Life Insurance: An Industry in Transition

Harnessing Innovation to Foster Growth

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Table of Contents

Executive Summary

Given the seismic shifts in technology, demographics, and customer preferences, the need for change in the insurance industry has never been greater. According to PWC, 74% of insurance companies believe that some part of their business is at risk of disruption, while 90% of insurance executives (the highest percentage in the financial sector), fear losing some of their business to insurance start-ups.[1]

Source: PwC Global FinTech Survey

Unfortunately, life insurers are caught in a trap in which product complexity increases reliance on sales agents, resulting in higher costs and lower profit margins. Life insurance agents often concentrate on wealthier, older customers, failing to reach out to the broader addressable market. This is compounded by the fact that many younger people are difficult to engage through traditional channels and do not believe life insurance products are relevant to them.

In which areas do you see the most important impact to your business from FinTech?

Source: PwC Global FinTech Survey

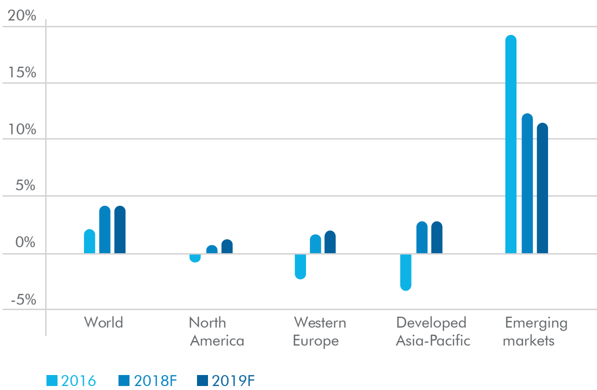
This paper explores some of the issues with the traditional life insurance model, outlines demographic and technological trends affecting the industry, and proposes actions that life insurers can take to remain competitive.

Background

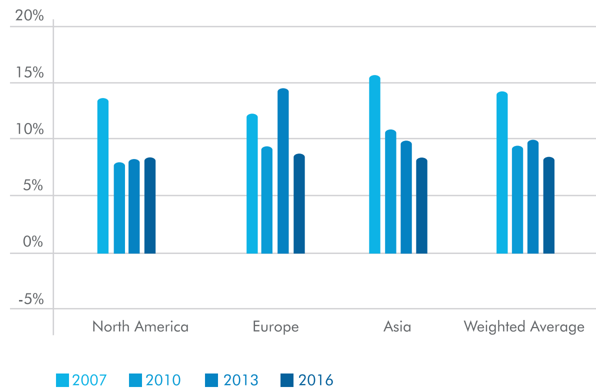
Nearly half of the US population is uninsured or underinsured, with US life insurance coverage gap exceeding $12 trillion (an average of $200,000 per household).[1] A similar proportion of US families have no retirement savings[2], with the collective US retirement savings gap for working households ranging from $7 to $14 trillion.[3]

Given the massive gaps in insurance and retirement coverage, one would expect increased market penetration of insurance and retirement products in US and similar markets; yet, that is not the case. According to Swiss Re, premiums in developed markets are expected to grow by 1–2% from 2018 to 2019, merely reflecting population growth.[4] Low growth and low interest rates over the past decade have eroded insurers' profit margins, resulting in lower returns on equity.

Real premium income growth for treditional life insurance



Life insurers' return on equity



Source: Swiss Re Institute

What can life insurers do to boost growth and improve profitability? In order to answer this question, we must examine the demographic and socioeconomic trends impacting today's society, along with the shift in consumer preferences due to technological innovation.

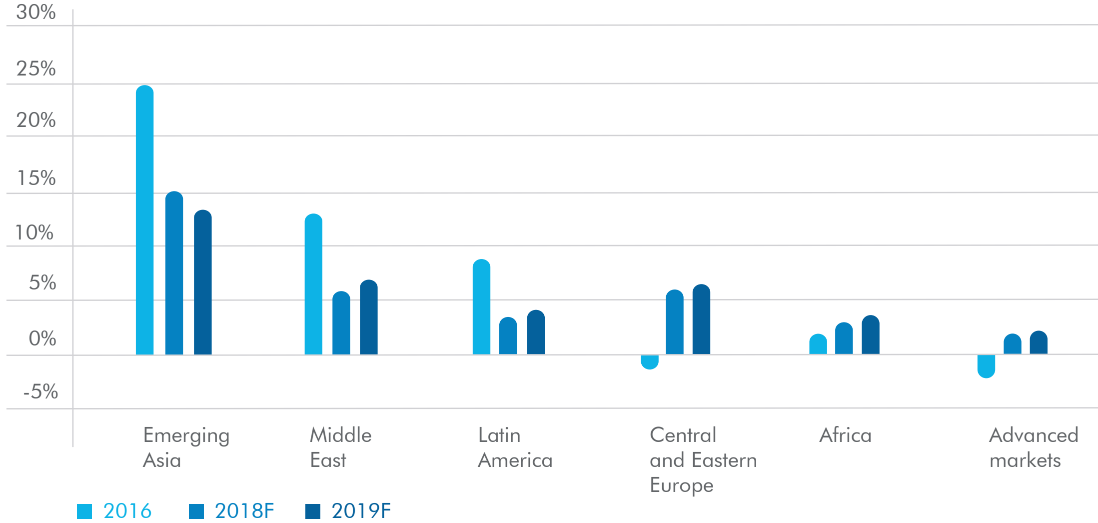
Demographic Trends

According to UN projections, 900 million people worldwide are currently 60 years or older, representing 12% of population.[5] By 2050, this demographic is expected to exceed 2 billion. The primary driver of this growth is an increase in global life expectancy, from an average of 70 years in 2015 to 77 years in 2050.

