INSURTECH: CHALLENGES AND OPPORTUNITIES FOR THE INSURANCE SECTOR

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Abstract: *Technology-driven innovation in the financial sector, or fintech, is becoming more pronounced in the last few years, leading to more efficient and convenient financial services. In a digital environment, the insurance industry is also incessantly evolving in pace with changing needs of customers. Advances in technology shape policyholder's expectations at the same time enable insurance companies to bring innovations to the market. Insurtech refers to the use of technology innovations in the insurance sector aimed to improve customer experience, simplify business processes, develop new products and increase competition. The bearers of this phenomenon are start-up companies that enter the insurance sector taking advances of new technologies and alter the whole insurance value chain. We will explore the potential impact of insurtech on the insurance sector, with a special emphasize on emerging market economies. Along with the rapid growth of venture capital investments they have attracted, insurtech companies have emerged across the geographical regions and lines of insurance business. The aim of the research is to identify challenges and opportunities that the entry of new, technology savvy players into the insurance sector imposes for established insurers. Insurtech companies are generally perceived as posing the risk of disruption in the insurance sector. Flexible business models allow insurtech companies to adapt to rapid technological change, while traditional insurance companies are often regarded as technology laggard. However, insurtech innovations could help insurers to reduce transaction costs, enter new markets and offer more client-tailored coverage. On the other hand, competitive advantages of incumbents are their expertise in risk assessment, customer base and compliance with regulation, all of which is a limiting factor for the expansion of insurtech business. Consequently, a combination of modern technology and experience through partnerships between insurtech companies and conventional insurers is the prerequisite for their mutual survival and development in favor of policyholders.*

Keywords: *insurtech, insurance, start-ups, technology, innovations*

1. INTRODUCTION

Due to its complexity, heavily regulated nature of the industry and the profitability of incumbents, insurance industry lacked innovations over the last 300 years [1]. Declining customer experience indicates that insurers fail to meet rising expectations [2]. However, under the influence of new technologies, insurance business is experiencing an ecosystem 'disruption' nowadays. In this segment of the financial sector, digital revolution began later [3], but even more intensely in relation to the banking sector and capital markets.

'Insurtechs' are technology-led start-ups that enter the insurance market, taking advantage of new technologies to provide coverage to more digitally savvy customers. Rapid expansion of insurtech business over recent years increasingly attracts attention of professionals and

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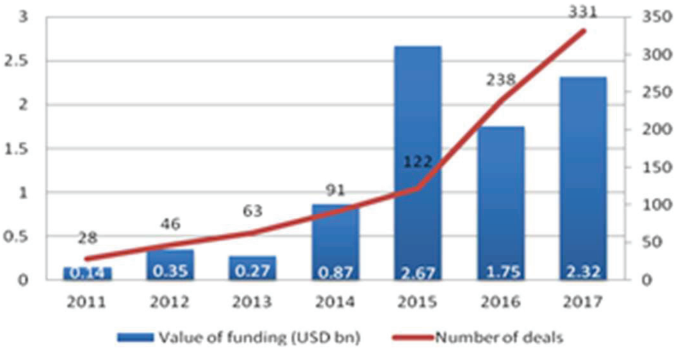
academics in the field of insurance and deepens the debate about its implications [4] - [7]. The paper deals with the potential impact of insurtech on the insurance sector. We consider development of insurtech activities worldwide and main characteristics of the insurtech business model. The aim of the paper is to indentify challenges and opportunities arising for established insurers from the entrance of insurtech innovators. Special emphasis is placed on the insurtech influence in emerging markets as well as on the possible benefits for incumbents from partnering with insurtechs.

2. INSURTECH DEVELOPMENT

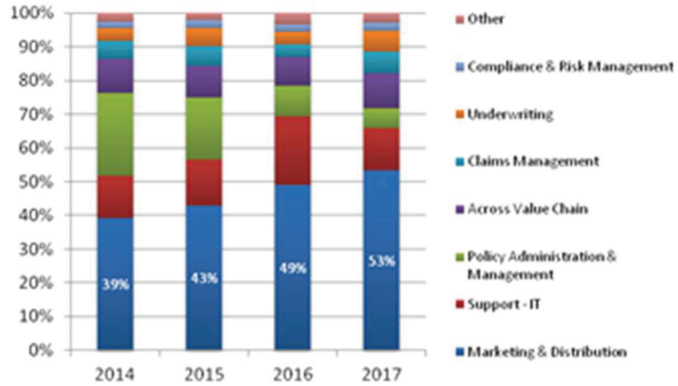
Insurtech business has attracted large venture capital investments in recent years. A record year was 2015 with funding estimated to have reached USD 2.67 billion. More than one third of this amount (USD 931 million) is related to Zhong An, a Chinese first Internet-only insurer founded in 2013 [8]. Although total InsurTech funding varies from year to year due to the irregularity of larger deals, since 2011 it has increased steadily at a compound annual growth rate of 49.4%. Only in 2017 the value of funding rose by 32% compared to 2016 and the number of deals has almost tripled in the last two years.

