

RETHINKING INSURANCE AND THE INSURER: OPTIMIZATION IS NOT INNOVATION!



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“The best way to predict the future is to invent it.”

– Alan Kay

“It is difficult to make predictions, especially about the future.” – Niels Bohr

Introduction

Over time, little has changed when it comes to the fundamentals of insurance: the pooling of uncertain independent risks and the spreading of losses among as many pool participants as possible. Essentially, an insurance provider models a set of risks, determines which factors show variations, creates a rating model on these elements, collects data pertaining to the factors, and then computes product-centric rates.

Compared to the banking industry and with limited progress since the mid-1990s on rule engines, insurance providers are trailing in the digital spectrum: customer engagement, use of analytics, and adoption of mobile and social media. Unlike the general (P&C) insurance companies, Life insurers are less digitally sophisticated because of organizational constraints and fragmented offerings, multiple distribution channels, and legacy technologies impacting the speed for product delivery and adoption of strategies.¹ Most of the current technological developments for insurers are devoted to the upgrading of existing infrastructures, such as policy administration and claims systems.²

Shifting trends in financial services

Recently, Christine Lagarde, Managing Director of the International Monetary Fund, said: “The role of banks as providers of payment services is being challenged and banks are going to adapt to survive, or possibly disappear.”³ Furthermore, according to the 2018 Capgemini World Wealth Report, the slower pace of change in the traditional banking industry is creating an excellent opportunity for big tech dis-

Executive Summary In “An Open Letter to Our Fellow Underwriters,” published by *ON THE RISK* in June 2018, Colin Kearney and Philippe Aussel discussed the present-day challenges of the underwriting function and for underwriters to stay relevant. In this essay and literature review, Philippe examines how evolving technologies and external pressures are generating the transformation of the insurance sector. While the insurance industry is considered to be risk sensitive, cautious to change and measured to adopt innovations, consumer behaviors are evolving and incumbent market participants are facing rising pressures from digitally native new entrants, robo-advisers and social trading platforms. Slow and steady may not win the race anymore in this age of rapid and agile digital transformation. Is the insurance industry prepared to break the status quo and be innovative? Can the insurance industry learn new tricks?

Disclaimer: This article does not discuss in detail any privacy and data protection concerns, the impact of advanced technologies on the labor market, or the increasing individualization of insurance coverage.

ruptors.⁴ Moreover, according to Deloitte, there are five significant trends changing the current financial services landscape:⁵

1. Changing customer preferences: Most day-to-day transactions are performed on mobile devices, reducing the need for brick-and-mortar customer touchpoints.
2. Cashless payments: Customers are embracing mobility and connectivity, making traditional wallets obsolete.

3. **Capital raising platforms:** Online marketplaces connecting businesses and potential investors are replacing traditional business financing sources.
4. **Empowered investing customers:** Virtual assistants, digital brokers, chatbots and robo-advisers are democratizing the investing and wealth management industry. Interestingly, high net worth clients are still looking for personal and in-person management.
5. **Growing connectivity in the insurance industry:** Remote real-time sensors (connected cars and connected homes), expanding telematics and personal wearables (connected people), and advanced analytics have the potential to disrupt an industry sector typically cautious about changes, thus making dynamic, real-time pricing and underwriting a definitive possibility.

Current macro challenges of the insurance industry in this early digital era

The insurance industry is known for its lateness to embrace digital technologies and to introduce truly innovative products to its customers.⁶ On the other hand, there are numerous emerging forces, e.g., direct-to-consumer initiatives (DTC), creating pressure across the insurance value chain with the potential to redefine the structure of the market. What are the current challenges limiting the insurance industry to leap forward?

1. **Reliance on legacy systems:** Specifically, for life insurance, because existing policies can be in force for decades, thus making the transition to newer, cheaper and more agile technologies difficult.
2. **Customer experience:** For commercial lines (P&C), the insurance process still relies on face-to-face negotiations and extensive paper documentation. For life insurance, non-face-to-face applications and “fluidless” underwriting are fairly new approaches. The traditional reliance on lengthy medical history questionnaires and biometrics can result in an unpleasant customer experience. There is also the belief that the insurance process is so specialized it cannot be handled by third parties or software. Overall, the insurance market is perceived as fairly inefficient because of the needs for insurers to protect themselves from information asymmetry (adverse selection and moral hazard) during the risk selection process, by verifying the information provided by the customers through third-party sources.
3. **Mergers and acquisitions:** Past M&A activities have distracted established insurance companies from innovative products and processes, and consequently, they may not have exploited

the looming digital transformation of the fourth industrial revolution.

