Insurtech

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(1.) What technologies are changing the insurance industry and how?

Many technologies based on the internet of things ("IoT), artificial intelligence ("AI"), and big data analytics have disrupted the insurance industry. Historically, big data analytics has been the focus. However, the industry has recently shifted more attention towards AI. These technologies often work together rather than in isolation to help insurers collect data, streamline processes, and reduce risks. ZhongAn, which primarily insures products purchased on shopping platform Taobao, utilizes both big data and artificial intelligence to promote sales of its insurance products (Insurtech Is Hitting Critical Mass). UiPath, which develops automation software for enterprises, provides solutions for clients based on machine learning and artificial intelligence (P&C Insurtech, p. 15). Other insurtech startups similarly combine technologies to improve the insurance industry.

In terms of IoT, the insurance industry has increased the use of sensors to serve different purposes. Currently, telematics represent the most well-known technology used in the insurance industry. Smartphone usage-based insurance ("UBI") utilizes telematics to track driving behavior and fraud while also enabling accident reconstruction. Additionally, "good" drivers tend to use insurance policies with telematics-based pricing. Progressive and Allstate have adopted this technology although the adoption of telematics is still fairly low with only 5 percent of drivers using the technology (P&C Insurtech, p. 6). In addition to personal auto insurance, telematics can improve the commercial auto telematics industry. Fueled by government mandates supporting these devices, electronic logging devices ("ELD") can record driving and resting behaviors for truck drivers. Besides auto insurance, sensors can be used to inform other types of insurance. Wearables and trackers, which depend on sensors, can collect health data and improve safety in dangerous workplace environments. As a result, wearables and trackers can be used to develop risk profiles for workers' compensation insurance. Additionally, hyper-local weather sensors can help insurers better price risk based on micro-weather conditions. Finally, smart home sensors can capture valuable information and mitigate risks for home insurance companies by detecting leaks or recording motions.

In terms of AI, the insurance industry has utilized a variety of tools to capture and process information. Geospatial analytics combine deep learning and machine learning with aerial imagery, enabling insurers to view roof conditions, property size, and other visual data. Using geospatial analytics, insurers can validate information and reduce the need for on-site property inspections. Furthermore, drones enable insurers to collect data before insuring a property and verify claims immediately after an incident. Virtual auto claims rely on established technologies such as smartphone cameras to reduce human touchpoints, making the process more convenient. AI can be applied to develop responsive chatbots that reduce dependency on personnels. Lemonade, a powerful upstart in home and renters insurance, utilities chatbots to provide quotes and handle claims. Moreover, commercial data automation can help insurance companies unlock existing data and streamline processes. For example, natural language processing can eliminate the need for manual data entry.

In terms of big data analytics, the insurance industry has harnessed data using a variety of sources to better understand risk. While the cyber risk insurance industry is nascent, analytic tools provide insurers with a better understanding of cyber risk. Additionally, commercial data augmentation tools can tap into social media and public data to verify insurance claims. Already companies, such as Carpe Data, have already carved a niche in this space. Information collected through IoT sensors and insights found through AI contribute to the emerging big data that can be analyzed to help insurance companies improve prices and understand risks. Furthermore, these technologies can be used to develop comprehensive ecosystems. Robot process automation ("RPA") technology can automate business processes in the industry such as underwriting new policies or ensuring compliance with regulations. Events, such as home buying, can be digitized through platforms that support underlying activities (i.e. purchasing home insurance, obtaining mortgages). Ultimately, insurtech disrupts outdated processes in the insurance industry and provides meaningful changes.

(2.) What are the struggles that insurtech companies are confronting when entering the insurance industry?

Fundamental differences between insurtech startups and incumbent insurance companies contribute to the difficulties insurtech startups face when entering the industry. Insurance companies have been around for a long time while many startups recently emerged leading to

"significant challenges and differences surrounding culture, workforce, agility, and technology" (The Rise of Insurtech, p. 3). Insurtech companies struggle in the risk-averse insurance industry since the insurance industry operates at a slower speed, which is reflected in the phrase "300 years versus 300 days" (The Rise of Insurtech, p. 6). Moreover, insurtech startups tend to be more nimble than large companies. As a result, insurtech startups are often frustrated by the bureaucratic nature of traditional insurance companies. Furthermore, there is a discrepancy between the cutting-edge technologies that a startup uses compared to the legacy systems that an insurance company uses.

Given these differences, insurtech companies struggle to recruit talent that respond well to both the insurtech and traditional insurance cultural environment. Additionally, insurtech companies are pressured to demonstrate a value proposition that meets business objectives and reduces friction. Given the demographic of insurtech founders, many insurtech startups neglect highly profitable areas such as life insurance and commercial lines due to lack of exposure (The Rise of Insurtech, p. 8). Consequently, insurtech startups could really benefit from better understanding the industry environment and meeting traditional insurers at their present state and easing them along the innovation pathway.

