

Can Data and Technology Support the Insurance Industry to Regain Lost Relevance?

June 2019

Summary

While the nature of risks organisations face has changed dramatically in the last 20 years, the Insurance industry, that is setup to help manage this risk, hasn't. This very slow response to change, has meant the Insurance industry has lost relevance. More concerning is that, without effective insurance, both companies and individuals may not be willing to take risk on, and innovation and economic development can be delayed.

Data and emerging technologies are creating opportunities for the Insurance industry to regain relevance. If the industry is able to innovate, increase efficiency and improve customer experience, there is potential to overcome the most pressing challenges. It will allow the industry to keep up with customer demands and re-emerge as a core contributor to the global economy. If, however, the Insurance industry fails to deliver, either others will fill the space, or investing in new areas will become a much riskier proposition.

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1 Introduction

Since the start of the Third Industrial Revolution in the 1980s, the world has changed in many different ways: rapid introduction and adoption of technological innovation (global internet; social networks; mobile technologies; evolving payment solutions; data availability); new economic realities (volatile and shorter economic cycles; interconnected financial climate; under utilisation of assets); structural shifts in society's values (desire for community; generational altruism; active citizenship); and demographic readjustment (increasing population; urbanization; longer life expectancy; millennials in the work force).

While these changes have been happening, the Insurance industry has seemingly preferred to operate in a closed environment oblivious to much of the impact these changes could bring. Resistance to change, failure to meet changing customer demands and a decrease in the importance of attritional risks has led the Insurance industry to reduce its relevance.

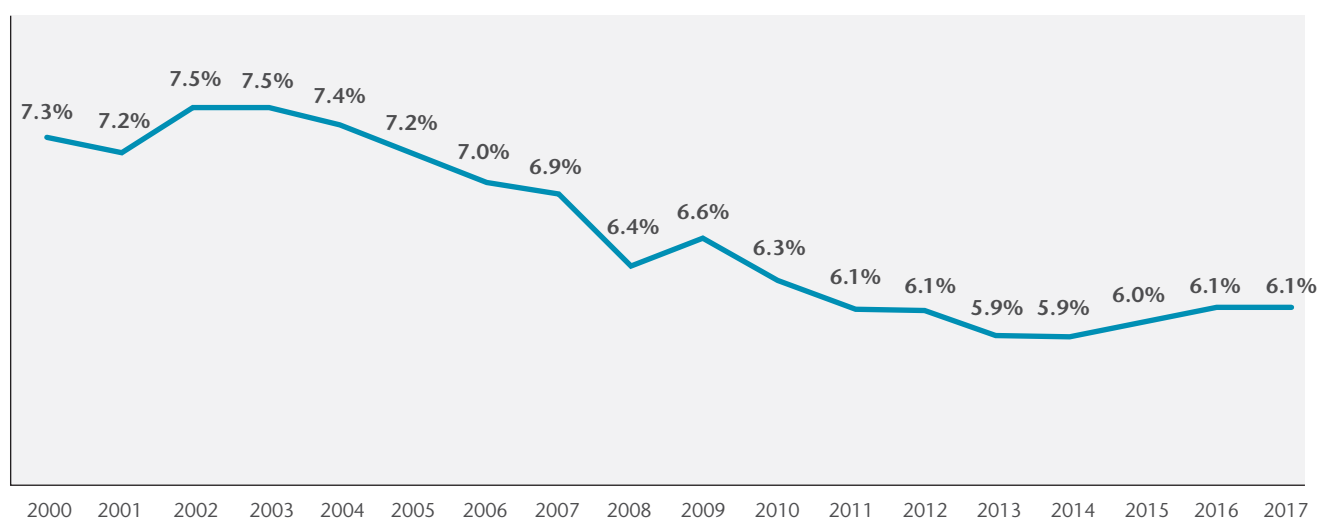
However the availability of data, the introduction of new capital providers, the impact of new business models emerging from the sharing economy and the challenge of InsurTechs are affecting the industry complacency. Collectively, these factors are creating the perfect storm for the incumbents allowing them to re-evaluate their preference for maintaining the status quo. There is an ever increasing expectation from the industry to be more innovative and deliver a vastly improved customer experience.

As data and emerging technology are accelerating the need for change, they are also opening doors. The industry is at cross roads where it can either choose to regain relevance by adapting to the new world order or it can continue to decline. Should it choose the latter, it could expose the US\$ 5 trillion market to approaches from large technology firms and manufacturers who have the access to customers, transformational capabilities and more than enough capital to fill the void left by the traditional players.

2 Insurance industry is losing relevance

By the end of 2017, the global Insurance industry was a US\$ 4,891.7 billion business, having grown at 4.1% annually since 2000. During the same period, however, global gross domestic product (GDP) grew annually at a rate of 5.2%, outpacing the Insurance industry growth. In fact, the Insurance industry's share of GDP has declined noticeably from a high of 7.5% in 2002 to 6.1% in 2017 as shown in graph 1.

Graph 1: Global Insurance industry Share of GDP (2000-2017)



Source: Swiss Re Sigma Explorer Dataset

The industry has traditionally tracked the GDP growth, with its importance in the developed economies such as the USA, peaking in the 1980s. Insurance has been a backbone of growth and innovation in other industries by allowing customers to purchase and/or make investments by marginalising the impact of associated risks. The declining share of GDP shows a loss of relevance in a period of great innovation. While in the short term

this loss of contribution to the global business engine is an issue for the Insurance industry, in the long run it may well lead to a reduction in investors ability to invest and innovate, so is an issue for all.

The various factors that have contributed to this decline are explored in the following sub-sections.

2.1 Insurance industry is slow to evolve

The Insurance industry has historically lacked an appetite to evolve and has shown reluctance in adopting industry-wide changes. A number of key elements, have created high barriers to entry. New entrants have found it difficult to challenge the status quo and lack appetite to win market share from incumbents with significantly large balance sheets. Such high barriers have kept the impact of disruption to minimal, allowing the industry to stay complacent even when most other industries have undergone significant structural shifts. In many ways 'Darwin' has not been at work.