4. **Regulations and compliance:** The financial sector (banking, investing and insurance) is heavily regulated as customers’ protection necessitates a heightened regulatory environment given the long-lasting provider-client relationship, such as for mortgages and permanent insurance policies.
5. **Delay in digital transformation:** The insurance back-offices are presently relying on paper documentation and third-party verifications. Distance is also a pain point for insurers and consumers. Insurance policies are still mostly delivered via postal mail or in-person by the insurance advisor to collect the first premium. This is a source of cost, inefficiencies and inconvenience. Moreover, once the sale and underwriting process are completed, there is a perceptible lack of interactions between the insurance carriers and the policyholder.

Leaping from passive transactional restitution to active loss prevention and mitigation

According to the McKinsey Global Institute, potentially disrupting technologies in the insurance context include: high-speed mobile internet, automation of knowledge work, the Internet of Things (IoT), advanced robotics, autonomous or near-autonomous vehicles and next-generation genomics.⁷ To embrace the digital transformation, the insurance industry should progress from passive transactional restitution to active loss prediction, prevention⁸ and mitigation by capitalising on transforming big data into actionable insights along the insurance value chain (from customer prospecting and acquisition to pricing, underwriting, claims, fraud detection and policy administration).

Since the mid 2010s, the balance of power has shifted towards value creation by the customers and agile process delivery. Consumers, fueled by the advance of digital and mobile technology, are gradually looking for portfolio simplicity, less costly products, improved transparency, accessibility and swiftness for their insurance transactions.⁹ The Geneva Association lists five possible scenarios for the evolution of the insurance industry:

Scenarios	Distribution of information between individuals and firms
The digital society	This scenario is characterised by free flow and open access to data. Insurance and technology companies have equal access to a broad range of data and can use it without restriction.
Insurance at two speeds	In this scenario, insurance companies are prevented from access to or use of enhanced data to which technology companies have access. Those who have access to data can use it without restrictions. In a sub-scenario, only a few insurers have access to data through exclusive cooperation agreements with technology companies, but other insurers do not.
Privacy regulation	In this scenario, regulators intervene to protect certain privacy values. In one sub-scenario, regulators try to prevent discrimination at all cost. In another sub-scenario, regulators aim to avoid intrusiveness. In a third scenario, regulators apply a zero-tolerance approach to the risk of abuse in using personal data.
Digital backlash	In this scenario, we assume that increasingly restrictive regulation prevents established insurers and new market players from the use of enhanced data in insurance.
A tale of trust	In this scenario, people are no longer willing to share their private data such as health-related information with technology companies, in general, or social networks, in particular. Insurance companies can act as a “safe harbour” but face similar conditions to the rest of the industry with regard to accessing data.

Gradually, insurers are weaving themselves into people’s daily living and leveraging digital and interconnected infrastructure (online behaviors, remote sensors and wearables) by applying artificial intelligence (AI) algorithms to deliver interactive, just-in time, risk warnings to their customers. Loss prevention through digital monitoring and predictive analytics has a direct impact on claims expenses. As the amount of high-quality and structured data increases, insurers will be in a better position to forecast consumer behaviors, habits and lifestyle more accurately and provide personalized feedback to reduce property or liability damages, to encourage healthier living and health, to increase years of disability-free living, and ultimately longevity. Going forward, it is expected that “accident-less” self-driving or driverless cars, the connected smart home, nanoscale biotechnologies and personalized medicine will shrink the claim rates. With improved risk prevention through predictive analytics, insurance pricing will come down, thus benefiting the insurance customers and the affordability of insurance coverage for all.

The conventional insurer is designed for stability (“build to last”). It is reputedly hierarchical with goals and decisions flowing top-down. It operates through linear planning and aims to capture value for its shareholders. In contrast, future successful insurers will “build for agility” around a network of squads operating in agile tribes, enabled by advanced technologies. The ultimate vision is to create value for all stakeholders by combining velocity, adaptability without compromising on stability, and by securing

a competitive advantage in volatile and ambiguous markets.

