

A Direct Research, presented as part of the requirement for the Award of the Master Degree in Management from the NOVA – School of Business and Economics



Digital Transformation and Disruption: Threat or Opportunity for the Traditional Insurance Incumbents?

ANGELICA GRECO
Student N°: 3491

A Project carried out on the Master in Management Program, under the supervision of:
Professor Ilya Okmatovski

Lisbon, January 3, 2018

Angelica Greco
Via Vigevano 41, 20144, Milan, Italy
+351 932287471
angelica.greco5@gmail.com

ABSTRACT

Digital technology often destroys value. What happens is, for some companies to become market winners and for others, digital technology turns to be the reason of their failure. There is one clear winner coming out from this battle: consumers.

Traditional insurance business model seemed resilient from digital technology. However, this resilience is not lasting forever. Actually, it is now starting to collapse. Digital is transforming the way products and services are served to the customers and also the underlying business models. Big data and analytics, Internet of Things (IoT), Automated Driver Assistance Systems (ADAS) are just some of the forces analyzed in this research that are disrupting the traditional insurance market and that are slowly shaping a new competition landscape with the emergence of Ecosystems. This new market situation can turn to be a great opportunity for some insurance company, but as it will be explained in this thesis, the success will not be evenly shared. What will make the difference is the speed and decisive motivation at which incumbents will embrace and actuate the change.

Key Words: *insurance industry, digital disruption, digital technologies, business ecosystems*

TABLE OF CONTENT

1. Introduction	1
1.1 Research Methods	2
1.2 General Overview of the current Insurance Market	2
2. Insurance Disruption and its Forces	4
2.1 Internet of Things	5
2.2 Big Data & Analytics	7
2.3 Sharing Economy	9
2.3.1 Peer-to-Peer Insurance	10
2.3.2 Blockchain	12
2.4 Internet Intermediaries	13
2.5.1 Price Comparison Websites	14
2.5.2 Value Comparison Websites	14
2.5.3 Social Brokers	14
3. Insurance Sectors Affected by Disruption	15
3.1 P&C	16
3.1.1 Automotive	16
3.2 Health	17
3.2.1 HiOscar	18
4. Ecosystems: the Future of Insurance Competition Landscape	19
4.1 Landscape	21
5. Final Recommendations for Insurance Incumbents	22
6. Conclusions	24
REFERENCES	25

1. Introduction

Our society is changing. It has always been right? But something is different this time. There is an air of innovation, a drum of anticipation for each new invention, conception and creation.

Several key trends and new business models are unfolding in the market of technology and as a result there has been a migration of start ups and new businesses foraying into the market of insurance, an industry previously thought to be safeguarded from disruptive technologies.

Something similar had already happened to the banking industry, where several of its business area has been attacked by emerging businesses with little chance to recover. Some well known examples are PayPal, Konfio, Scottrade and Revolut.

Moreover, competitors are likely to come from unexpected areas. Some examples are Google, Apple, Tech Giants, Pharmaceutical Players and Manufacturers – home appliances. As a matter of fact, Google is already investing¹ and building partnerships in the insurance tech with some insurtechs startups like HiOscar, Gusto and Lemonade.

Therefore, incumbents are facing unpredicted challenges from competitors with unique skills, since they are lacking on digital education, on the capacity to attract “digital talents” and also by having heavy regulatory constraints when compared to new startups. Sure enough, the latters are data driven and posses the adequate technology.

This Direct Research will investigate how the insurance competition landscape will play out in the near future by giving a brief overview of the current market situation and then by analyzing the drivers of disruption, that are been divided into four main categories (Internet of Things, Big Data & Analytics, Sharing Economy and Online Intermediaries), and how these will play out in the near future, as well as the main sectors that will be affected by the digital transformation – Property and Casualty and Life insurance. Finally, it will outline the shape of competition

¹ \$257.5M dollars in several start ups and formed 5 partnerships with other ones (source: CBInsights)

landscape that is emerging within the market and thus propose a viable solution for incumbents to overcome the disruption in the best way, being this way able to lead the change without being deposed by it. What comes through strongly is the crucial need for insurance to quickly intervene if they want to remain profitable and competitive within the market.

1.1 Research Methods

The analytical approach used in this direct research has been the analysis of publication about the insurance industry, specifically researches published by the biggest worldwide consulting companies such as McKinsey, Deloitte, Pricewaterhousecoopers (PwC), Ernst and Young (EY), Boston Consulting Group, Accenture KPMG and Roland Berger and also from minor consulting companies, like the Baring Point Institute. Also, data coming from Banks, Insurance and other relevant Companies' reports have been analysed – Morgan Stanley, Goldman Sachs, Allianz, IBM and Cisco as well as online business magazine articles. Moreover, two data-driven intelligence on Venture Capitalists and Start Ups have been consulted and are CB Insights and Crunchbase along with other insurance-related websites – e.g. friendinsurance.com, the-digital-insurer.com...

Finally, also data coming from surveys conducted by the previously mentioned consulting companies with a focus on PwC Insurance Banana Skins 2017 have been reported.

1.2 General Overview of the current Insurance Market

Globalization and the speed at which technology grows, both have contributed to the fragmentation of the insurance marketplace. It can be observed that there is an ageing population at one end of the spectrum and a less loyal and more demanding millennial generation at the other. All these factors have implications for product design, marketing and sales, also taking into consideration the change in family structures.