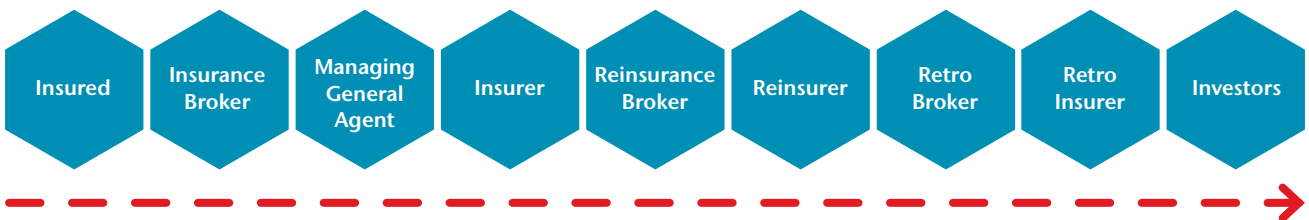
2.1.1 A complex value chain

The Insurance industry started with a simple value chain involving four roles – the insured, a broker who advises the insured, an underwriter who prices the risk and an investor who provides the capital to secure the risk. Over centuries, the chain has expanded to include multiple other roles essential in helping the spreading of large risks across a broad investor community, as shown on graph 2 below.

These new parties have benefitted the chain by providing expertise, access to customers, secure handling of transactions, arbitration in case of disputes and spreading of risk coverage across multiple partners. However, this has also resulted in added complexities and inefficiencies as each risk now undergoes multiple handovers.

While a longer value chain offers opportunities to new entrants to attack at multiple points, the added complexities and the importance of scale reduces opportunities to cause real disruption.

Graph 2: Example Insurance industry Value Chain



Source: Aon analysis

2.1.2 Stringent regulations

Insurance is one of the highest regulated industries in the world. And since the global financial crisis of last decade, when governments across the globe bailed out several financial service providers including insurers, the focus on capital adequacy and customer safety has increased manifold.

While a proactive regulatory regime ensures a healthy operating standard with potential measures in place to avoid another financial meltdown, multiple surveys have highlighted the implications of increased regulatory burden, leading to increased costs and limited product innovation.

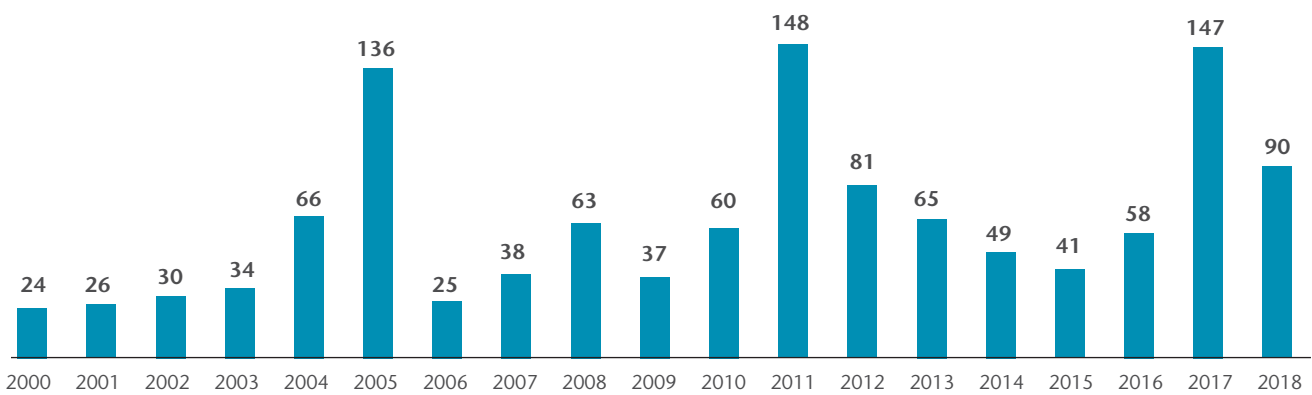
2.1.3 Scale and volatility of losses

The true value of any insurance product is realised when the customer receives payments for incurred losses. This means that insurers must maintain enough reserves at any time to meet these claims.

Over the years volatility in high severity losses have made it difficult for insurers to accurately predict the required capital levels, as shown on graph 3 below.

In addition, regulators now require insurers to be adequately capitalised with enough buffer to sustain extreme losses for even the lowest probability of occurrence (for example 1-in-100 years event or 1-in-200 years event). This puts additional pressure on the insurers to maintain bulky balance sheets. On the other hand, a large capital base gives established insurers advantage of scale and limits growth opportunities for smaller industry players/new entrants.

Graph 3: Global Insured Losses (US\$ billion) - All Natural Disasters (2000-2018)



Source: Aon plc, 2019: 7

2.1.4 Need for proprietary and historical data.

Accurate pricing of the risk is key to survival in the industry. The insurers (specifically underwriters supported by actuaries) rely excessively on experience and statistical analysis to determine the premiums that they would be willing to take to cover the risk.

Access to correct and historical data is of chief importance and has been a key differentiating factor amongst insurers. Since the dawn of Third Industrial Revolution in the 1980s, insurers have been involved in a race to acquire, store and develop proprietary databases that allow them to price risks better than the competitors.

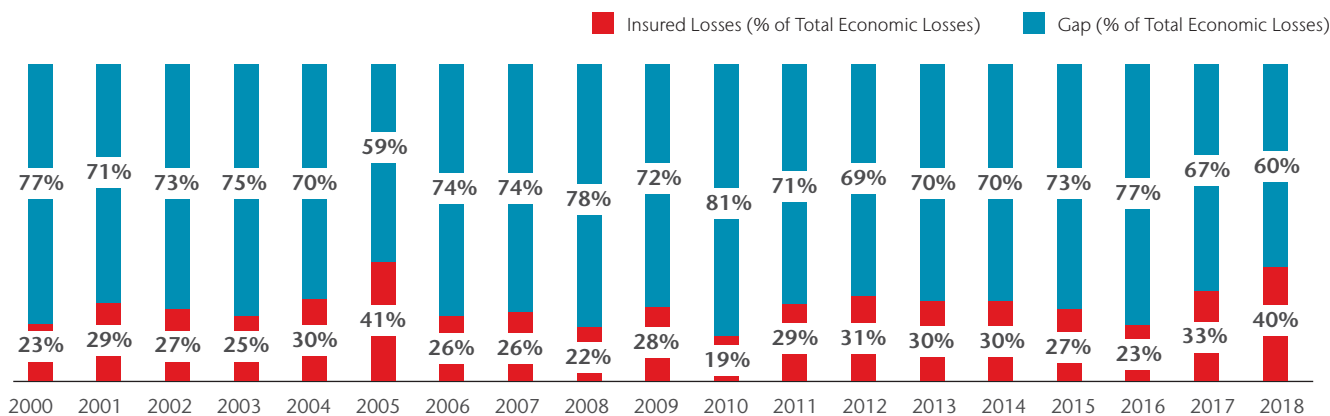
The collection of these extensive databases by incumbent insurers have given them immense benefits over new entrants that do not typically have similar datasets. Additionally, the incumbents have continued to add on to these databases through an unchallenged continuation of underwriting— which has further widened the gap for new entrants.