Figure 1: InsurTech financing trend (2011-2017) [8], [9]



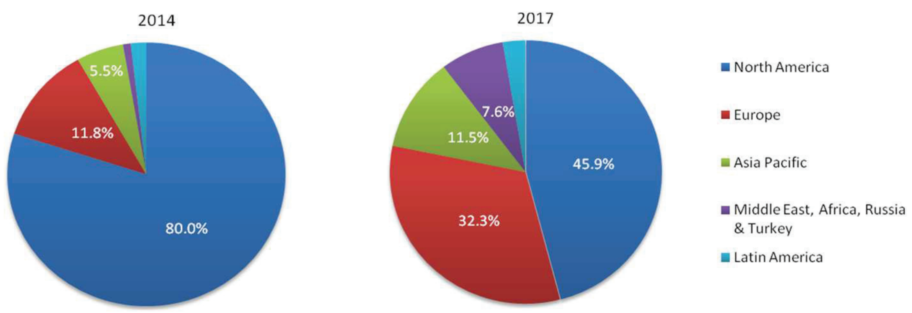
The role of insurance and reinsurance companies as investors in insurtech start-ups is becoming more pronounced. While in 2012 (re)insurers realized just one strategic private tech investment, in 2017 they made 119 start-up investments [9]. They are also forming accelerators and incubators or entering partnerships with insurtech start-ups.

Figure 2: Number of insurtech deals per insurance value chain segments [10]



Although insurtech companies are involved in all major insurance business lines, about 63% of all insurtech deals in 2016 were realized in non-life sector and 78% in personal lines [11]. In terms of the insurance value chain positioning, start-ups targeting marketing and distribution achieve a growing and dominant share (53% in 2017) in the number of deals. Another area with rising start-up activities is claims management. Apparently, start-ups in insurance are oriented towards customers' satisfaction. At the same time, the number of deals in the policy administration and management part of the value chain decreases. This trend can be explained by the dominance of existing platform providers that make new entrants more difficult [10].

Figure 3: Number of insurtech deals per geographic region [10]



The geographical distribution of insurtech activity also changes over time. In 2014 North America accounted for 80% of the world's insurtech deals, but its share fell to 45.9% in 2017. In contrast, the share of Europe rose from 12% to 32% during the same period [10]. Still, in terms of the absolute value of funding invested, the US retains its primacy in world scale, followed by the United Kingdom, India and Germany [12].

3. SPECIFICS OF INSURTECH BUSINESS MODEL

Insurtech companies are mainly start-ups taking advantage of new technologies such as advanced data analytics, Big Data, artificial intelligence and the Internet of Things to lower costs and to provide better tailored insurance coverage. Their business model is characterized by focus on customers, personalized products, full automation of processes and data-driven decision making [13]. Also, they rely on mobile technology and applications to reach a broader coverage of population. Thus, a microinsurer BIMA provides insurance services in less developed markets, where insurance penetration is very low but the mobile penetration is relatively high. Using mobile technology, BIMA sells affordable health insurance to low-income families in 15 countries. Although potential policyholders are initially contacted by agents, their registration and premium payment is performed completely automatically through the proprietary mobile insurance platform [14].

In terms of value drivers, about 40% of insurtech companies are oriented towards finding new ways to grow, through increasing customer experience and introducing new products. Typically, they focus on untapped insurance market segments and single products, whether new or modified existing ones (e.g., telematic insurance) [15]. A primary value proposition of another 22% companies relates to lowering acquisition costs by providing digital interface for the customers. The remaining insurtechs are focused on lowering administrative and claims settlement costs [13]. One of the most comprehensive taxonomies distinguishes between nine categories of insurtechs (Table 1).

Table 1: Insurtech cathegories [12]

Category	Description	Examples
Comparison Portals	Enable online comparisons between different insurance products and providers	Check24 (Germany), Goji, HealthSherpa (U.S.), Policybazaar (India)
Digital Brokers	Offer insurance brokerage services by means of online portals or mobile apps	GetSafe (Germany), Simply Business (U.K.), Coverwallet, Embroker (U.S.)
Insurance Cross Sellers	Offer insurance as complements to products by means of online portals or mobile apps	Snapsure, Virado (Germany), Simplesurance (U.K.), Pablow (U.S.),
Peer-to-peer insurance	Private insurance pools on the basis of social networks for mutual insurance coverage	Friendsurance (Germany), Guevara (U.K.), insPeer (France), Lemonade (U.S.)
On-Demand Insurance	Offer insurance coverage for chosen periods of time	trōv, Metromile, Slice (U.S.) Cuvva (U.K.), Tikkr (Sweden), Qover (Belgium)
Digital Insurers	Offer fully digital insurance products that are accessible via online channels only	Oscar, Clover (U.S.), BIMA (Emerging Markets), ZhongAn (China)
Big Data Analytics & Insurance Software	Provide software solutions allowing insurers to better manage and leverage internal and external data	Logical Glue (U.K.), Praedicat, Vlocity (U.S.), getmeIns (Israel)
Internet of Things	Enable data collection via smart devices (e.g. telematics and drone technology)	Octo, Cocoon (U.K.), Driveway, Sureify (U.S.)
Blockchain & Smart Contracts	Offer solutions for a tamper-proof distributed database system for transactions	Sparkl, Everledger (U.K.), Monax (U.S.), Helperbit (Italy)