Engaging with this splintering customer demand in this new market landscape becomes both a threat and an opportunity for insurers, since the clients' expectations are changing in conjunction with digital transformation.

As a matter of fact, users want insurers to offer them products with certain types of characteristics, accessible, customer-centric and complaisant of users' needs, seeing that they are now aware of the services and innovative modus operandi of online retailers and other highly customer-centric sectors.

Hence, two main reasons of failure in meeting customer needs from General Insures (GI) can be outlined: first, GI services are not recurrent and do not provide immediate and tangible benefits when compared to other popular connected services, and also, the online user experience (UX) in GI can be often demanding and complicated (Appendix 1 and 2); second, when GI start innovating on products, it may not take into account new risks that can occur when implementing digital technology (e.g. cyber attacks).

Looking at some numbers, it can be seen that the investment into this industry suggests it is no longer regarded as impregnable: venture capitalist (VCs) globally invested \$2.6 billion in insurtechs in 2015, and almost \$1.7 billion in 2016 (Appendix 3).

Moreover, it is interesting to notice that according to Accenture's Global Consumer Pulse Survey (2014), 21% of the respondents agreed that insurers "*are the same in terms of offerings and services*" and more than 80% are willing to use digital and remote touch points (like web chat, email, mobile apps, video or phone) in place of interacting with insurers via agents or brokers.

Finally, as this thesis decided to focus more on the European market by giving practical examples in this area, in Appendix 4 several figures showing EU market trends can be found.

2. Insurance Disruption and its Forces

According to a definition given by EY², Digital Transformation is a buzzword that is often misunderstood. The concept is described as taking leverage on the power of technology in order to redefine business models and the user experience and also to acquire new customers through new channels.

What is questionable in the GI current business model, it is its long term viability. Hence, those insurers that decide to digitalize, will be able to automate processes, turning them into faster, more precise and less costly ones. Embracing digital means for insurers to be able to move beyond direct digital sales and create product and services that can be enclosed in customers' life³.

Specifically, the proliferation of users' data and consequently the continuous development of analytical techniques lead to the possibility of gaining specific and precious customer insights, thus forging the path for insurers to reshape customer targeting, underwrite risk and financial advise. Not to mention other benefits that will follow the adoption of digital capabilities, such as increase in speed, lower costs, greater precision and customization.

Also, new customer segments can be tapped. For example GI could start tackling the younger and lower income segments, since digital technology could boost the way insurers engage with clients and reduce costs. Appendix 5 shows the areas where insurtechs are innovating most.

One of the major benefits, endorsed with the adoption of these digital technologies, as previously anticipated, will be the possibility for insurers to predict risk and customer demand with greater precision than ever before, thus transforming insurers value proposition from “*reactive claims payer to preventive risk advisors*” (PwC, 2015), lowering prices and shaping their target.

² “Digital Disruption in Insurance”, 2017

³ e.g. pay as you drive insurance, see 4.3 Automotive section for more information

What makes the difference in providing right prediction and proactive solution is the change in analytics “*from descriptive (what happened) and diagnostic (why it happened) analysis to predictive (what is likely to happen) and prescriptive (determining and ensuring the right outcome)*” (PwC, 2015) (Appendix 6).

Also, digital disruption will bring into the insurance market the need for new type of products to satisfy new customer needs. For example, concerns about cyber-security will lead customers to demand services that can prevent and protect them from the violation and loss of their data.

Moreover, with the rise of sharing economy, new type of insurance policies are needed. Just think about Airbnb, where homeowners became now hoteliers and about Uber drivers. Who is protecting them?

Deloitte identified nine killer applications⁴ that are likely to disrupt insurance in a future and how big their impact could be (Appendix 7), that were grouped in this thesis into four main categories: Internet of Things, Big Data & Analytics, Sharing Economy, and Online Intermediaries.

2.1 Internet of Things

According to a definition given on Forbes magazine, any device that entails an on and off switch to the Internet and/or to each other, can be part of the IoT. Hence, these will include all objects ranging from smartphones, coffee and washing machines, headphones, lamps, wearables and so on.

The soaring adoption of sensors and connected devices as part of the IoT (Appendix 8) enables data to flow from these connected devices to insurers, who can in turn analyze the data for risk assessment and pricing; this precious information can reduce the value of the customers’ premiums and provide other important benefits, such as different types of assistance in an

⁴ i.e. Telematics-based services, self-driving car insurance, mobile internet transactions, price comparison websites, peer-to-peer insurance, social brokers, cyberrisk insurance, sharing economy insurance, value comparison websites

emergency, thus providing more tangible and frequent benefits.

According to McKinsey report⁵, in 2010, there were 12.4 billion devices. By 2025, it is estimated there will be more than 50 billion. IoT-based health and home insurances only recently emerged and are available just to a small number of European insurers. Here stands a great potential of disruption, but it is crucial for these new types of services to be able to provide more than one benefit and thus not just focus on lowering premiums.

For example, to win customers, IoT could provide valuable information to users, targeting new market niches: it could tell environmentally-friendly people how to reduce their carbon footprints by changing the way they usually drive and this also tell drivers how they can minimize risk both by analyzing how they drive and by advising routes where the environment is safer.

Moreover, it can help consumers to avoid or minimise losses. The potentials are endless: in home insurance, thanks to IoT, people can for example shut off a leaking water pipe just using their smartphone.