2.2 Struggling to meet customer needs

Despite years of existence, the Insurance industry has failed to keep up with the demand for risk coverage. For example the economic value of losses from all natural disasters has

consistently been more than the insured value of losses by an average multiple of 3x-4x. This gap is highlighted in graph 4 below.

Graph 4: Gap in Insured and Economic Losses – All Natural Disasters (2000-2018)



Source: Aon plc, 2019: 3;7

The gap is not limited to natural disasters. As highlighted by Aon’s Global Risk Management Survey 2019¹, multiple top risks sighted by customers are either uninsurable or partially

insurable leading to significant supply gap. Graph 5 below highlights the Top 30 risks (in order of rank) from that survey.

Graph 5: Top Risks from Aon’s Global Risk Management Survey 2019

		Legend: ■ partially insurable ■ uninsurable ■ insurable		
1 Economic slowdown/slow recovery	2 Damage to reputation/brand	3 Accelerated rates of change in market factors	4 Business interruption	5 Increasing competition
6 Cyber attacks/data breach	7 Commodity price risk	8 Cash flow/liquidity risk	9 Failure to innovate/meet customer needs	10 Regulatory/legislative changes
11 Failure to attract or retain top talent	12 Distribution or supply chain failure	13 Capital availability/credit risk	14 Disruptive technologies/innovation	15 Political risk/uncertainties
16 Exchange rate fluctuation	17 Concentration risk (product, people, geography)	18 Workforce shortage	19 Counter party credit risk	20 Aging workforce and related health issues
21 Property damage	22 Environmental risk	23 Weather/natural disasters	24 Third party liability (incl. E&O)	25 Technology failure/system failure
26 Major project failure	27 Failure of disaster recovery plan/business continuity plan	28 Injury to workers	29 Failure to implement or communicate strategy	30 Asset value volatility

Source: Aon 2019 Global Risk Management Survey

Six of the top 10 risks, including Damage to reputation/brand and Cyber, require better data and analytical insights to achieve fully effective risk transfer. However, current capabilities are primarily applied to drive better pricing and claims certainty across existing risk pools, and have not yet reached their full potential for emerging risks.

This inability to meet customer need has been driven by both an expensive model (for most risks only 60% of premiums paid are actually returned to the insured) and a lack of innovation. Historically, the need for long data trends meant insurance products always trailed emerging risks.

¹Aon’s 2019 Global Risk Management Survey, the seventh of its kind since 2007, was conducted in the last quarter of 2018. It is designed to offer organizations the insights necessary to compete in an increasingly complex business environment. Conducted biennially, the survey gathered input from 2,672 decision-makers from 33 industry sectors. Participant profiles encompass small, medium and large organizations in 60 countries across the world. About 66% represent privately-owned companies and 21% public organizations. The rest are primarily government or non-for-profit entities.

2.3 Core business in decline

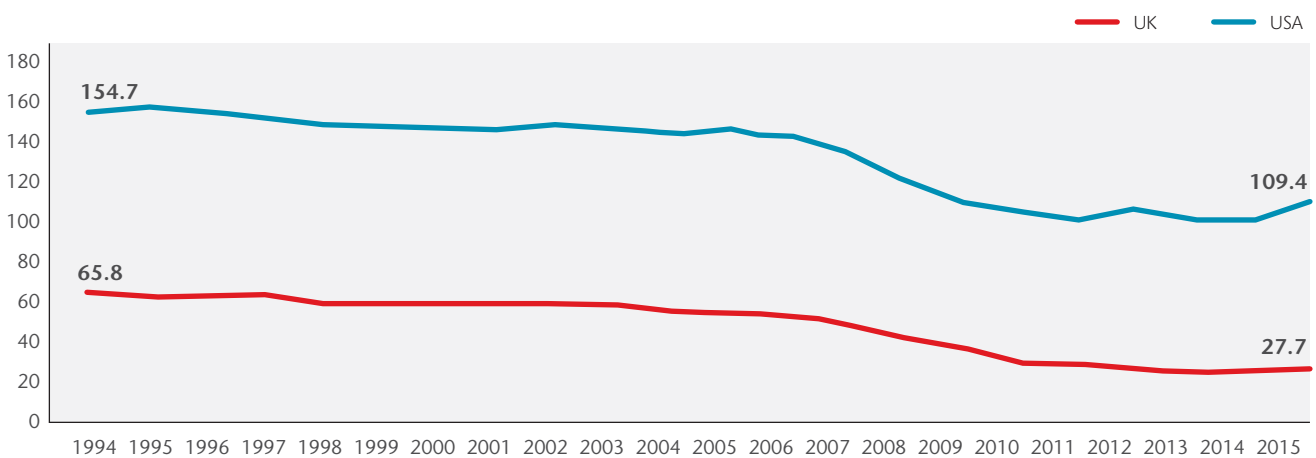
Attritional losses are defined as losses occurring from non-catastrophe events. These are high frequency-low severity losses that are generally stable and relatively easier to model and reserve for. Insurers are keen to cover attritional losses to counter-balance the volatility-prone and uncorrelated catastrophe-risks.

However, given the improvements in technology and infrastructure, an increase in consumer awareness on health and safety matters and a focus on prevention rather than claim, attritional losses have followed a downward trajectory. The data below highlights a reduction in

frequency of incidents leading to lower attritional losses, which consequently impacts the demand for such insurance products.

Graph 6 shows the trend in fatalities arising from road accidents in the UK and the USA. Motor is one of the largest classes of insurance accounting for more than 40% of Global Property&Casualty premiums (MOODY'S, 2018: 8). Over the years, manufacturers have significantly improved the in-vehicle security mechanisms to reduce the impact of accidents, and road safety has improved. This has changed the basic nature of risk that insurers are used to underwriting and will impact the pricing and coverage of traditional motor insurance products.

Graph 6: Fatalities from Road Accident Per 100,000 Habitants, UK & USA 1994-2015



Source: OECD Data, Road Accident Statistics, <https://data.oecd.org/transport/road-accidents.htm>

This trend is repeated across many categories. For example, non-fatal occupational injury and illness incidence rates - which is core to the Workers' Compensation class of insurance in the USA - were dramatically reduced as a result of an increased focus on preventing work place

accidents, an improvement in facilities and delivery of comprehensive worker education. In the period from 2003 to 2017, the per capita accidents went down from 5.0 to 2.8

3 Status Quo is being challenged

While the industry has been losing relevance, it is now facing new challenges which are creating pressure for change. While these challenges are impacting the incumbents they also provide the potential for insurance to regain its key role in supporting innovation. Creating opportunity for lower costs and new innovations.