The aging of the global population is significantly more pronounced in advanced economies, where fertility rates have declined dramatically. Europe's average age is expected to reach 46 years by 2050, rising by 10 years above the global average. On the other hand, emerging markets are projected to have an average age of 26 years by 2050, primarily driven by high fertility rates across Africa and Asia.

This presents an opportunity for life insurers who focus on serving the needs of the growing populations in emerging markets. Given the diverging demographic trends, emerging markets are expected to drive new demand for life insurance, while the aging populations in developed markets will likely desire longevity and retirement products. Growth of insurance premiums in emerging markets is already outpacing growth in developed regions, with Asia representing 76% of all emerging market premiums.[6]

Life & Health Real Premium Growth by Emerging Region



Source: Swiss Re Institute

Implication for Life Insurers:
Aging populations will drive the need for retirement and longevity products in wealthier, developed countries. Younger demographic in emerging markets will drive demand for simple term life insurance products.

Socioeconomic Trends

Urbanization of Emerging Markets

The rural / urban divide may be even more relevant for life insurers than the developed / emerging market distinction. Based on UN projections, the world's urban population is projected to increase by 2.5 billion by 2050, mostly in emerging markets (1 billion in just three countries - India, China, and Nigeria).[7] With cities offering better economic opportunities than rural areas (most of the global GDP is produced by 300 largest metropolitan areas), it is no surprise that 1.5 million people worldwide move into cities every week.

The urbanization of the world's emerging markets is projected to be a key driver of middle-class growth, which is expected to grow by 2 billion people to reach 5.2 billion by 2030 (with 88% of this growth occurring in Asia).[8]

Urban dwellers typically have smaller family sizes, reflecting the higher cost of city living and lower extended family support. This trend – along with higher incomes driven by the burgeoning middle class – will result in greater demand for financial protection, becoming a key driver of insurance premium growth.[9]

Rapid Mobile Internet Adoption

As urbanization of emerging markets leads to higher average income per capita, the number of Internet users is projected to increase from 51% of the global population in 2018 to 90% by 2030 (increasing by 3.5 billion users, primarily via mobile devices).[10] This digital adoption will allow emerging country populations to bypass traditional financial services infrastructure and utilize internet-connected mobile devices to facilitate transactions and purchase financial services.

For instance, credit cards never became popular in China, but its mobile payment volume exceeded $18 trillion in 2018.[11] In contrast, U.S. has a deeply entrenched banking and credit card infrastructure, making the transition to next generation of payment systems much harder. As a result, the volume of mobile payments in the U.S. was only $50 billion in 2018.[12]

In another example, M-Pesa launched in Kenya in 2007 to provide the unbanked population with access to money transfers via smartphones. The service became widely popular in a country where only 10% of the population had traditional bank accounts, but over 90% had access to smartphones. As of 2017, M-Pesa had 34 million users, with transfers processed through its system exceeding 50% of Kenya's annual GDP.[13]

Implication for Life Insurers:
Demand for insurance will increasingly come from emerging markets. Rapid digital adoption in these markets will alleviate the need for costly and complex local licenses, allowing companies to bypass traditional infrastructure and reach their customers without a large agent salesforce.

Shift in Consumer Preferences

The proliferation of global technology firms has created a paradigm shift in consumer expectations. No discussion about consumer preferences is complete without the mention of Amazon, whose success demonstrates that customers want digital products to be flexible, dynamic, transparent and available seamlessly across all channels.

Within life insurance, consumers have consistently indicated that the purchase of protection products is a time-consuming and confusing process. Customers are intimidated by the challenge of researching, comparing, and purchasing a policy in an environment that lacks clear information.

Once consumers do select an insurance provider, submission of details required to underwrite the policy and taking the medical exam can be onerous and take longer than anticipated.[14] Studies have shown that 70% of people expect a life insurance policy to be active within two weeks of their application, but the average policy still takes most insurers several weeks to underwrite.[15]

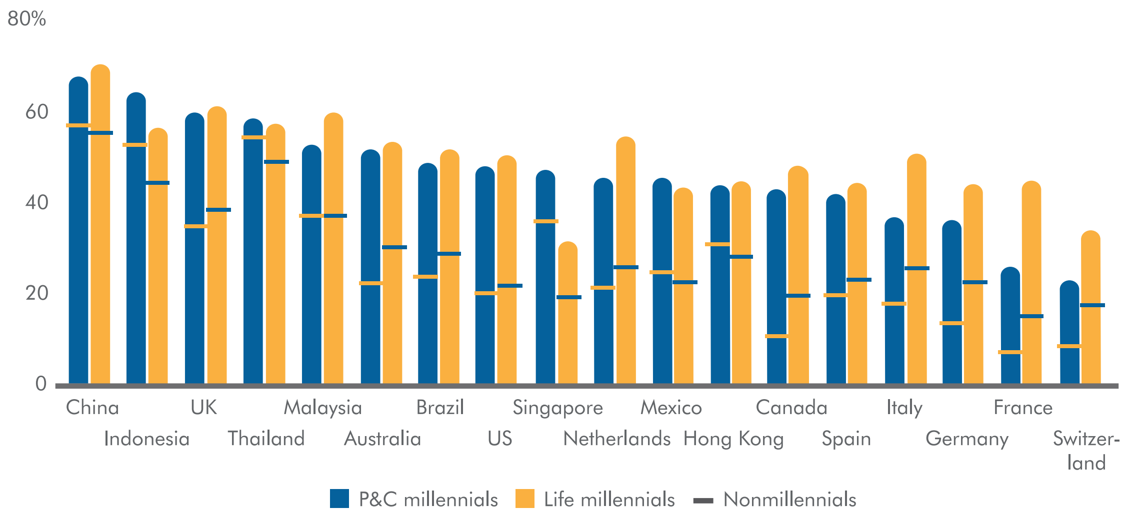
Overall, consumers say that insurance products are too complex, application procedures are too inconvenient, and the systems are incompatible with one another. This results in low customer loyalty and satisfaction. According to research by McKinsey & Company, only 52% of policyholders believe that their insurance carrier is easy to do business with, while only 42% feel that their agent cares about helping them achieve their goals and treats them like a valued customer, not just a "policy number."[16]

As Dan Preston, CEO of Metromile (a pay-per-mile car insurance carrier), summarizes:

"There are typically three interactions an insurer has with their customers. When they sell a policy, when they renew a policy and when they receive a claim. There's nothing in those interactions that add value. Even the claims process is so full of friction that it becomes an unpleasant experience for the customer."