Another application of the IoT could be for insurers to change their business model: from life benefits to coach health advisors, promoting well-being. This way, they will be able to tackle new customer segments, previously unexplored. For instance, services that will focus on fitness and quality of life could specifically target millennials, who might be unaware of the need of life insurance yet. According to Deloitte report⁶, many customers are willing to use these kinds of services at the moment, but more importantly, many more could do so in future (Appendix 9).

Hence, as already previously outlined, the disruption may occur in the sense that there will be a shift in risk assessment from “what has happened” to “what could happen”.

Specifically, this prescriptive analysis will lead insurers to predict why and when things are going

⁵ “Digital disruption in insurance: cutting through the noise”, 2017

⁶ “Insurance disrupted: General insurance in a connected world”, 2015

to happen, thus using turning this data to improve sales conversion ratio by continually adjusting price and policies (PwC, 2015).

It is thus crucial for insurers to move fast in developing and adopting these kind of solutions devices-related. This way first-movers will be able to gain a greater amount of data and consequently precious insights, also benefiting from network effects. This way, they will be likely to be better positioned in the competition landscape.

In this area of operation, it will be likely for insurers to partner up with sensors manufacturers and companies that own the data (like auto manufacturers, health equipment producers...).

To find the right partners, insurers have to strategically think the best way to position themselves in the IoT ecosystem. For example, they could leverage on trustability and reliability qualities, taking into consideration the increasing concern of consumers on data collection and analysis by other companies. Yet ultimately, the most attractive insurers will be the one that will provide risk assessment services as well as roadside and medical assistance.

2.2 Big Data & Analytics

Big data & analytics are part of the action of analyzing great amounts of data. This big data comes from different types of sources (e.g. social networks, videos, images, IoT, online transactions...).

The goal of these data analysis is to discover valuable insights about consumers that would have remained invisible otherwise, being thus able to capitalize on them and gain competitive advantage.

Following on the line of disruption caused by the IoT, it is important to focus on data coming from those devices and from other sources, and consequently data analysis as well, in order to understand the potential connected to this force.

Thanks to predictive analytics, new selling approaches can be adopted, approaches that will go beyond traditional cross-selling and upselling ones used nowadays. Hence, analytics can identify products for particular customer in specific regions and demographical niches and create customized UX.

That is because analytics “listens” to customer wills and needs, thus creating opportunities for new products and services to be created and be launched quickly to appropriate market’s openings.

Also, it can help reduce costs and get rid of useless items and processes by analyzing which distribution channels (including individual agents and brokers) work best, which one are the most performing when considering leads and which one are the one that will boost sales.

Moreover, big data analytics it is useful to detect and reduce fraudulent claims, which are estimated to be around 10% of all submitted claims, with an impact of approximately \$40 billion in the US alone (EY, 2017), by extending these capabilities also to other areas of the insurance business. Some of the biggest insurance companies, including Allianz, AXA and AIG, are already starting to exploit the power of big data analytics to reduce fraud, by adopting technologies such as voice biometrics, call behavior, and other metadata.

Furthermore, looking for example at pension planning, these capabilities can be transformed in a way for insurers to provide interactive offering. Customer will this way be able to conduct a financial trade-off between how much they want to live off now and when they will retire. All in all, this will help to reduce product boundaries as digital insights and agent input along the distribution channel and open the path for tailored customer solution.

This effective way of managing people’s financial affairs, will lead to adjust automatically change in income or to decide to switch some pension contribution to be able to pay forward a mortgage looking at reducing expenses when the retirement time comes.

Therefore, it can be said that increasing access to data will definitely improve the speed of servicing drive down costs, and pave the way for better precision, customization and adaptation.

However, according to a PwC survey⁷, more than 30% of the insurance's senior management lacks the skills to make the most of these new information and capabilities.

Considering that digital companies, that are build on a data-driven mantra, are starting to enter the insurance market, insurers cannot afford to respond slowly (Appendix 10). Hence, insurers possess valuable historic data, that if properly managed will help them crash the competition that is coming from these digital newcomers. As a matter of fact, the latter player collects vital data insights coming from all sort of channels (i.e. social networks, credit card history...): thus, being able to know for example the how fast people drive, how they break and their online behaviors on social media, which are more important data when compared to the age, zip code, past accident records (McKinsey, 2017).

Finally, it is very important for insurers to think about the implication that technological giants such as Google and Amazon may have for their business. Sure enough, these big players have access to millions of customers' data, while possessing the right skills and tools to analyze those data. And what if, besides offering well-targeted, tailored products, they start to tackle specifically low-risk customers? This will have tremendous consequences for the insures' business model, if premiums collected from low-risk policyholders contribute to the claims of high-risk ones, could fall apart.

2.3 Sharing Economy

Sharing economy has created online markets, through which buyers and sellers can meet and transact. Two of the most famous examples are Uber and Airbnb. This new online markets have

⁷PwC's 18th Annual Global CEO Survey: A marketplace without boundaries?

paved the way for the creation of new types of insurance. For example, there are just a few insurers that offer policies to cover Airbnb hosts and that provide liability cover for the buyers and sellers that operate in those online marketplaces. As a matter of fact, in case of negligence, would be better to have an effective insurance instead of incurring in difficult processes and expenses to repair possible damages through legal actions like is happening often nowadays in GI.