3.1 Growth in new 'alternative' capital

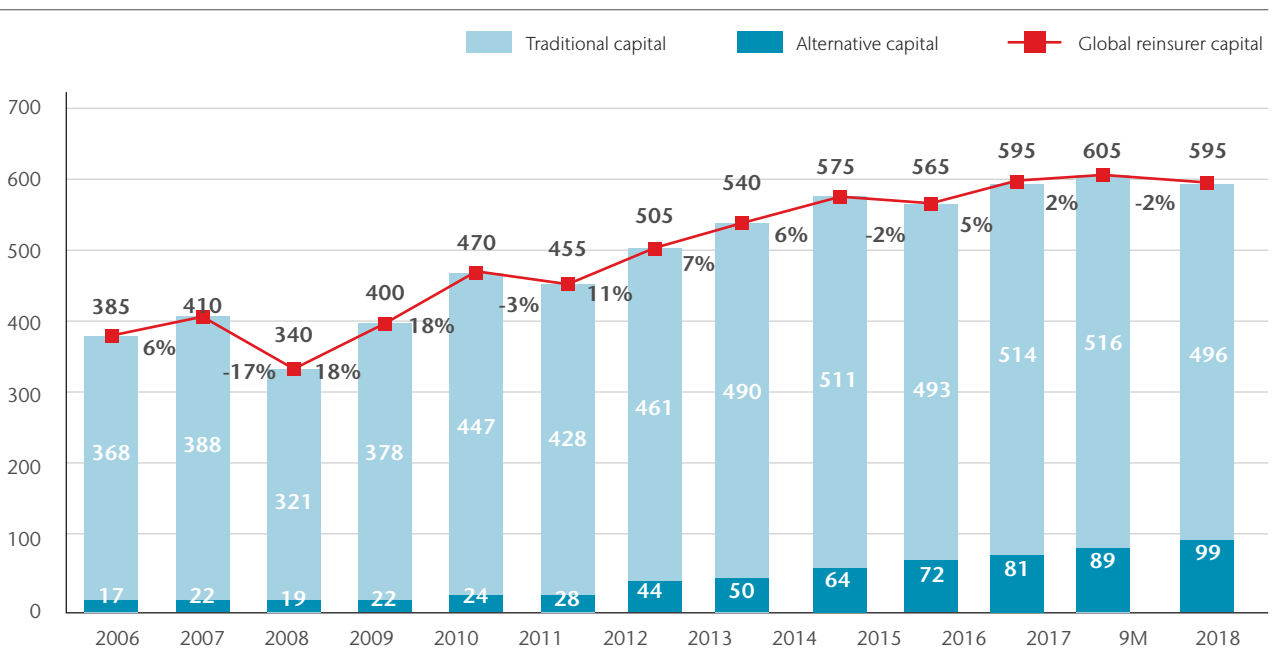
Insurers look for additional capital in the reinsurance market to protect their balance sheet against unexpected losses, to free-up capital to achieve other targets (geography and new class expansion) and to access expertise and services in product development, pricing and underwriting. This risk spreading is a critical element in the operation of the insurance market.

Historically, both insurance and reinsurance markets have relied on traditional sources of capital - retained profits, shareholder funds/equity investments and market loans. Over the last two decades, a new source capital for the industry has emerged known as alternative capital. It is currently focused

on the reinsurance market and has grown rapidly (now at c.16% of reinsurance capital) since its introduction. It refers to direct investments from the financial markets (hedge funds, mutual funds, sovereign wealth funds, pensions and institutional investors) into the reinsurance business.

It is estimated that global reinsurer capital stood at US\$595 billion at September 30, 2018, down 2% relative to the end of 2017. Traditional capital fell by US\$ 20 billion to US\$ 496 billion (-4%), while alternative capital rose by US\$ 10 billion to US\$ 99 billion (+11%) as shown on graph 7 below.

Graph.7: Change in global reinsurance capital



Source: Aon own analysis based on Company financial statements; Aon Business intelligence and Aon Securities Inc.

Alternative capital firstly appeared in the early 1990s. Hurricanes Andrew and Iniki (both in 1992), followed by the Northridge Earthquake (in 1994), led to higher reinsurance prices and questions about the ability of traditional reinsurance to pay losses after catastrophes. In 2005, losses from hurricanes in the USA stimulated the growth of the non-traditional risk transfer market and increased the popularity of Cat Bonds, Industry Loss Warranties (ILWs)² and Sidecars³. These products were supported by alternative capital. In essence, the capital was used to absorb the effects of a hard market (rising prices) or to manage complex or difficult risk exposures which were often uninsurable in the traditional insurance market. (BRUGGEMAN, V. 2007: 5). This was aided by the increased availability of structured and historical data on losses.

After the financial crisis of 2008, the incentive to diversify investments and a need for returns further enhanced the appeal of Insurance industry to the holders of alternative capital.

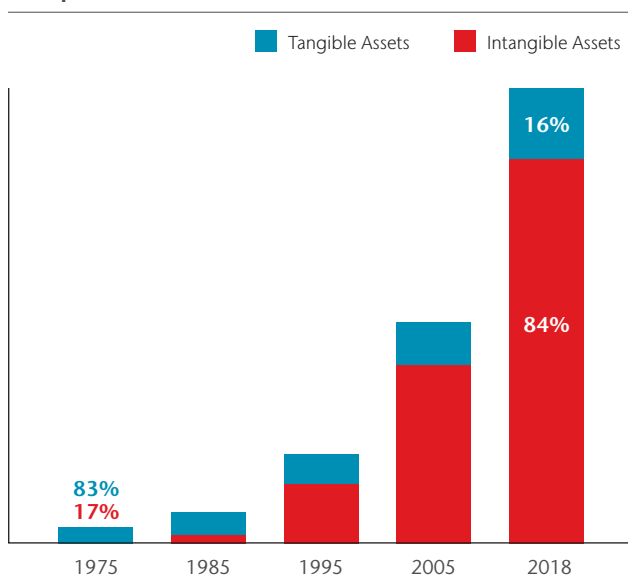
With further improvements in data and analytics, alternative capital can potentially bypass the traditional value chain to access ‘pure’ insurance risks. Supported by detailed exposure data and facilitated by emerging technologies, this form of capital is cheaper and allows for more efficient transaction mechanisms compared to traditional forms of capital. It has significant potential in lowering the long term costs of gaining insurance due to its lower cost of capital. Enabling insurance to cover more risk.

3.2 Growth of intangible assets

The insurance customer landscape has changed considerably: traditional property and casualty losses are no longer the only main risks that corporations are focused on mitigating. The importance of intellectual property and brand/reputation in value creation is leading to a realignment in the customer risk profile.