Consumers today expect a personalized experience, with easy-to-understand products available across multiple channels. According to Bain & Company, the share of digitally active insurance customers increased by more than 60% from 2014 to 2018, while mobile adoption increased by over 70% in just 2018.[17] Millennials, in particular, prefer mobile channels for comparison shopping and self-management of their policies, as per the graph below. And while it is tempting to dismiss Millennials as a small proportion of insurance consumers, LIMRA research shows that 40% of life insurance policies are now purchased by consumers aged 25-45.[18]

Share of customers who used mobile for research and/or interactions in the previous 12 months



Millennials are defined as customers 18 to 34 years old

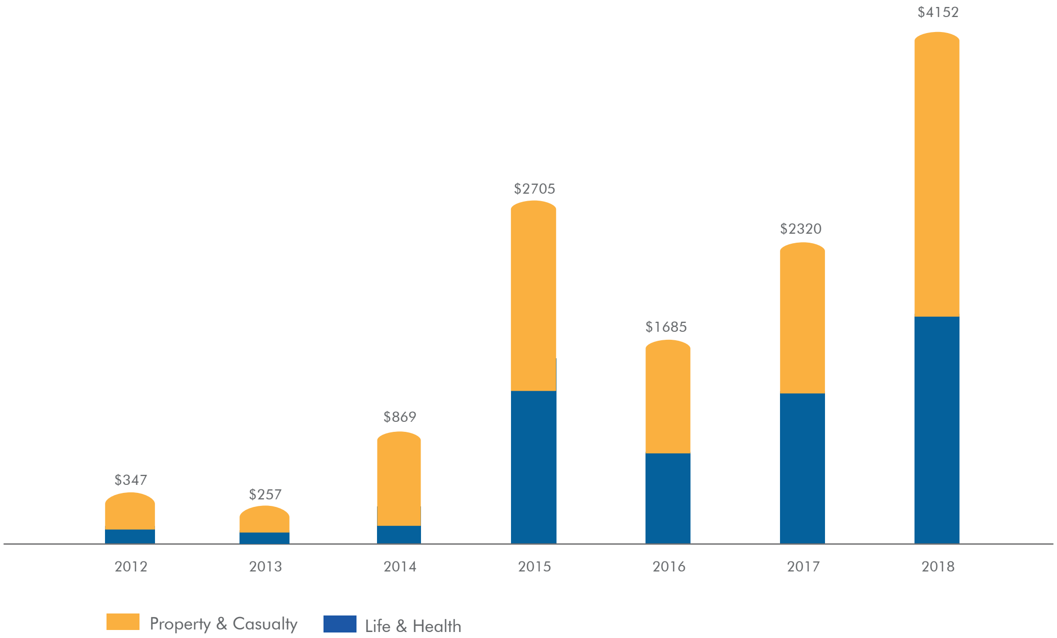
Source: Bain/Research Now Insurance NPS Survey, 2018

Implication for Life Insurers:
User experience is becoming a key differentiator in the underwriting process, given consumer expectations of personalized products, minimal friction and continuous touch-points throughout the customer relationship.

Innovation is Disrupting Life Insurance

Most traditional insurers have been slow to embrace new technologies and business models, allowing insurance technology ("InsurTech") startups to aggressively seek market share in the $4.6 trillion global insurance market.[19] Research by Willis Towers Watson indicates that the number of companies in the InsurTech space has grown rapidly, with funding volume increasing more than 10x over the past six years.[20]

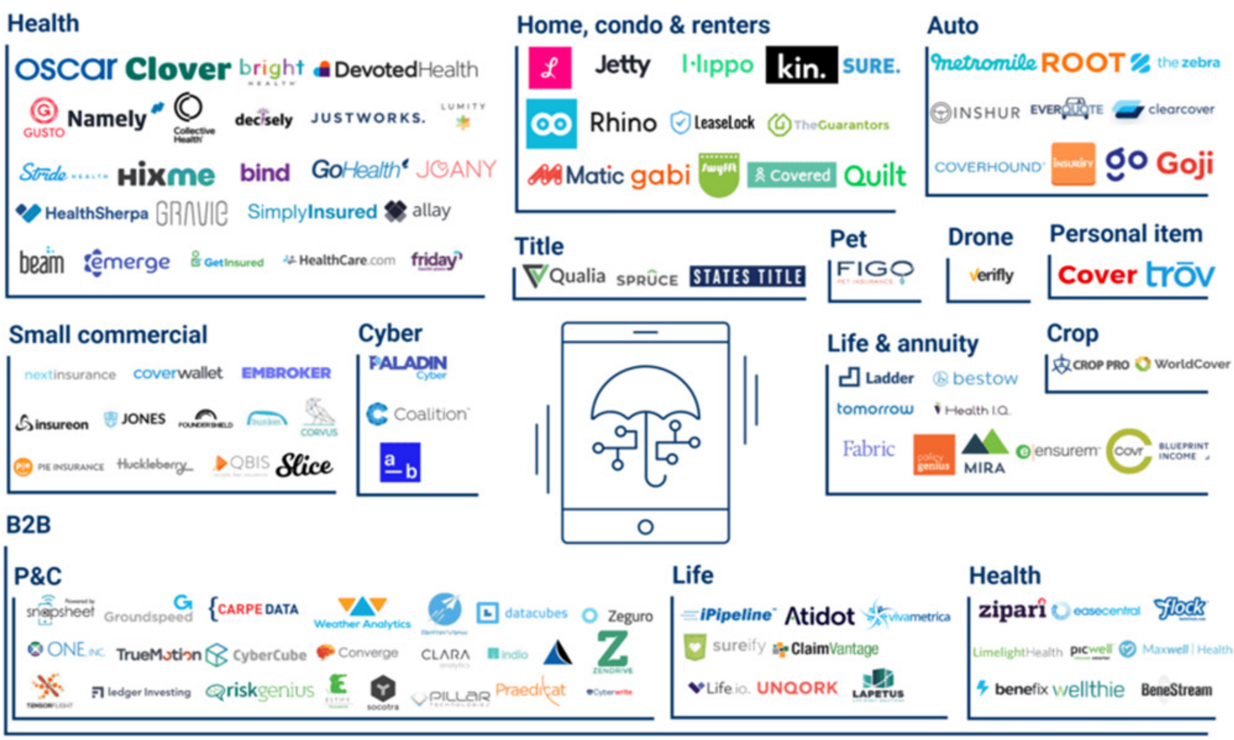
InsurTech Funding Volume – All Stages
(in $ millions)