Following this line of thoughts, insurance companies can start to insure individuals as users of assets instead of owners of assets. For example, there is a gap in the market for people who would like to be insured to drive any car – “driving other cars” or DOC.

Sure enough, new types of risk are emerging: for instance, Uber and Airbnb give the possibility to users to share the service (like a car ride or a spare room) by paying a fee, this way altering the traditional principles of insurance that mainstream drivers and homeowners need. Of course, new innovative solution are emerging, thus creating a huge range of possibilities for insurers that are willing to experiment fast and become relevant within the market.

2.3.1 Peer-to-Peer Insurance

One ramification of the sharing economy is the social economy, which lead to a new way of insurance to rise: peer-to-peer.

Peer-to-peer insurance (P2PI) make individuals “club together” in order to share risk. The big difference when compared to traditional insurance is that the these network gather individuals coming from social media or just by being friends (affinity groups) to cover the smaller losses that usually people would have paid individually out of their deductibles thus exercising their buying power. Moreover, if no such claims are executed throughout the year, the members of the pool can get back a part of their premiums.

While P&C schemes are the most sold, the growth in phenomena such as carpooling, could lead P2PI to have a central role within auto insurance.

What helped the growth of these type of insurance are social networks. As a matter of fact, P2PI works as follows: people join together to share risk; then they pay a portion of their premium into a mutual pool; after, they pay the balance of their premium to an insurer; this shared pools is thus able to fund claims; the insurer this way becomes a reinsures by funding claims that the peers can't meet because they have finished their funds and also GI can this way provide other services to the pool, such as policy administration; the money that is not spend at the end of the year is refunded to the peers, or used for the next year, thus generating savings that in a traditional insurance process would have been profit for the insurer.

Some European P2PI networks, state that they can save its members up to 80% on their premiums⁸ and 1/3 on average in property insurance⁹.

This money-saving happens thanks to some factors that are intrinsic when considering the nature of this phenomena: the pool is brought to commit less fraudulent claims when compared to GI users, since by making a fraudulent claim members risk to be thrown out of the pool. Moreover, this networks allows people to assess risk for the pool more accurately than insurers by sharing important insights that insurers do not possess because this information is part of materials that has to be disclosed. Additionally, P2PI has lower costs, since members pay each other small claims, eliminating the claims handling procedures and also the Customer Acquisition Cost (CAC) is lower, considering that the pool is doing the marketing by themselves, since the bigger the pool, the bigger the savings.

⁸ Guevara, UK P2PI - wrote more than £100,000 of premium in its first two days of operation

⁹ Friendsurance, German P2PI was growing at 20 per cent per month when funded

2.3.2 Blockchain

“Blockchain is a shared, distributed ledger that facilitates the process of recording transactions and tracking assets in a business network. An asset can be tangible — a house, a car, cash, land — or intangible like intellectual property, such as patents, copyrights, or branding. Virtually anything of value can be tracked and traded on a blockchain network, reducing risk and cutting costs for all involved” (IBM, 2017).

Thanks to Blockchain, new business models and product offerings – such is the case of P2PI – are created. This kind of “accounting book” provides virtual assistance for quoting, claims handling processes and also transparency of data with a more efficient access to insurance contracts to all the parties involved.

Blockchain’s nature of digital foundation, lead to an increased use of mobile-to-mobile secure transactions and reduced risk of duplication or exposure management.

Insurance companies should thus be keen to convert their policies’ books into a P2P market like this. As a matter of fact, the blockchain’s network possess distributed transaction books, transparent auditability and smart executable policy.

Hence, E-aggregators are an emerging business model that insures should better keep an eye on, since through them they could serve better prices, due to reduced commissions when compared to the traditional agent-based model and they could also serve better information to consumers.

Moreover, by embracing Blockchain, clients will be able to smooth and speed up data verification processes and reduce privacy concerns considering that will not be possible to give data to a third party without the consumer’s permission.

Also, blockchain can be used to identify fraud since it can provide falsified damage, theft and medical reports, by authenticating the validity of documents, controlling police reports and claim histories and by verifying identities.

Looking at some numbers, investors put more than \$800 million into blockchain's start ups between 2014 and 2015 and in late 2016 some of the European incumbents giants (Aegon, Allianz, Munich Re and Swiss Re) gave birth to a pilot project named B3i to start knowing better this disruptive technology (McKinsey, 2017). For example, a startup from UK¹⁰ is working on a blockchain solution known as know-your-customer (KYC). This solution will help financial institutions to prevent money laundering also by driving down the cost and the consuming timing of this process, since it will avoid consumers to give the same information on their identity and source of wealth to different institutions.

Hence, when KYC is in place and the data is verified, individuals will be able to provide a private key to the companies in order to get them access to the encrypted data when they may need it.

2.4 Internet Intermediaries

According to OECD, Internet intermediaries are those middle men that facilitate transactions between third parties on the Internet. This way they provide access, host, transmit and index content, products and services (including Internet-based ones) created by third parties.

Thanks to incumbents' legacy, customer ownership has never been a problem, until today. As a matter of fact, competition was coming just from other traditional insurance companies and also, they felt safe to pass customer contact to intermediaries. Nowadays, however, customer access and ownership are crucial in order to gain greater profits (McKinsey, 2017). Hence, nowadays, in order to succeed and beat competition, insurers have to offer superior product and services. They can not rely anymore on their reputation and legacy.