Value in the corporate world is no longer driven by physical/ tangible assets. As technology has advanced, it has led to the growth of intangibles assets in the form of intellectual property. The graph below shows that 84% of market capitalization in 2018 was driven by intangible assets. While the five largest corporations in 1975 were manufacturing companies (IBM; Exxon Mobil; P&G; GE; 3M), that has completely changed in 2018 as the first five positions were occupied by Tech companies (Apple; Alphabet; Microsoft; Amazon; Facebook).

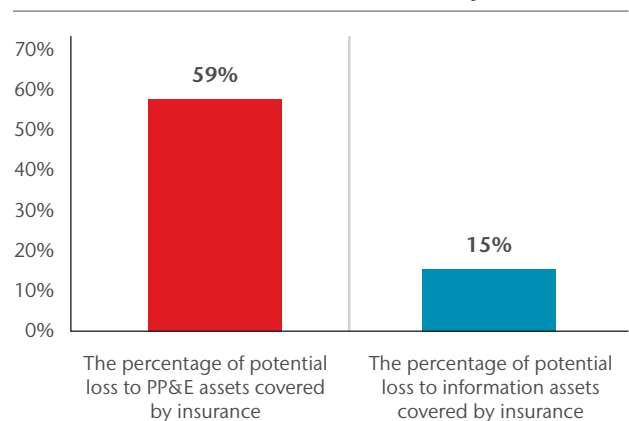
Graph.8: Tangible vs Intangible assets for S&P Companies 1975-2018



Source: Aon own analysis based on Company financial statements; Aon Business intelligence and Aon Securities Inc.

Yet, organizations are only able to secure coverage to insure a relatively small portion of their intangible assets (15%) compared to insurance coverage for legacy tangible assets (59%), as shown on graph 9 below.

Graph.9: Percentage of Property, Plant & Equipment (PP&E) and Information assets covered by insurance



Source: PONEMON INSTITUTE LLC, 2017: 3

This shift represents both a challenge and an opportunity for the Insurance industry. The ability to provide coverage for intangible assets would enable insurance to regain relevance and support innovation and investment. Until it can, its importance is likely to remain muted.

²Industry Loss Warranties (ILW): the specified limite denotes the amount of compensation received if the industry loss warranty is triggered

³Sidecar is a quota share contract between (re)insurers and investors covering a book of business

3.3 Sharing economy

The sharing economy is an emerging economic system, based on the use of internet and mobile technology, to share assets or services on a peer-to-peer level. It allows the participants to gain instant access to goods, services, experiences, resources or information without the burden of ownership or long-term commitment.

Popularized by the likes of Airbnb and Uber, the sharing economy has emerged as a global movement that continues to shape the global economy. Although still relatively small – revenues globally are estimated in US\$ 15 billion in 2014 – it is projected to reach US\$ 335 billion by 2025 (PwC, 2015: 14).

Shared assets promoted by these firms is beginning to have an affect on insurance, changing the relationships between insured and insurer. Increasingly to support shared assets, insurance needs to be integrated into the shared service, rather than being a policy held by an individual.

No where is this more relevant that in the rise of shared and autonomous vehicles. By 2025, the car market for partially autonomous vehicles is expected to be at US\$ 36 billion

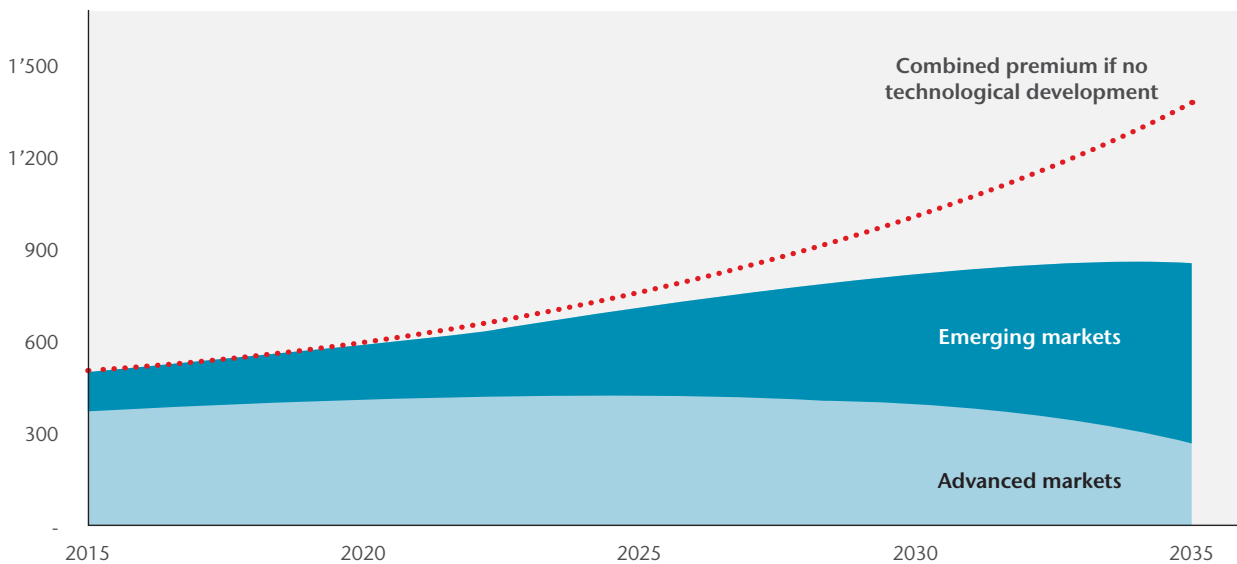
while the market for fully autonomous vehicles lags at US\$ 6 billion⁴. Some industry experts predict up to 21 million autonomous cars could be sold globally in 2035, and that more than half of US traffic could be autonomous by 2050.

Self-driving cars will change how cars are insured with most of the liability associated with self-driving cars stemming from manufacturer rather than driver. This new generation of cars will create new types of risks, such as cyber, which were not associated with traditional motor insurance (DELOITTE, 2016: 7)

However Swiss Re estimates that as self-driving vehicles become widespread, accident rates could fall by up to 40% by 2030, with motor premiums starting to fall in advanced markets⁵ as shown in the graph below. Given automotive insurance represents over a third of the global market this trend is highly significant.

The Insurance industry will need to both rethink its products and integrate them further into services. While an opportunity for some, it will be a major challenge for many current players.

Graph.10: Automobile Premiums in US\$ billions from passenger vehicles only in selected markets



Source: Moody's, 2018: 9.