Source: Willis Towers Watson

The InsurTech Landscape

According to a PWC survey of insurers, the biggest opportunities within InsurTech are cost-reduction (including a move towards cloud-based platforms), disintermediation, self-servicing, and automation of core insurance functions.[21] Over the past few years, multiple start-ups have focused on these opportunities across all sectors of the insurance industry:



Source: CB Insights

Most of these start-ups focus on distribution, customer acquisition and insurance operations, rather than underwriting risk (which is handled by established insurers and reinsurers with balance sheet capacity and regulatory expertise). Therefore, most start-ups primarily act as brokers, striving to own and manage the customer experience, while partnering with established reinsurers to manage risk capital.

Leading InsurTech Start-Ups

Company Name	Description
Attune	Small business insurance
CoverWallet	Distributed business insurance
Slice Labs	Customized on-demand, short-term insurance utilizing AI decision-making in underwriting process
Sherpa	Subscription-based model to provide personalized insurance (packaging up multiple products into one personalized offering, while buying them wholesale from GenRe)
Haven Life	Instant term life insurance coverage for up to $3M, with no health exam
GetSafe	Personalized health, life and non-life insurance portfolio for each customer (with ability to dynamically adjust type and amount of coverage, covered persons, and assets)
Zhong An	Fully automated, dynamically micro-priced individualized policies (18,000 policies/second), with no sales staff. Each customer is risk-assessed individually and priced accordingly (no risk pool)
ChainThat	Insurance Blockchain Development House, partnering with R3 consortium
Vitality, Oscar, Fitsense, Sureify	Life and Health insurers using wearable devices and mobile apps to enable digital engagement
Bestow	Fully digital life insurance solution with no medical examination needed and coverage in a few minutes
Ladder	Instant Term life insurance with no health exam, only salaried employees; flexible coverage amounts
Friendsurance	Peer-to-peer insurer that gives annual cash-back bonuses to people who don't file claims
BIMA Mobile	Simple and affordable life, personal accident and hospitalization insurance products that can be bought by phone in discrete 3-6-12 month blocks, much as mobile credit top-up cards are sold

Full-stack InsurTechs	
Lemonade	Renters' and homeowners' insurance. Pays out claims via a proprietary AI-based algorithm. Takes a 25% flat fee for transaction, leaving the rest for risk pool. Unclaimed premiums are paid out to charity
Metromile	Pay-per-mile, pay-how-you-drive car insurance for low-mileage urban drivers (using mobile app and in-car telematics)
Root	Mobile-based car insurance underwritten by AI based on driving habits (rewarding good driving)

These companies have proliferated by taking advantage of the demographic, socioeconomic, and technological shifts causing disruption across the insurance industry. Many of the techonological innovations and industry trends harnessed by these start-ups are discussed in the following sections.

Technological Innovations

Distributed Ledger Technology

Although still in its infancy, distributed ledger technology (DST) – also known as blockchain – could have the following benefits within insurance processes:[22]

- Reconciliation of collecting and paying premiums and settling claims
- Recording ownership and payout of policies
- Lowering reliance on agents/brokers in gathering information, as all relevant client information is stored in the ledger
- Real-time monitoring of activity by regulators via a single source of transaction history
- Accelerated settlement time by eliminating transaction validation process
- Reducing possibility of fraudulent claims and KYC issues

The U.S. has $7.4 billion in unclaimed life insurance money that cannot be passed on to beneficiaries due to lack of necessary claim information. **A blockchain-based registry** could address this challenge by allowing the rightful claimants to receive these unclaimed funds, while improving security via a distributed public record.[23]