There are three main online intermediaries that incumbents should keep an eye on: Price Comparison Websites (PCWs), Value Comparison Websites (VCWs) and Social Brokers.

¹⁰ Tradle <https://tradle.io>

2.5.1 Price Comparison Websites

According to a Deloitte definition¹¹, Price Comparison Websites (PCWs) help users to quickly find insurance by aggregating policies from multiple insurance companies and display them based on quoted price.

What is likely to happen with the increase in use of PCWs, is the commoditization of some of Europe's largest markets (i.e. German motor market, Deloitte 2015), by making customers more price-sensitive therefore giving to low-cost insurers the opportunity to gain market share.

Moreover, the forces of competition will change, by having companies focusing less on price and more on other sources such as scale.

2.5.2 Value Comparison Websites

VCWs help customers to make the purchase of a policy through a comparison of value instead of price. This type of intermediary is customer-centric, since it lists policies by considering factors that will meet customers' needs.

What is likely to make VCWs a preferred distribution channel is the fact that is able to meet customer needs by explaining the value of GI policies, which are often not well comprehend. As a matter of fact, according to Deloitte's survey, over a quarter of health, home and motor insurance customers stated that it is difficult for them to work out if GI is good value for money.

Consequently, if people start using more this tool, they will in turn get a deeper understanding of GI products, thus gaining more consciousness when making purchases.

2.5.3 Social Brokers

Social brokers are new type of online intermediary¹² that often operates by using social media. Specifically, it has a reasoned focus on market niches that have poorly-served insurance needs

¹¹ Insurance disrupted General insurance in a connected world, 2015

¹² Bought By Many (BBM) is the first social broker in Europe <https://boughtbymany.com/>, it has raised \$7.5M on Jan 2017

(e.g. people with heart conditions who need travel insurance, Deloitte 2015). Customer acquisition is made, precisely, through the analysis of social media users' patterns and other online behaviours (for example by analyzing the "likes").

The potential in attracting a great amount of users of these kind of intermediary, lies in the fact that social brokers can offer them substantial savings. BroughtByMany.com declared that it can save up to 19% on by using their collective buying power (Deloitte, 2017).

Moreover, it tackles untapped customer segments: for example, BBM had a young drivers group with over 10,000 members in May 2015. BBM acquires customers by applying affinity marketing, social media and SEO. As a matter of fact, BBM has a top ranking on Google for 6,100 niche insurance search terms (Morgan Stanley, 2015).

Social brokers should not scary insurers, but instead the latter should look at them as a great business opportunity, since these platforms can identify good risks, by indicating to insurers the users to whom offer a discount and this way still providing profitability and also because they possess a deeper and more solid relationship with customers when compared to traditional insurers.

Insurers should therefore act promptly, considering that for now social brokers are just intermediaries, but in a near future they could turn their customer insights into valuable reasons to start underwriting.

3. Insurance Sectors Affected by Disruption

According to PwC Insurance Banana Skins 2017 survey, the main sectors that will most feel the disruption are the Non-Life or Property and Casualty (P&C) sector, as well as the Life insurance one (Appendix 11). There will be a commoditization of motor, property and other core insurance business lines, due to automated underwriting and competition coming from unexpected areas

and new entrants. Also, new opportunities will rise thanks to the flow of data and new information-based models (PwC, 2015).

3.1 P&C

In this sector revenue improvement can be achieved by leveraging on digital technology. According to McKinsey 40 percent of P&C and life insurers' expenses reside in their top 20 to 30 core end-to-end processes. These expenses can be reduced, or even better eliminated, by embracing digitalization.

Also, more customized product will raise, such as “pay-as-you-drive” insurance, charging policyholders by the mile driven.

Concerning home insurance, now in a data-driven landscape, for example insurance companies will be able to know when individuals will put their home on sale in the market, therefore becoming targets for insurers to offer new home cover and also products to cover mortgage on their new house.

This way, home insurers can evolve their core products by helping property buyers take out insurance, value properties, predict utility costs, offer smart-connected-devices to predict future possible flood risk, send danger alerts, as well as repair person to solve home-related issues; all this through a simple mobile app.

3.1.1 Automotive

According to Deloitte's nine killer applications of digital technology in General Insurance, self-driving cars will have the highest disruption impact within this sub-sector (Appendix 7), but also it will be the force that will take longer to take effect. Innovative insurers and auto manufacturers can leverage on new opportunities coming from the automated driving systems (Appendix 12), while others are likely to see a significant erosion of revenues. These technological

improvements will be able to drive down accident claims by at least 10% in developed markets by 2015 and 20% by 2035, hand in hand with reducing premium prices (PwC, 2015).

Self-driving cars could be safer than human drivers, since the entailed mechanisms don't suffer from human frailties, like sleepiness. As a matter of fact, more than 90% of car accidents happen because of human errors (Alert Driving, April 2011). However, risk won't be completely eliminated: environmental and other human factor will still be responsible for some accidents to occur. Also, this technology will introduce new types of risks, such as hacking and malfunctions of the self-driving system.

This revolution combined with the car sharing and car pooling phenomenon will reduce the number of vehicles present on the road, therefore the need for personal insurance coverage.

The key concern to focus is: who will accountable for risk, since most of the accidents will be caused by failures in control software and systems? There will be a shift of liability along the supply chain, Original Equipment Manufacturers (OEMs) could hence become liable.