⁴<https://www.statista.com/topics/3573/autonomous-vehicle-technology/>

⁵Advanced markets include: Canada, France, Germany, Japan, UK and USA. Emerging markets include: Brazil, China, Egypt, India, Mexico, Russia

3.4 InsurTech

The Insurance industry has had traditionally manual processes, and has been a paper driven industry with huge inefficiencies. While customers' needs are evolving at an unprecedented quick pace, the incumbents' large legacy systems and naturally conservative approach, make them slow to reach the market with new products and an improved customer experience.

InsurTechs are companies that use technology to make the traditional insurance value chain more efficient. They are beginning to reshape the Insurance industry by targeting particular value pools or services in the sector, rather than seek to provide end-to-end solutions.

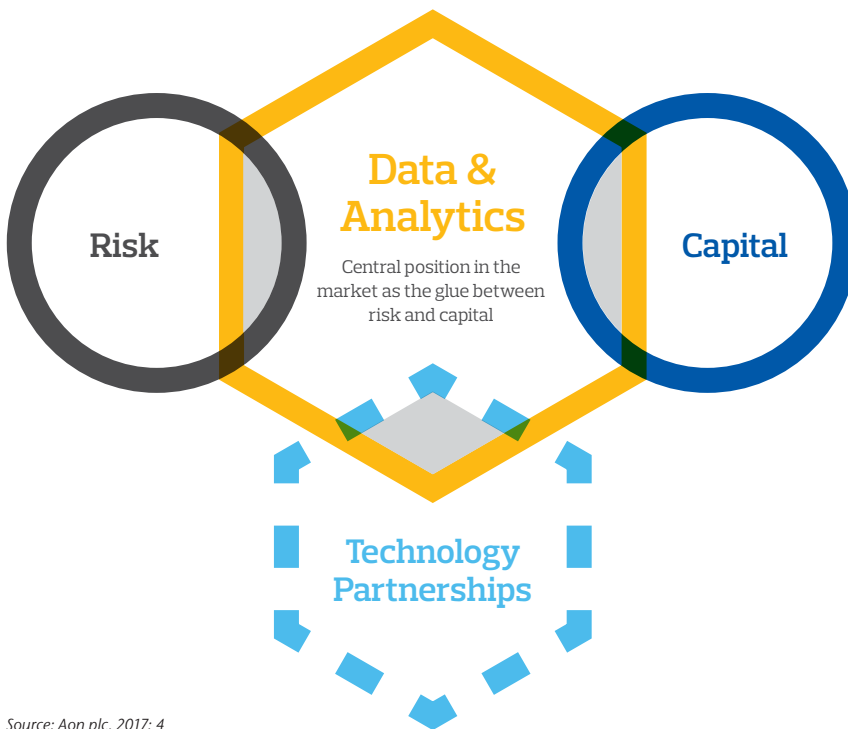
InsurTechs have seen more than US\$ 11 billion of funding since 2015, and the volume in 2018 is expected to reach US\$ 3,8 billion (FT PARTNERS). While Insurtechs were originally viewed as a disruptive force competing with traditional insurers to gain market share, there is a growing collaboration and partnership with the incumbent

players. Most of them are launched to help solve legacy insurer problems across the organization, from general inefficiency in operations to enhancing underwriting, distribution, and claims functions, especially in consumer facing insurance. More recently they are also moving into the commercial segment focusing on loss prevention and efficiency. (CATLIN, T. et al. 2017). Incumbent insurers have managed to leverage InsurTechs to speed up innovation (DELOITTE, 2018: 11). From a funding perspective most of the US\$ 2.6 billion that went into the InsurTechs in the first nine months of 2018 came from incumbent Insurers. (MOODY'S, 2018: 6).

The accelerated use of technology and digital capabilities again represents both a challenge for the industry but also an opportunity to innovate and develop more efficient products and services.

4 Data and technology with potential to transform

Graph.11: The Emerging Open Architecture Model



Source: Aon plc, 2017: 4

Traditionally, the Insurance industry has used proprietary historic data to match the demand from risk owners with the supply from capital providers. Focusing on relative simplistic regression analysis as the main approach. While robust, this approach is reliant on a long data history and limits insurers ability to move into new areas

Increasingly the transformative power of data and technology is changing this relationship, as shown in the graph below. While underwriting data used to be in the hands of the incumbents

only, emerging technologies, new analytical techniques and huge increases in sensors are enabling usage of new forms of data that are much more freely accessible. In addition, these technologies are supporting instant delivery of in-depth analytics that can potentially lead to significant efficiency gains and new types of products.

This effect is pervasive. In the following sub-sections, the paper focuses on three key technologies of note for the Insurance industry.

4.1 Artificial Intelligence

Artificial Intelligence - Robotic Process Automation (RPA) and Cognitive Intelligence (CI) - is know as any system that can perceive the world around it, analyse and understand the information it receives, take actions based on that understanding and improve its own performance by learning from what happened.

Artificial Intelligence not only gives the opportunity to reduce costs (process automation; reduction of cycle times; free up of thousands of people hours) but improves accuracy that results in better data quality. For insurers

this offers significant potential to both enable new ways of interpreting data and understanding risks. As well as reducing the costs of many critical processes such as claims assessment. This dual impact of better understanding and lower costs is highly valuable.

Insurers' spend on cognitive/artificial intelligence technologies is expected to rise 48% globally on an annual basis over five years, reaching US\$ 1.4 billion by 2021. (DELOITTE, 2017: 15).

4.2 Internet of Things

The Internet of Things refers to the digitization of objects around us. It works by embedding advanced hardware (e.g. sensors, cameras and meters) into everyday objects and even people themselves, linking those objects further to on-line networks. (MOODY`S, 2018: 11).

For example, connected devices in the homes such as water leakage detectors, smoke alarms, CO2 readers and sophisticated home security systems will support prevention and reduction in losses from water damage, fire and burglary, respectively.

The Internet of Things has the potential to significantly change the way that risks are underwritten. The ability to have access to data in 'real time' will provide greater precision in the pricing of risk and also help insurers to respond better to the evolving customer needs. Consider the example of home insurance; customers will be forced to reconsider the decision to buy home insurance as

packaged currently when their house is already monitored 24/7 for break-ins and the sensors are constantly monitoring the appliances to prevent fires. The insurers could utilise the same data to develop customised insurance policies depending on usage and scope of sensors.

The Internet of Things applies equally to wearable devices with embedded sensors for tracking vital statistics to improve the health, safety and productivity of individuals at work. It is predicted that the connected health market will be worth US\$ 61 billion by 2020⁶.

The Internet of Things offers the Insurance industry an opportunity to reinvent itself and to move from simply insuring against risk to helping customers protect the properties / health. This integration of insurance with products through live sensor data can revolutionise how insurance is embedded into our every day lives.