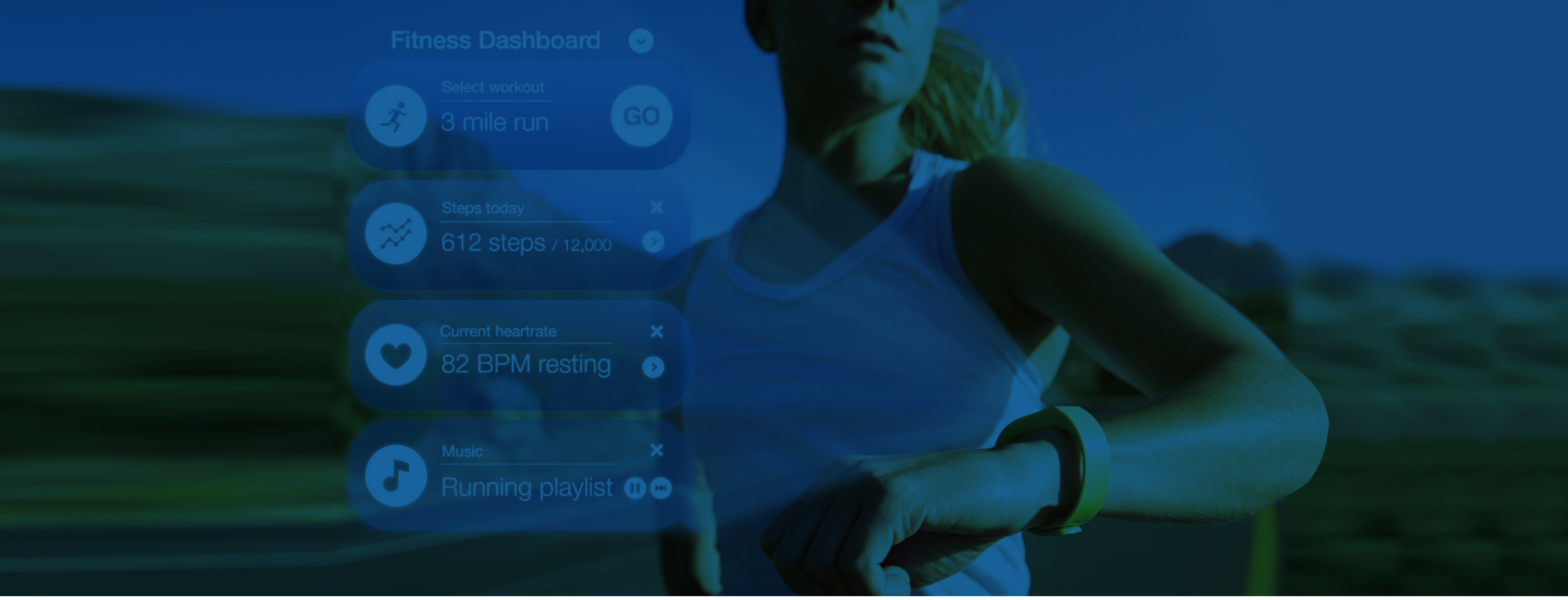
Wearables and Telematics

Some life and health insurance companies are starting to provide wearable activity trackers to their customers as a way to lower insurance premiums. According to research, 33% of Americans and over 50% of Millennials would consider wearing an activity tracker, if it resulted in a decrease of their premiums.[24]

Insurers connecting with their customers via sensor devices can also create more frequent and meaningful engagement. For instance, data provided by wearable devices – including vital signs, activity, nutrient consumption, and sleep patterns – could enable insurers to provide more precise pricing and underwriting, while offering policyholders value via fitness and lifestyle feedback.

Sensor technology, combined with P4 medicine ("Predictive, Preventive, Personalized, and Participatory"), is projected to drive greater integration between insurers and health care providers.[25] This would shift the focus of life insurance coverage from death benefits to promotion of well-being and better quality of life.

John Hancock is giving rewards and premium discounts to customers for using wearables like Apple Watch and Fitbit to encourage healthy lifestyles via its partnership with the Vitality Group. This allows John Hancock to harness data from the devices to create more precise underwriting.[26] Customers have the choice to opt into the program, earning "vitality points" and saving money by tracking daily health related activities. As of September 2018, the Vitality program became available on all of John Hancock's life insurance policies at no extra charge.[27]



Cardiogram, a private company based in San Francisco, is using wireless and wearable technology to identify health abnormalities at their earliest stages. Cardiogram and UCSF recently published a study that "validated the accuracy of DeepHeart, a deep neural network distinguishing between people with and without diabetes, achieving 85% accuracy on a large data set which included 200 million heart rate and step count measurements."[28] The study indicates that wearables and artificial intelligence could be used to detect health conditions such as diabetes, hypertension, sleep apnea, and atrial fibrillation, accurately and early.

According to research by ARK Investments – an investment manager specializing in disruptive innovation – insurers should be willing to subsidize or fund wearable devices like the Apple Watch, adding incentives like lower deductibles or co-pays for consumers willing to share activity data associated with early stage disease.[29] Apps like iHealth on the Apple Watch can allow insurers to track customers' health signs and proactively recommend suggestions for healthier decision-making, allowing for dynamic repricing of insurance premiums.[30]

Cognitive / AI Technologies

Robotic Process Automation (RPA) gives insurance carriers the ability to automate repetitive underwriting, policy administration, and claims tasks, potentially freeing up thousands of people hours. RPA solutions use chat bots to mimic the way individuals interact with applications and follow simple rules to make decisions and automate routine business processes, improving efficiency without requiring fundamental process redesign.[31]

Cognitive Intelligence (CI) technologies go further by providing tools to automate non-routine tasks that require soft skills, such as intuition, creativity, and problem-solving. This is driven by refinement in several key CI technologies, such as handwriting recognition, image / audio / video analytics, and natural language processing.

Overall, insurer spending on cognitive/artificial intelligence technologies is expected to increase by 48% annually over the next few years, reaching $1.4 billion globally by 2021.[32]

Big Data / Data Analytics

Data analytics, along with use of non-traditional data sets, can lead to customized product offerings with improved risk analysis, pricing, claims prediction, and fraud detection. Insurers can gather publicly-available customer data from social media and other digital sources and use it to create a customized risk profile, offering an instant policy quote.

Advanced analytics can enhance the precision, customization and flexibility of risk protection, paving the way for solutions that easily adapt to life changes and stretch beyond insurance to cover a comprehensive range of financial needs.