3.2 Health

Several trends are unfolding the life-insurance sector, some of them already described before, such as IoT and Big Data & Analytics. Mobile and wireless application are driving the health market (Appendix 13). Like previously mentioned, a possible way for insurers to evolve and lead the change lies in shifting their business model focusing on promoting life benefits, thus becoming wellness coaches and tackle new customer segments. As a matter of fact, these sophisticated sensors are able to monitor heart rate, blood sugar levels and other potential signs of illness in real time, thus notifying customers of the potential problem. Also, this can create a stronger customer relationship turning insurers in promoter of well being, by giving health advices and proposing gym memberships (PwC, 2015).

Since nowadays consumers are empowered by globalization and by transparent flow of information, they are now able to take control of their health care decisions. For health insurance companies, this will turn in a difficult challenge, considering that their intrinsic nature is not customer-centric driven but instead, health G.I have always related on the independent agent model. This model was more cost-effective than employing a full time person, however it has created a barrier between the insurers and their customers. The nature of the agent role is to control information about policyholder instead of sharing it in order not to risk to be disintermediated. This way, insurers often see the agent, and not the policyholder, as their customer (EY, 2015).

Let's see now an example of a health tech-insurance startup, that has is primary focus in customer-centrism.

3.2.1 HiOscar

Oscar has raised more than \$700M, 32.5% of which by Google. Its goal is to disrupt health insurance by shifting the value proposition in building a solid and direct connection with consumers, thus humanizing the whole private health insurance operations: *“It aims to make its customers love health insurance — as opposed to seeing it as a necessary evil — and put Oscar at the center of people’s health and wellness needs”* (CB Insights, 2017).

Oscar’s strategy is to focus primarily on customer experience, brand, and simplicity (Appendix 14), since competing on scale, price, and distribution was going to be harder when considering the size of incumbents. However, Oscar saw its potential niche in customer satisfaction,

considering that the health insurance industry is characterized by a very low net promoter score (NPS¹³) of 12 out of 100.

4. Ecosystems: the Future of Insurance Competition Landscape

According to Investopedia, a Business Ecosystem can be defined as the network of organizations (i.e. suppliers, distributors, customers, competitors, government agencies...) involved in the delivery of product and services by applying both the principles of competition and cooperation. Each organization within the ecosystem is able to affect others and vice versa. Therefore, a costand and evolving relationship is created and every member must adapt itself in order to survive.

The emergence of this reality could harm insurers along the whole value chain, since other industries can leverage on a stronger customer relationship and better control of risk object, less legacy baggage a set of disrupting skills and assets, lower operational costs and efficient distribution models. Not to mention their value proposition, which is more appealing when compared to the traditional insurance one. In this scenario, insurers are confined on a side as mere providers of capital to shrinking risk pools (Morgan Stanley, 2015).

For insurers, ecosystems could turn out to be both an opportunity and a threat to their business model, since they could harm just parts of insurance's value chain or they could instead become direct competitors. In the latter case, they will leverage on better customer engagement, relationship and insights, thus probably crushing the competition coming from traditional insurance companies.

As a matter of fact, Google is selling insurance in 48 US states, and in the UK it provides auto

¹³ NPS indicates the number of customers that are willing to recommend a product or service to friends. Companies like Apple have a NPS of 70 or more

and travel insurance quotes. Also, Walmart and IKEA and a number of mobile phone companies have already entered the insurance market (Accenture, 2015).

Just one respondent from a survey of Baring Point Institute felt that his company had a “*strong alliance network*” and 25% of the respondents stated that they had only a single alliance in place. Positively, according to a PwC report, more than 30% of insurance CEOs consider strategic partnerships as an opportunity to embrace innovation in the proper way and access to effective digital capabilities. However, only 10% of insurance CEOs are seeking partnership with start ups. According to a Morgan Stanley research (Appendix 15), ecosystems cluster themselves around the main types:

1. Segment of One distribution ecosystems. They deliver customized offers based on data insights. Most of them are retailers (e.g. Amazon) or startups;
2. “One-stop-shop” ecosystems. They provide services build to meet customer needs, such as health problems;
3. Connected object ecosystem¹⁴.

Also, there are three main forces that are likely to speed up the disruption:

1. Customer expectations: according to Morgan Stanley research, 50% of consumers would switch to a new innovative insurance model;
2. Technology adoption: also according to Morgan Stanley, by 2020, it is expected that 80-100% of all shipped cars will possess connected devices and that nearly everything in a home could be monitored online;
3. Regulation. Safety regulations are likely to accelerate even more the adoption of the

¹⁴ See 3.1 IoT section for more information

IoT¹⁵.

Therefore, the disruption it is likely to occur in the distribution area, since these ecosystems will lead to a shift to non-traditional channels. Underwriting will become data driven, and there will also happen to be risk reduction.

Hence, it is obvious that insurer can not pursue innovation completely by themselves but instead, there is a crucial need to address strategic partnerships rapidly.

For example, Allianz has partner up through a joint venture with Baidu, a Chinese Internet giant. This partnership will lead Allianz to implement new ways of selling its product by providing tailored offers, since the Chinese company is specialized on data e online consumers' behaviors. Moreover, it will give the insurance giant access to the Chines market.