⁶<https://medium.com/iotforall/how-will-iot-transform-the-insurance-industry-609f89a12bf1>

4.3 Blockchain

All disruptive technologies have a “tipping point” – the exact moment when it moves from early adopters to widespread acceptance. Just as it was for Google in the late 1990s and smartphones in the 2000s, could we be approaching the tipping point for the next big disruptive technology – blockchain?

Essentially, blockchain is a shared digital ledger technology that allows a continuously growing number of transactions to be recorded and verified electronically over a network of computers. It holds an immutable record of data, stored locally by each party to remove the barrier of trust. Through smart contracts, blockchain can enable automation of tasks for more efficient processing. It made its debut in 2009 as the system used to track dealing in the first cryptocurrency, Bitcoin, and, since then, organisations around the world have spotted blockchain’s potential to transform operations.

Most industries are currently experimenting with blockchain to identify and prove successful use cases to embrace the technology in business as usual. IDC, a leading market

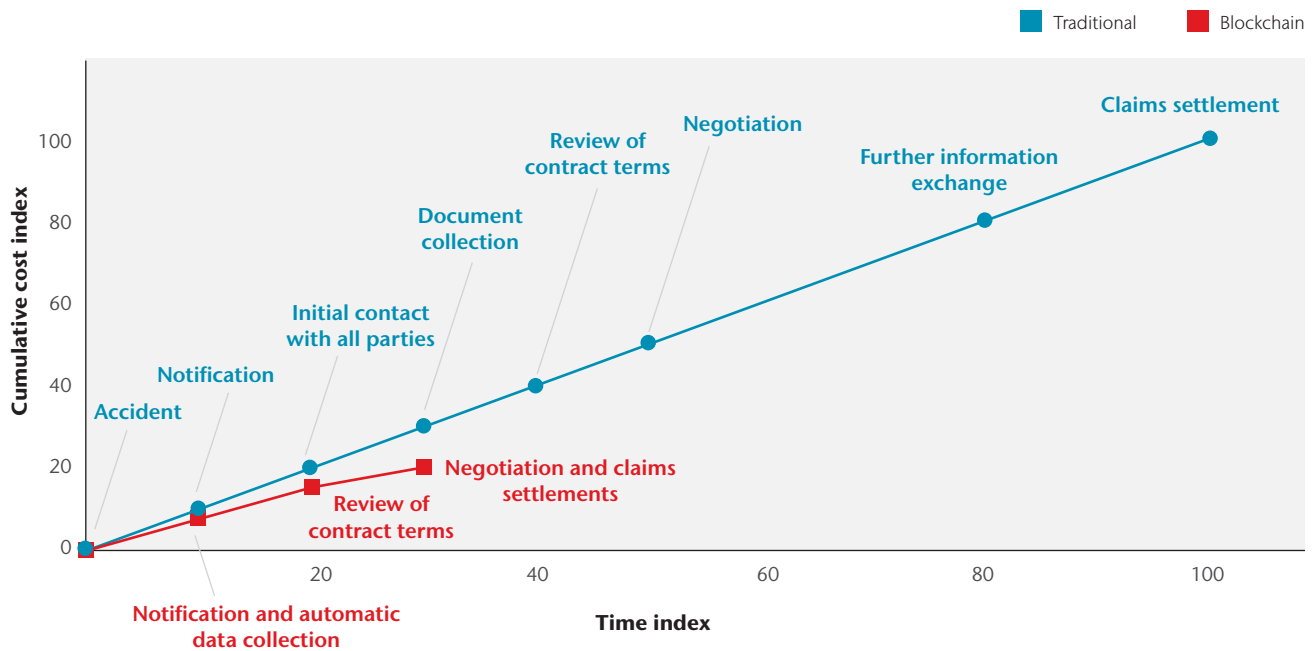
intelligence firm, expects the spend on blockchain to increase from US\$ 1.8 billion in 2018 to US\$ 11.7 billion in 2022 at a growth rate of 60%⁷.

With all the aforementioned benefits, blockchain also has potential to impact the Insurance industry. It can help Insurers reduce operational and administrative costs through automated verification of policyholders, auditable registration of claims and data from third parties, underwriting of small contracts and automation of claims procedures. Equally, it can help reduce the fraud which would contribute to reduce total cost.

In an industry where ‘trust’ is critical, the ability to have guaranteed contracts, with claims certainty will help the take-up of insurance in new areas.

BCG estimates that blockchain could drastically improve the end-to-end processing of a motor insurance policy and any claims arising thereof as shown in the graph below.

Chart 12: Settling a Motor Claim, Traditionally and with Blockchain



Source: <https://www.bcg.com/publications/2018/first-all-blockchain-insurer.aspx>

However, despite the flurry of activity and promising initial developments, blockchain faces a number of obstacles that will need to be overcome before companies choose to adopt it on a broader scale.

It is entering the ‘Trough of Disillusionment’ on the Gartner Hype Cycle for Emerging Technologies for 2018. Gartner predicts that the technology will enter mainstream usage in 5 to 10 years.

⁷<https://www.idc.com/getdoc.jsp?containerId=prUS44150518>

5 How will the industry respond?

The Insurance industry is facing unprecedented challenges to its identity. After years of decline the industry finds itself at a cross roads. Insurance needs are changing rapidly, new technologies and data are available and finally the barriers to change are coming down. The industry is at an inflection point and must decide a course of action to regain relevance. If insurance gains relevance all industries prosper as our ability to invest and innovate grows. So how will the Insurance industry respond?

5.1 The industry structure will change

Proprietary data and a large capital base are the two most critical factors that have protected incumbents from competition. However, these factors are severely under challenge from the increased availability of digital data and the emergence of alternative capital. In response, Managing General Agents (MGAs) have emerged and are forcing a restructuring of the industry value chain.

MGAs act as underwriters without holding the actual risk on their books. They rely on availability of non-proprietary data to price and manage risks on behalf of a capital provider (traditional or alternative) and often support coverage of niche products. As the MGAs are not required to hold capital, same regulatory restrictions do not apply as they do to traditional underwriters. This allows for more innovative coverages with a higher speed to bring new products to market. Given their size and age, the MGAs are able to operate efficiently and adapt in accordance with customer demands.

MGAs are increasingly being supported by investors of alternative capital that are now seeking higher returns by covering 'pure risks'. This is leading to a shortening of the value chain as shown in Graph 2.

The growth of MGAs is a sign of the industry beginning to innovate. By the end of 2015, MGAs wrote US\$ 41.6 billion Property & Casualty insurance premiums in the USA. This reflected an annual increase of 8.9% between 2011 and 2015. During the same time, the number of active MGAs in the USA increased from 399 in 2011 to 610 in 2015 at an annual rate of 10.0%. (USA Statutory Filings)

To put this into perspective – in 1999, MGAs accounted for 4% of the Commercial Property & Casualty insurance business written in the USA. By 2015, this share had increased to over 14% and is expected to rise further. (USA Statutory Filings).