Founder and CEO of Lemonade, Dan Schreiber, described the core product of insurance as an algorithm, susceptible to new data practices:

> *"Insurance is about using statistics to price risk, which is why data, properly collected and used, will transform the core of the product. Advances in data science, access to hundreds of nontraditional data sources, and the application of AI and machine learning will make very precise underwriting possible—even down to the individual risk. Risks that are now seen as part of a monolithic group will be assessed very differently."*

Privacy and cybersecurity issues will need to be considered – and perhaps addressed via reinsurance – as reliance on data increases. Developing privacy law regulation, such as EU's GDPR directive, may make the cost of data breaches and privacy violations prohibitively expensive for large corporations.

Insurance Industry Trends

Peer-to-Peer Insurance

Crowdsourced Peer-to-Peer ("P2P") insurance provides access to a cost-effective pool of capital by bringing together policyholders who pay premiums into a collective pot. The model typically relies on a group of individuals with a common affiliation to combine premiums to insure against risks. Since the aggregate pool covers individual losses, individuals are motivated to keep their risks low to keep costs low for everyone in the pool.[33]

While traditionally, premiums not paid out in claims have been kept by insurers, P2P insurers typically return these residual funds to the group. When risks exceed premiums paid by the pool members, reinsurance companies are used to cover the difference.

Lemonade, a US-based P&C carrier offering renters' and homeowners' insurance, uses an AI-powered app to provide customers with a personalized policy and insurance coverage in as little as 90 seconds. Lemonade takes a flat 25% fee out of each premium for operating expenses, with the remainder used to insure risk pool members. After claims are paid out, the remaining funds are donated to charity.

Germany-based **Friendsurance** uses social media to enable pools of friends to buy P&C policies from established insurers, with each pool member paying an upfront premium for their policy. If there are funds left after claims are paid out, all members of the pool receive a "cashback". According to Friendsurance, more than 80% of its customers have received a cashback and some insurance lines, such as property insurance, have cashbacks as high as 30% of original premiums.[34]

Self-Service

Claims are increasingly driven by customer self-service. Insurance companies are starting to allow customers to upload required documentation, review the claim via an automated process, and award a payout. If the automated review fails, the claim is escalated to a human agent. Use of a self-service model reduces costs while improving transparency and speed of execution.

Tractable, a UK-based car damage assessment service, can estimate the cost of vehicle repair without human intervention, by analyzing user-submitted photos using machine learning technology.

Customer Engagement

There is a shift underway from a concept of life insurance to one of living insurance, where insurers continually provide benefits to policyholders. Insurers can achieve this by shifting from passive risk management (writing a policy and hoping no claim is made against it) to active risk management (assisting a customer at every pain point). Insurers can also shift the emphasis from life benefits to the promotion of health, well-being, and quality of life.

For mass-affluent customers with less than $250K in investable assets (representing 100 million of U.S. households), death protection is not a primary concern. Higher priorities include debt repayment, stable standard of living, and retirement savings. In order to address the financial needs of their clients, companies could offer student loan programs to help pay off debt, reward healthy life choices by lowering premiums, offer budgeting tools to help reduce expenses, and recommend reallocation of savings toward appropriate insurance coverage levels.

Accelerated Underwriting

Many potential customers are discouraged by the long and complicated insurance application process. According to research by Deloitte, the likelihood of prospects buying a policy once they begin an application increases from 70% to 90% as the underwriting gets closer to real-time.[35]

As a result, many insurers are developing advanced analytics to streamline the application-to-closing process from weeks to minutes, aiming to lower onboarding costs and minimize customer loss. Faster underwriting metrics, based on digitally-available medical data, social media activity, driving records, and prescription information can estimate an applicant's life expectancy, without the need for traditional medical exams.

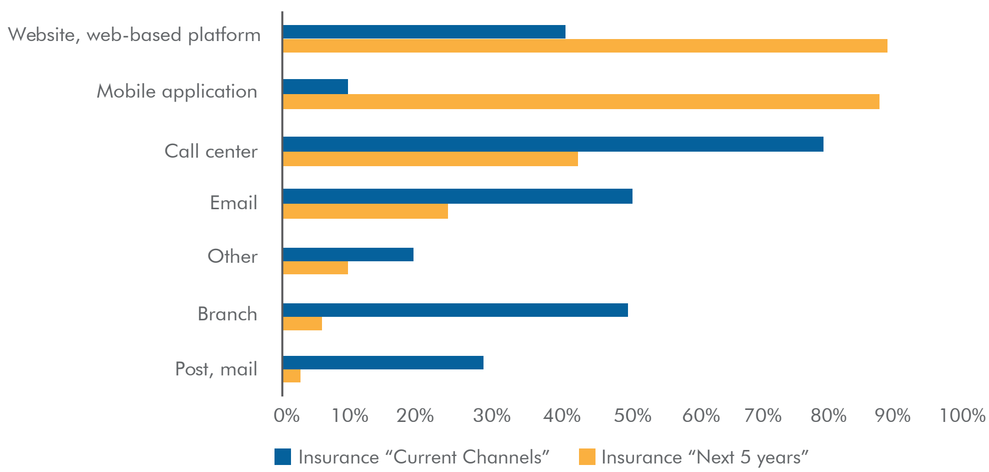
A number of online platforms, such as **Haven Life, Ladder, Juniper,** and **Bestow**, offer term life insurance products using digitally-available data sources to create a comprehensive customer risk profile, bypassing the need for a medical exam. These platforms target younger consumers, who may often avoid purchase of life insurance, given the associated time and complexity. Moreover, these companies typically do not charge annual policy fees or employ commissioned agents, potentially gaining a competitive advantage relative to incumbents.[36]

Going one step further, **Lapetus Solutions** – which combines facial analytics, bio-demographic information, and dynamic scoring via its Chronos platform – has partnered with Legal & General of America (LGA) in a service which provides instant life insurance quotes based on a nine-question survey and a user-submitted photo.[37]

Digital Distribution

According to research by the Insurance Governance Leadership Network, up to 40% of insurance premiums are spent on distribution in the form of intermediaries, acquisition fees, and costs.[38] Rather than incorporating sales commissions into the policy cost, some insurers are shifting a portion of their business to a flat-fee structure by distributing policies digitally. This approach both lowers costs and allows first movers to reach broader audiences.