(3*a.) What are the overall market dynamics of car insurance in the UK? What is the potential market size in the UK for Cuvva-type services?*

Motor insurance premiums in the UK were expected to grow by 1.5% in 2016 to 15.6 billion dollars. Since premiums were set to rise by an average annual rate of 1.3% between 2016 and 2020, the overall market of car insurance in the UK would reach roughly 16.4 billion dollars. Insurance premium rates in the UK tended to be cyclical as premiums decline for good returns while increase for added-on losses. The issue of the motor insurance market is that brokers charge high fees, thus the insurers have incentive to bypass brokers and reduce the expenses. The average insurance premium for comprehensive cover also charges higher fees for the youngest motorists (extra 1750 dollars). In the near future, the marginal cost of conducting the transaction of insurance payment should be close to zero as brokers are replaced by artificially intelligent agents.

In 2016, the car insurance market was controlled by three large companies: Admiral, Aviva and Direct Line. However, more companies started to enter the market. The development of

information technology provides easier access to potential policyholders and makes the exchange of information more conveniently by phone calls, mail, the internet and retailers.

Cuvya provided pay-as-you-drive car insurance. The target customers of Cuvya are people who rarely drive a car. They do not have a car and sometimes want to borrow a friend's or family member's car for a short period of time (several hours). There were roughly 6 million cars in the UK that were driven very infrequently.

(b.) What is the strategy of Cuvva and what are its potential competitive advantages?

One strategy of Cuvva is that it addresses the pain point of the car insurance market and focuses specifically on a group of target users. Also, to provide a better user experience, Cuvva collects feedback from users and makes improvements or adds functions to the mobile app they provide. Since Cuvva aims to address the overpaying of car insurance for those people who do not drive cars frequently, one advantage of Cuvya is that it offers car insurance by hours. The other advantage would be that Cuvva expands access to car insurance to everyone and makes it easy to use through providing its services on a mobile app. This is also beneficial for people who want to share the driving on long road trips. Another competitive advantage Cuvva has is its technology to analyze customer data via the database of DVLA.

Cuvva also uliztizes networking effects. For users, it is convenient to see the location and price of cars that are available to rent offered by their Facebook friends. While for the lenders, they are able to make some extra money by lending their cars to trusted friends. At the end, two parties are likely to achieve a satisfying result at a low cost. Moreover, Cuvva offers a flexible insurance policy for occasional users who take public transportation to work by covering the risk of driving for leisure activities. It also charges no switching cost. Since users pay for the car insurance on a monthly basis which is determined by their driving history and the condition of the car, they could easily cancel the policy at the end of the month and switch to a traditional policy if their driving habits change.

(c.) What do you see as Cuvva's strategic challenges?

Some strategic challenges for Cuvva involve the inherent unwillingness of consumers to constantly think about their insurance. As mentioned in the case, consumers generally do not want to think about their insurance every time they want to go for a drive. Insurance is a necessary aspect of an individual's life, but one that ideally is thought about as little as possible. We believe that consumers would rather pay a slightly higher premium rather than have to think about their insurance every time they want to drive somewhere. Moreover, we think the most important contributing factors to an individual's insurance premium are constant across both Cuvva's model and traditional models. For example, a consumer's age is much more likely to predict the likelihood of an accident rather than the day of the week. Therefore, we would argue that while limiting asymmetric information via Cuvva is obviously beneficial, we think that the additional information acquired via Cuvva will not be as game changing as initially thought.

Furthermore, Cuvva faces a challenge of established players already dominating the insurance industry. There are many other players that have a pay as you drive policy and Cuvva has to compete with these established businesses. In addition, there is also a possibility that the underwriters that Cuvva uses could develop their own front end app like Cuvva and directly compete with Cuvva. While the insurance industry has historically been a stagnant industry, with the advance of technology and acceptance of fintech we believe that companies like Cuva will face increased competition.

(d.) In what other ways could Cuvva strengthen its position?

Cuvva has a very user friendly approach to providing insurance in making it as convenient as possible for the consumer to receive insurance. With this in mind, I would suggest that Cuvva emphasizes this in their marketing and try to grow their network with being consumer orientated as their hallmark. We think Cuvva implementing the referral program was a perfect example of Cuvva strengthening their position in the market and should continue to look for ways such as this to grow their network. Cuvva has to keep in mind that they are a platform for insurance rather than an actual underwriter, and therefore they need to be establishing network effects and growing their network as quickly as possible. A good way to strengthen their position is to provide a discount for customers that use Cuvva for a certain amount of time in order to increase switching costs and

have more data on their customer base. Cuvva could justify the discount by having a more accurate measure of what their expected losses will be on their customer base and also keeping customers for longer. An additional way for Cuvva to strengthen their position is by using an API to access a user's Facebook account and suggest potential friends to refer to Cuvva. From there Cuvva could set up a platform in which users can offer to rent out cars for a day. This would further increase the network effects for Cuvva making it more convenient for potential customers to choose Cuvva over a competitor.