliver social good. This means insurers that dynamically manage risk will be well positioned to help address the growing burden on the healthcare system caused by lifestyle diseases, such as diabetes and heart disease. Also, a number of technological developments are disrupting the insurance industry, so there is a big play in digitally enabled solutions.

Insurtech boom a boon for customers

“A healthy society should not be full of stock investors, but policyholders.”

– Jack Ma, Chairman of Alibaba



iStock

Customers will be the biggest winners of insurtech's rise, in our view, as they will benefit from better services, greater convenience, cheaper premiums and more personalized solutions⁸. Insurance companies will also benefit from potential cost savings and incremental revenue opportunities. In addition to these benefits, the broader implications of insurtech in Asia could be substantial.

Asia's low insurance penetration is well documented. A large uninsured population places an enormous burden on government resources. The government often ends up bearing the costs of the uninsured with funds that could otherwise be used for other public services such as infrastructure and education. A dearth of coverage also exacerbates income inequality, as those without insurance end up draining their incomes and savings on healthcare bills. The social price of underinsured is difficult to estimate, though such costs in emerging Asia – with 43% of the world's population and insurance penetration well below global averages – are certainly among the highest worldwide.

Along with income levels, a lack of awareness and understanding of insurance protection is a big reason for low insurance penetration in Asia. In the age of smartphones and instant information, however, mobile apps will allow insurers to raise awareness and educate the public in a cost-effective way. And a convenient, easy-to-use mobile platform selling simple and affordable insurance policies has the potential to see exponential growth in adoption in just a short period of time. In certain geographically dispersed areas, mobile technology could be the only efficient channel to distribute insurance. In our view, insurtech can significantly accelerate insurance penetration in Asia, thus creating considerable economic and social value for these countries.

The next generation of insurance products will likely place a greater emphasis on prevention and incentivize positive, lower-risk behaviors via premium discounts. Incentive-based products could lead to positive shifts in customer behaviors. And as these products become more prevalent, such shifts in customer behaviors could potentially occur en masse, which would have far-reaching implications. Even a marginal change in the prevalence of fire and car accidents, healthcare costs and employee productivity can already yield immense benefit to society.

The pace of change and disruption in Asia's insurance industry might be uncertain, but the direction of such developments is quite clear, in our view. The impact of insurtech will become increasingly apparent over the next several years, as its influence could reach far beyond the insurance industry. Investors would therefore do well to pay close attention to the development of insurtech in Asia.

⁸ For a broader perspective on how the consumer is emerging as the biggest beneficiary of technological disruption on goods and service sectors refer to *Shifting Asia #1: Asia's Consumer Dividend*

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