What is currently the most popular channel of your clients to interact with your company? From which of the following channels do you expect the largest growth in usage over the next five years?



Source: PwC Global FinTech Survery

Digital distribution could extend the reach of life, annuities, and pension coverage into largely untapped areas – such as younger and lower income segments – by reducing costs and allowing businesses to engage with customers in more compelling and relevant ways. Research by McKinsey & Company shows that consumers are increasingly comfortable gathering information from online and remote sources, with respondents preferring these sources (36% and 35%, respectively) compared with in-person advice (29%).[39] Digital distribution is especially applicable in emerging markets, where the traditional agent network is underdeveloped, but the population is digitally-savvy, with high mobile penetration.

Simplified Contracts

Behavioral economics studies have shown that individuals tend to make poor long-term saving decisions, delaying or putting off the purchase of life insurance in light of perceived costs, such as surrender charges. As demand for life insurance shifts to emerging markets, insurers could gain market share by issuing simple, dynamic, short-duration products which lend themselves easier to digital distribution.

> Swedish startup **BIMA** offers accident and term life micro-insurance to low-income consumers in developing regions of Africa, Asia, and Latin America via prepaid credit on mobile devices.[40] These simple, short-term (less than 12 months) contracts offer instant coverage and easy renewal / cancellation.

The Rise of Platforms

Platforms that aggregate customer data from multiple financial institutions – such as RoboAdvisor dashboards – will increase in number and scope, allowing customers greater visibility into their coverage. These ecosystems will own the customer relationship: users will interface with the recommendation engine, while products offered within the platform will become commoditized. Ultimately, customer experience would be simplified, with back-end algorithms optimizing and tailoring coverage options across multiple insurance needs. Some examples of these ecosystems include:

Aggregators

Insurance comparison websites such as PolicyGenius, CoverHound, TheZebra, and Insurify are early examples of product aggregators. As these startups broaden their scope across multiple lines of business and enhance the sophistication of their recommendation engines, they may offer personalized insurance coverage by fusing policies from multiple carriers. Already, insurance RoboAdvisors – such as Clark's in Germany and Hublio in Ireland – are attempting to create for insurance what Betterment and Wealthfront have done for investing.

This category also includes Managing General Agent (MGA) insurers such as Slice Labs, Getsafe and Sherpa. These companies typically control the user experience while partnering with third-party risk carriers who are ultimately liable for the customers' claims.[41] The MGA arrangement allows these companies to create more customized and dynamic customer policies, while maintaining flexible reinsurance arrangements across multiple carriers.

Integrated Platforms

These are personalized, multi-line product offerings by a single carrier. An example of an integrated platform is LINK by Prudential Financial, which recommends Prudential's products based on the results of an interactive user questionnaire. From an underwriting perspective, this type of bundled product offering can be more efficiently priced than individual policies. The downside, however, is that such a platform is limited in its product scope. In order to be effective, an integrated platform needs to address all of the customer's needs, ideally bundling P&C, health, and life into one dynamic policy.

Regulatory hurdles and privacy concerns will likely prevent individual carriers from offering true multi-line policies in the U.S. However, this issue can be mitigated by opening an integrated platform to third-party carriers with complementary offerings. As insurance products become more commoditized, benefits will accrue to platform owners.

Digital Partnerships

Insurers are beginning to integrate their products, on a white-label basis, into established digital platforms for a more holistic user experience. For instance, French insurer AXA recently partnered with e-commerce giant Alibaba to offer a varied range of insurance products through Alibaba's digital platforms, including AliExpress, Alibaba.com, and AliPay.[42] AXA's objective is to co-innovate and develop tailored insurance products for specific segments of Alibaba's customer base of over 600 million users.

In another example, U.K. insurer Aviva Life partnered with social media operator Tencent to launch Blue, a digital life and critical illness insurance offering for the Hong Kong market.[43] Blue combines Aviva's insurance expertise with Tencent's technology and customer base. Blue's products will be distributed through Tencent's WeChat app, aiming to disrupt the Hong Kong insurance market by eliminating traditional sales channels and associated commissions. Currently, less than 1% of all life insurance sales in Hong Kong are made digitally.[44]

In the U.S., insurer tie-ins with digital payment platforms such as Apple Pay, PayPal, Venmo, Square, and Stripe could provide a new avenue for insurers to expand their customer base. For instance, if ranked by number of customer accounts, Venmo and Square would already be among the top 10 largest U.S. financial institutions.[45]

Case Study: Zhong An

The Chinese insurance market has grown rapidly over the past decade and now ranks as the third largest globally, behind only the US and Japan. Rapid adoption of technology is forecasted to grow China's InsurTech industry from $37 billion in 2015 to $174 billion by 2020.[46]

The companies at the forefront of this digital evolution are Ping An, Tencent, and Alibaba. Each has launched numerous insurance offerings leveraging advanced data analytics, AI, telematics, and other innovative technologies. In 2013, these leading companies partnered to create Zhong An Insurance, an online-only carrier that leverages technology to remake the insurance model.

Zhong An relies on data analytics to identify unmet customer needs and develops products to address those needs, resulting in rapid prototyping and distribution at competitive price points. For example, in order to set health insurance premiums, the company analyzes exercise data secured through partnerships with makers of wearable devices.

In addition, Zhong An uses AI and blockchain technologies to settle online claims and help lower fraud, while a cloud-based IT system gives the company access to considerable computing power at a relatively low price. 97% of its customer queries are directed to its "chat bot" without any human intervention. Zhong An prides itself on having no salesforce, as it relies entirely on digital distribution.