Also AXA has started a global partnership with Alibaba and Ant financial Services to distribute its product on the giant ecommerce. The aim is to innovate together in order to develop customized offers for Alibaba's customer base and by doing so, also exploring new segments to target. This is an excellent example of how things might turn out in a future: incumbents should leverage on these tech-giants' expertise as opposed to compete with. Ultimately, this collaboration shows how insurance will be distributed among the ecosystems as an "add on" and not as a "push" product (Source: the-digital-insurer.com).

4.1 Landscape

To sum up, insurers will face competition coming from unexpected areas and by new players. Therefore, it is likely for them to become a hub or aggregator for multiple offering coming from different providers and shift their current agent-operating model into a more customer-centric and advisor kind of role.

¹⁵ For example the eCall European initiative calls for all cars from 2017 to be sold with a system that automatically generates an emergency call

Given the high barriers to entry and switching cost, it won't be likely for insurtechs startups to take over incumbents. As a matter of fact, data owners will be less keen to start selling insurance, instead they can sell data to insurance or start distributing insurance by becoming brokers and setting up an online marketplace, as well as starting strategic partnerships with G.I.

However, there will be some players that are more likely to become dominant within the ecosystem, hence exerting more bargaining power towards other players, depending on the sector of interest (Appendix 16).

Moreover, their presence will force G.I to innovate and evolve its business models to remain competitive and keep their bargaining power towards its suppliers and buyers.

For example, the disruption may occur when customer will prefer to insure themselves in networks such as the P2PI one, instead of doing it in traditional companies, therefore commoditizing the latter market. Also, this will lead to a reduction in demand, not followed by a consequently reduction in supply, therefore lowering prices. In this scenario, P2PI would bring into the market adverse selection for incumbents, with poor risks being excluded from P2PI by members carefully analysing their networks.

Hence, it will be highly advisable to start looking for the right partners within the ecosystem, ranging from tech giants to OEM.

The successful insurers will be the one that will be able to create partnerships with "upstream" channels, in order not to lose their customers to other players and also considering the risk of being disintermediated at the distribution stage.

5. Final Recommendations for Insurance Incumbents

The first thing incumbents should do is to get their CEO and board members to embrace the digital transformation and become the ones that will push and motivate the company to evolve.

Cultural change is key to the success of this transformation. Therefore, also digital education at all levels becomes crucial. As a matter of fact, the transformation will be completed successfully by implementing fast test, lean and agile approaches that are able to speed progress but at the same time maintain the proper focus on customers, and cross-functional teams that pool specific types of expertise. Incumbents should already start looking for ways to attract new and young talents to form a proper team, considering that the competition for digital talent is particularly high and the start up companies have more power in attracting talents.

Investment has to be secured as well, since digital transformation will require large amount of money (i.e. Axa invested €950 million over just two years - McKinsey, 2017).

Digitalization comes hand in hand with a customer centric approach that has to be entailed among all the value chain. To gain early support, incumbents should promote projects that deliver quick rewards at a manageable risk. For example, customer service activities and the redesign of claim processes.

Therefore, it is crucial to build proper capabilities to be able to modernize core operating platforms, such as administration, billing, claims systems in order to deliver effective user experience for their clients.

Conclusively, long term success it is clear by now that will be dictated by the power, skills and know-how of the ecosystem that incumbents will build around them. As a matter of fact, ecosystems will create the competitive advantage needed to survive in the market and will enable to reduce the innovation gap between the G.I current product offering and the tech giant competition, and also, incumbents will learn new ways of working, such as the agile approach and they will also benefit from the power of new important technologies, thus being able to implement a proper digital culture.

6. Conclusions

One sure thing that emerges from this analysis is that the future of insurance will be pervaded by digital. The industry is now ready to feel its impact, an impact that was before protected by regulation, companies' legacy & portfolios and also by customer loyalty.

The disruption will result in a much more agile and effective business model, that hopefully will be able to meet customers' needs and capitalize on unfolding commercial opportunities in a much more efficient way when compared to the present and past times.

In conclusion, the future seems brighter for insurers. They will have more opportunities to capture demand and evolve their product portfolio delivering higher value to their users. Crucial will be to establish the right partnership with the right player within the Ecosystem.

The spreading of data and information will enable G.I to analyze them and turn them into smarter solution for consumers, the ultimate winners of this battle.

Also, it is very important for insurers to maintain integrity by protecting individuals from these technology advances and by setting up the proper moral and ethical bounds around these innovations. As a matter of fact, insurance has always been a representative and side player for regulation and will be good to keep on doing that during these time of changes.

“This is the age of digital disruption. Across industries, insurgents with digitally enabled business models are challenging incumbents and their established business models. The incumbents have a choice: be disrupted or be the disruptors. Those that prosper in the digital future will be those that choose to be disruptors and invest in innovation today”

(McKinsey, 2017).