Many insurtech companies promote digital ‘peer-to-peer’ insurance (p2p) under which policyholders form small groups and pay premiums into a cashback pool. The pool is used to pay claims, and any remaining amount of money at the end of the year is returned to policyholders without claims. Friendsurance, an insurance broker launched in Germany in 2010, is considered a pioneer of p2p insurance. Similarly, a US based non-life insurer, Lemonade, returns eventual surplus of premiums over claims to policyholders in the form of an annual ‘giveback’ that is donated to charities of their choice. An artificial intelligence application is used to offer susceptive property insurance, as well as to report and settle claims. Thus, p2p insurance emerged under the influence of the sharing economy phenomenon, as a combination of traditional mutual insurance and modern technology solutions.

4. IMPACT ON THE INSURANCE SECTOR

Although still in its infancy, insurtech is beginning to affect the global insurance market. Through the development of innovative, digitally distributed products, new technology savvy players are getting involved into lines of business traditionally dominated by incumbents. However, according to [13], merely 9% of insurtech companies intend to replace the incumbents, while majority of them (61%) are aimed on providing services to insurers through the simplification and digitization of parts of the insurance value chain.

In order to survive in the new digital world, insurance companies are facing the tasks of upgrading customer experience and enhancing business processes. Their suitable response implies offering innovative products through digital channels and digitization of operations. Taking into account the rapid growth of insurtech activities, the incumbents' position on the market in the future will depend on the speed of their adjustment to inevitable changes. Some of the possible strategies are collaborating with, or directly acquiring, an insurtech company. Engaging with insurtechs allows incumbents to learn from their digital expertise in order to digitize faster.

Thus, entrance of insurtech companies poses a competitive threat to incumbents, but also provides potentially valuable opportunities for partnering in ventures. Two key areas of cooperation between traditional insurers and modern insurtechs relate to data and customers [11]. Insurtech innovations can enable incumbents to expand insurance coverage to market segments that were previously underinsured, introduce new products and services, simplify claims management, reduce transaction costs and to deliver enhanced risk identification and measurement. At the same time, the start-ups might benefit from access to insurer's customer base, accumulated capital, expertise in risk assessment and underwriting, recognizable brand and compliance with regulation.

Investing in start-ups by (re)insurers is desirable, but insufficient in order to fully exploit the advantages of new technologies. It is necessary to change corporate culture and to adopt a new business philosophy so that innovations become an integral part of everyday business. Of course, the collaboration itself can be a challenge due to disparity in size, culture, technology and mindset between old and new players.

The impact of new technologies can be particularly high in emerging markets where insurance distribution networks are less developed. The lower the insurance penetration, the faster could market develop based on the new distribution models. Still, in most emerging markets there are specific challenges for digital transformation of financial services, such as low income and financial literacy level, underdeveloped technology and venture capital ecosystems as well as weak infrastructure [16]. Examples from practice show that insurtechs are relatively successful in overcoming these challenges when delivering microinsurance in emerging markets [17]. Although currently focused on improving existing business models, there is a potential of insurtech to improve product design and customer experience in these markets.

Insurance regulators and supervisors play a particularly important role in encouraging innovations. In order for insurers and their customers to benefit from digitization, regulatory processes must permanently adapt to technological and market developments. It is necessary to remove the existing regulatory barriers, but at the same time to provide a high level of policyholders' protection and fair competition [18]. Consumers should be convinced that their interests when buying insurance from insurtech start-ups as from established companies are equally safe. Finally, in parallel with the provision of proper market access for insurtech start-ups, traditional insurers should also have access to supervisory support for the development of innovative products and services.

5. CONCLUSIONS

Given their potential to bring innovations, new technologies are the key driver of changes in the financial sector, including insurance sector. Analysis of the insurtech development path indicates a sharp increase in investment into insurtech start-ups and their growing emergence across the insurance value chain and lines of business, with concentration in distribution, non-life and personal lines. Insurtechs are developing innovative business models that may provide greater insurability of policyholders by using technology to facilitate product comparison, simplify the purchasing process and to better tailor insurance coverage as well as deliver widespread efficiency. In emerging markets with less developed distribution networks, insurtech has the potential to enhance financial inclusion and to increase insurance penetration.

Entrance of insurtech innovators to the insurance market imposes distinct challenges for traditional insurance companies. Faced by technology-led disruption, incumbents are under increasing pressure to evolve and reinvent their business processes and attitude toward customers. At the same time, they can benefit from acquiring or partnering with insurtechs which will enable them to introduce innovative products and to provide services more efficiently based on the application of new technologies. Thus, the rapid evolution of the insurtech sector does not necessarily lead to crowding out of incumbents. Proactive insurance companies that respond fast enough to ongoing digitization by adjusting their portfolios, distribution channels, organizational structure, and internal processes will be able to maintain their market position. A valuable support in this regard can be the digital expertise of insurtech companies, whose entry should be considered more as an opportunity than a threat.

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