5.2 We will have new products

There is a growing demand for coverage of new risks emanating from emerging technologies, new business models – like Airbnb - and the increased interconnectivity. To gain relevance, the industry must address these demands in a timely manner.

Cyber is the most important of such new risks. A Cyber attack impacts every area of an organization and could lead to an infinite number of further loss events. The reality is that only 30% of the corporations surveyed in the “2017 Global Cyber Risk Transfer Comparison Report” are “fully aware” of the economic and legal consequences of an international data breach or security exploit. It therefore requires a holistic, multi-disciplinary approach to manage.

There's been a tremendous rise since 2017 in the sophistication, scale and impact of Cyber attacks. As corporations strive to enrich their customer experiences through a spectrum of endpoints - ranging from mobile devices to automobiles – the attack surface has increased dramatically. The table below shows some of the most notable breaches and its commercial impact.

Table 1: Notable Data breach / Intrusion Commercial impacts

Organisation	Commercial Impact	Financial Components	Source
Anthem	\$263 million	Gross Expenses (\$148mm) Security Improvements (\$115mm)	Regulator Settlement U.S. District Court
Equifax	\$314 million \$464 million	Gross Expenses to Date Total Estimated Gross Expenses	Q2 2018 Earnings Release Q2 2018 Financials
Global Payments	\$141 million	Gross Expenses	10-K Filling 2015
Heartland Payment Systems	\$148 million	Gross Expenses	10-K Filling 2013
The Home Depot	\$298 million	Gross Expenses	10-K Filling 2017
Sony Corporation (2011)	~\$171 million ¥14 million	Consolidated Operating Income	2010 Forecast Revision
Sony Corporation (2014)	~\$41 million ¥4.9 billion	Investigation & Remediation Expenses	Q4 2014 Financials
Target Corporation	\$292 million	Gross Expenses	10-K Filling 2017
The TJX Companies	\$187 million	Gross Expenses	10-K Fillings
Yahoo! Inc. (Altaba Inc.)	\$350 million \$35 million \$80 million £250,000	Reduced Acquisition Price SEC Fine Securities Class Action ICO Fine (DPA 1998)	Verizon Press Release SEC Press Release U.S. District Court ICO Notice

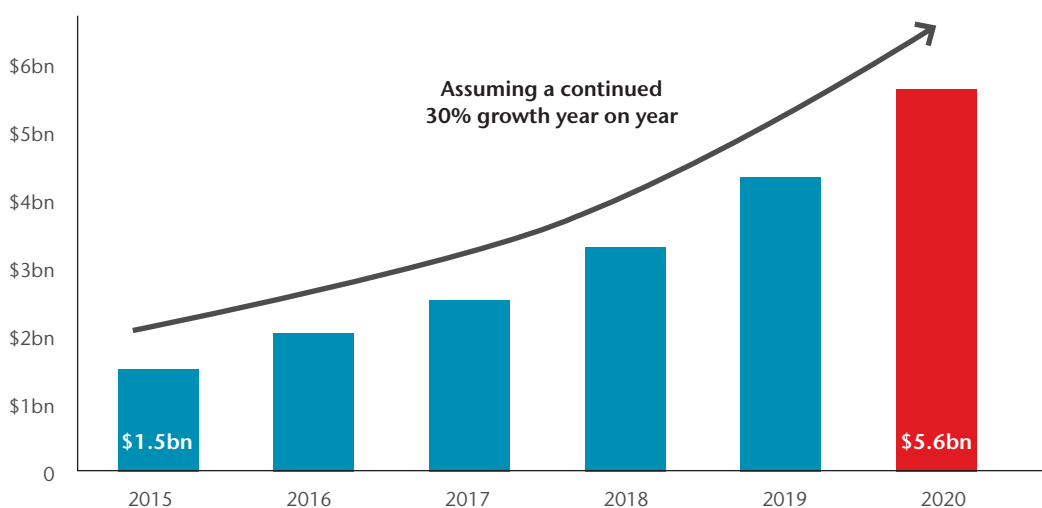
Source: Aon own analysis

Initially developed as add-on-covers or bundled into existing liability or professional indemnity policies, there’s been a growing demand for standalone Cyber products. However, the handling of cyber risk has moved beyond traditional insurance - quantify and transfer risk— to a comprehensive approach where pre-and-post breach services to identify and mitigate risk are included, as well as the ability to quickly recover should such an incident occur. (Aon plc, 2017: 8-9).

Currently, up to 85% of the total Cyber premium originates from the USA, being Europe 8%, and the remaining 6% corresponds to the rest of the world. Assuming the USA standalone Cyber growth rates could continue at a 30% rate year on year, total premium could reach US\$ 5,6 billion by 2020, as shown on graph 13 below.

Regardless of the promising growth figures, Cyber is another example of the lack of relevance of the Insurance industry today: out of a total of US\$ 450 billion in reported loss, the total written premium amounts only to US\$3 billion.

Graph.13.: USA standalone Cyber market projection



Source: Aon plc, 2017b: 6

5.3 Products will be increasingly integrated

Insurance will increasingly need to be integrated into products and services. As we shift towards a more shared economy with fewer owned assets we would expect insurance to respond by increasingly becoming integrated and invisible.

Insurance as part of a car journey, insurance as part of a home rental, insurance as part of a flight cost. The ability for manufacturers and service providers to understand their own data and use it to manage risk will change how we interact with insurance.

5.4 Insurance will be cheaper

Perhaps the major driver of insurance loss of relevance is its cost. Any service which has a 40% cost of usage is unlikely to make economic sense except when it is either required, or in the most high risk situations.

The availability of cheap capital and the availability of cheap data, as well as the technology to analyse it and the technology to automate and simplify processes, will be revolutionary in insurance. Ultimately this lower cost will drive demand and support growth and relevance.

6 Conclusion

The relevance of insurance, which has declined over the last few decades, after peaking in the early 1980s, is set to increase again.

Big shifts in insurance needs, both in the commercial and consumer segments, new sources of cheap capital, the prevalence of cheap and accessible data and the technology to automate and analyse will transform the Insurance industry.

Not only is this important for insurers, it is also important for all of us. Insurance is the grease behind investment and innovation. The long term decline in the Insurance's industry ability to reduce risk could be a significant impediment on future growth. However we believe that the reversal of this trend will mean that insurance can once again grow in its importance of protecting our key investments and activities.

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