REFERENCES

- [1] Alert Driving, 2011. Available at: <https://goo.gl/QwTVMq>
- [2] BCG, “Beyond the Hype”, Available at: <https://goo.gl/s9BBuo>
- [3] Bughin Jacques, LaBerge Laura, and Anette Mellbye, 2017, “The case for digital reinvention,” *McKinsey Quarterly*, Available at: <https://goo.gl/iqb7rJ>
- [4] CB Insights, 2016, “Google Insurance Tech Investments”, Available at: <https://goo.gl/dkTfFm>
- [5] CB Insights, 2017, “Oscar health insurance strategy teardown”, Available at: <https://goo.gl/zx6R5i>
- [6] Cisco, 2017, “Digital transformation for the insurance industry”, Available at: <https://goo.gl/yUbCAE>
- [7] EY, 2015, “Mobile technology in insurance”, Available at: <https://goo.gl/MPXdDh>
- [8] EY, 2015, “The future of health insurance”, Available at: <https://goo.gl/28MsfN>
- [9] EY, 2016, “PAYL- wearable trends”, Available at: <https://goo.gl/86Km45>
- [10] EY, 2017, “The evolution in self-driving vehicles”, Available at: <https://goo.gl/YJCSGP>
- [11] EY, 2017, “Digital transformation in insurance”, Available at: <https://goo.gl/JwFJyW>
- [12] Goldman Sachs, 2014, “The Internet of Things: making sense of the next mega-trend”, Available at: <https://goo.gl/J656qk>
- [13] Gröger Anne-Christin , 2014, “Insurance Deductions for using Health-Monitoring Apps, Risks and Rewards”, *Worldcrunch*, 21 Available at: <https://goo.gl/hb6Y56>
- [14] Gupta Manav, 2017, “Blockchain for dummies”, *IBM*, Available at: <https://goo.gl/GXgLAS>
- [15] Halverson Mark, Malhotra Ravi, 2015, “Beyond insurance: Embracing innovation to monetize disruption”, *Accenture*, Available at: <https://goo.gl/Ly5Nbk>
- [16] Hurley Rich, Evans Peter, Menon Arun, 2015, “Insurance Disrupted. General Insurance in a connected world”, *Deloitte*, Available at: <https://goo.gl/zkGsYf>
- [17] Insurance Europe, 2015, “European insurance in figures”, Available at: <https://goo.gl/s9SUH9>
- [18] Insurance Europe, 2016, “European insurance – key facts”, Available at: <https://goo.gl/1bsR5U>
- [19] Investopedia, “Business Ecosystem”, Available at: <https://goo.gl/KRJizx>
- [20] Jim, 2014, “Disrupting Insurance with Friendsurance”, Available at: <https://goo.gl/LDhmsb>
- [21] Kosoff Maya, 2015, “Google just invested \$32 million in Oscar, a billion-dollar startup that wants to shake up healthcare”, *Business Insider*, Available at: <https://goo.gl/Jk2s5V>
- [22] Lascelles David, Patel Keyur, 2017, “Insurance Banana Skins 2017”, *PwC*, Available at: <https://goo.gl/mjaDz4>
- [23] Maeder Patrick, “The smart insurer: more than just big data”, *Bearing Point Institute*, Available at: <https://goo.gl/DcgYpN>
- [24] Maissin Jean-Pierre, Flamand Thierry, 2014, “When digital changes the way insurance works” *Deloitte*, Available at: <https://goo.gl/XxfhHm>
- [25] McKinsey, 2017, “Digital disruption in insurance: Cutting through the noise”, Available at: <https://goo.gl/9Cd9BC>
- [26] Morgan Jacobs, 2014, “A simple explanation of the ‘Internet of Things’”, *Forbes*, Available at: <https://goo.gl/AprcVV>

[27] Morgan Stanley, 2015, “Insurance Tech Ecosystems”, Available at: <https://goo.gl/N3QH45>

[28] OECD, 2010, “The economic and social role of intermediaries”, Available at: <https://goo.gl/MT6PGQ>

[29] PwC, 2015 “Disruption is the new reality in the global insurance industry”, Available at: <https://goo.gl/oh8Htt>

[30] PwC, 2017, “A marketplace without boundaries? Responding to disruption” Available at: <https://goo.gl/p8Hs9b>

[31] Roland Berger, 2015 “Internet of Things and insurance”, Available at: <https://goo.gl/h4pCys>

[32] Roland Berger, 2016 “Digital and disrupted: all changes for healthcare”, Available at: <https://goo.gl/i1PxkY>

[33] Shubber Kadhim, 2014, “Guevara wins Wired Money’s startup competition”, *Wired*, Available at: <https://goo.gl/zt5Fhu>

Srivastava Tanushree, Yadav Deepanshu, 2017, “Digital disruption in the insurance industry”, *KPMG*, Available at: <https://goo.gl/k8wb4s>

[34] Vicente Danny, 2016, “Disruption in insurance”,

Cisco, Available at: <https://goo.gl/rxj8oW>

[35] Wade R. Michael, 2015, “The battle for digital disruption: startups vs incumbents”, *IMD*, Available at: <https://goo.gl/du9xYU>

[36] Willis Tower Watson & CB Insights, 2017, “Quarterly InsurTechs Briefing Q1 2017”, Available at: <https://goo.gl/Hcj5vH>

[37] Womack Rian, Regan Trish, 2013 “Google’s Schmidt: Insurance about to ‘explode’ with uses of big data”, Available at: <https://goo.gl/1ZWeNf>

WEBSITES:

[1] Crunch Base: <https://www.crunchbase.com>

[2] Friend Insurance: <http://www.friendsurance.com>

[3] Gusto: <https://gusto.com>

[4] Hey Guevara: <https://heyguevara.com>

[5] Hi Oscar: <https://www.hioscar.com>

[6] Lemonade: <https://www.lemonade.com>

[7] Statista: <http://statista.com>