Thus, the best-in-class insurers of the future will be:

- Freshly thinking about the customer not product, by shifting from product-based insurance to usage or customer-based coverage, by being service-orientated and customer-centric, with less transactional and more relational client communication and customization, and pro-activity by predicting customer needs and behaviors through analytics.
- Getting smarter with data by combining actuarial, risk selection and data science; structured data is definitively the new wealth for insurance companies.
- Digitally mobile and automated with little process fences, frictions and repetitions to boost speed of decision-making and agility to respond to market changes and customer demands.
- Not only strong in the core insurance functions (pricing, risk assessment and claims) but also by incorporating loss prevention and mitigation incentives, such as improving driving habits, healthier lifestyles and risk awareness.
- More fluid, flexible and cost-effective in their shared functions (e.g., finance, human resources, operational/IT management) to eliminate siloed and duplicative infrastructures.

Conclusion

So far, insurers have enjoyed a monopolistic position given the lack of substitute products to the insurance coverage (savings and self-insurance are not viable

economic alternatives). But today's banking and insurance markets are being shaken by four disruptive trends:¹⁰

1. Quickly evolving environment.
2. Rapid introduction of disruptive technology.
3. Accelerating digitalization and democratization of information.
4. New war for talent.

There is a consensus that the traditional insurance business model, characterized by incremental changes and organizational constraints, will have difficulty surviving in tomorrow's digital landscape. It should be re-engineered by creative and innovative teamwork and partnerships.

To achieve gains and competitive advantage for its stakeholders, organizations must continuously develop products and services through innovation and creativity. This will be key for the insurance industry, given that competition is typically framed by external regulation and compliance forces¹¹ and potentially disrupted by external digitally native entrants. Hence, contemporary insurers appear to be mainly focusing on the optimization of existing products, processes and services, and accept it as though it were a proxy for innovations. But...optimization is not innovation!

The marketplace is shifting due to multiple factors, including rationalization in the insurance sector, regulatory pressures after the 2008/2009 global financial crisis, the need to adopt big data and advanced analytics, low-yield investment portfolio performance impacting pricing and capital requirements, cost pressures, a change-resistant culture, and rising customer expectations for personalization and enhanced digital experiences. Two factors are believed to change the insurance industry in ways unseen:¹²

- Big data and emerging cognitive computing (artificial intelligence, machine learning, algorithmic, microservices and blockchain capabilities) for innovative pricing and dynamic risk selection alternatives as new sources of frictionless underwriting information are becoming available.
- Empowered customers looking for insurance application and product simplification, heightened transparency, high velocity transactions with more usage-based or real-time risk-based insurance (UBI) products, with concepts like “pay when you use” or “pay how you use.”

Agility in operations, real-time data collection, automation, artificial intelligence, machine learning and cognitive robotics are emerging as core factors for transforming the insurance value chain. Are the insurance market players ready to rewrite the rules

of customer engagement and learn new tricks? With improved loss prevention, will the nature of insurable risks shift to low-frequency but high-severity events that would be harder to predict and price for?¹³ Only time will tell how the future of insurance will emerge.

“While the future is hard to predict, it's definitely not impossible to prepare for it.” – PWC

“Just as energy is the basis of life itself, and ideas the source of innovation, so is innovation the vital spark of all human change, improvement and progress.”
– Theodore Levitt

Further readings

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- Disruptive technologies: Advances that will transform life, business, and the global economy (McKinsey Global Institute).
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– Thriving in the coming insurance industry transformation – Five practical actions insurance companies can take to thrive (KPMG).

Notes

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About the Author

Philippe Aussel has over 40 years of facultative reinsurance underwriting experience and has worked for SCOR SE since 2003, having started at Munich RE in 1977. *ON THE RISK* published articles by Philippe on “Essentials of Financial Statement Analysis and Business Valuation” in September 2012, “Advanced Life Insurance Concepts at a Glance for Underwriters from a Canadian Perspective” in September 2013, “Essentials of Canadian Taxation in the Life Insurance Underwriting Framework” in March 2015, “The Drivers of Future Mortality: An Underwriter’s Perspective” in September 2015, “The Unique Challenges of Underwriting Children for Life Insurance” in December 2017, and “An Open Letter to Our Fellow Underwriters” in June 2018 (co-authored with Colin Kearney). Philippe holds a degree in Insurance Management from the German Insurance Academy (Deutsche Versicherungsakademie) and in 1996 wrote his final study paper on “Financial Statement Analysis for the Non-Professional Reader.”