The company's technological advantage has fueled its fast growth. Gross written premiums exceeded $940 million in 2017, a 75% increase over the prior year.[47] In September 2017, Zhong An went public at a valuation of $11 billion, becoming the world's most valuable InsurTech company.[48]

As of 2018, Zhong An had more than 300 million policyholders and had issued 5.8 billion insurance policies.[49] 60% of its customer base is between 20 and 35 years old, with the majority of customers purchasing their first insurance policy through the company.

Reaction from Existing Insurers

Insurance executives were initially consumed by the possible threat presented by InsurTechs. Nimbler and less constrained by regulation than established firms, insurance startups were seen as disruptors that could overturn existing business models and acquire substantial market share from slower-moving incumbents.

Most of these startups, however, have struggled with thorny regulatory issues and customer adoption. Instead, insurers and reinsurers quickly moved up the digital learning curve by partnering with InsurTechs to acquire the necessary expertise. Some carriers have integrated InsurTech ideas into their business models through acquisitions and partnerships, while others have set up in-house innovation funds to fold InsurTech into their long-term business planning.

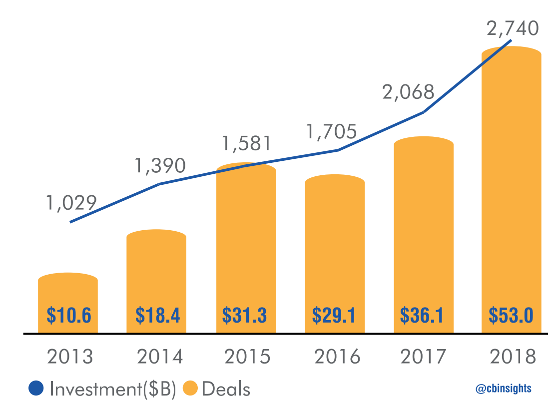
Leading Insurance Corporate Venture Funds

(Re) Insurer	Fund	Year Founded	Size ($M)
Allianz Group	Allianz X	2016	1,100
American Family Insurance	American Family Ventures	2013	50
Aviva Group	Aviva Ventures	2015	115
AXA XL	AXA Venture Partners XL Innovate	2015 2015	600 500
Liberty Mutual	Liberty Mutual Strategic Ventures	2016	150
MassMutual	MassMutual Ventures	2014	250
MetLife	MetLife Digital Ventures	2018	100
Munich Re	Munich Re Digital Partners Munich Re/HSB Ventures	2016 2014	50 50
Nationwide	Nationwide Ventures	2016	100
Northwestern Mutual	Northwestern Mutual Future Ventures	2017	50
Ping An Insurance	Ping An Ventures	2012	150
Transamerica / Aegon Group	Transamerica Ventures	2014	140

Corporate venture capital ("CVC") activity has continued to grow, with $53 billion invested across 2,740 deals in 2018.[50] This growth made CVC a larger proportion of the overall venture capital ecosystem:

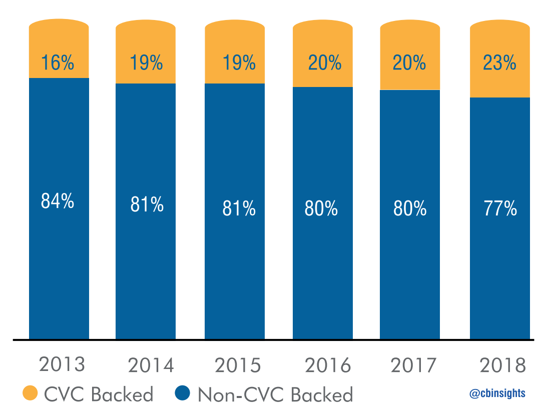
Global CVC activity accelerates to all-time highs

Annual global disclosed CVC deal and funding, 2013 - 2018



CVC contribution to the overall VC ecosystem grows

CVC participation in VC-backed deals, 2013 - 2018



Recommendations for Life Insurers

Transformative Acquisition

Traditionally, life insurers have relied on a network of agents to drive growth – a strategy which has performed well in developed countries with larger addressable markets of affluent consumers. However, given that most of global growth going forward is projected to come from an expanding middle class in emerging markets, life insurers could benefit from a scalable digital strategy to address this underserved segment.

Engine 1, Engine 2

In the "Firm of the Future", Bain & Company recommends a dual-engine approach to management:

> *"Leaders of the firm of the future will be toggling between running their core—today's engine—as efficiently as possible, looking for sustaining innovations there. They will also need to create a new business—tomorrow's engine—that reflects new customer needs, new competitors, new economics or all three."*

The examples cited include Netflix's transition from core DVD business to online streaming, IBM's transition from hardware to service offerings, and Marvel's transition from publishing to character licensing. According to Bain's research, the two engines are initially run in parallel and take about five years to transition from engine 1 to engine 2.[51]

Engine 1 requires traditional business management: discipline, incremental improvement, and careful risk assessment. Engine 2 requires creativity, agility, and the ability to take risks on a wide portfolio of initiatives. Engine 2 is managed under the corporate umbrella, but is often funded and staffed separately. Life insurers could jumpstart their Engine 2 by acquiring an InsurTech firm that has created a frictionless digital user experience.

Potential Acquisition Targets

An acquisition could yield multiple benefits: onboarding of a knowledgeable tech team, insight into an innovative approach to insurance, and an integration of a new brand under an existing umbrella to attract a tech savvy, younger demographic. Some potential acquisition targets include:

Ladder Financial

Founded in 2015, Ladder provides instant online term life insurance policies with no medical exam, by asking users to fill out a simple five-minute questionnaire and scraping the Internet for additional information based on social security number, license number and other basic personal details. Its policies are underwritten by Fidelity Security Life, allowing users to 'ladder' coverage up and down as needed with no surrender charges. Ladder has raised $54M in funding to date, with its most recent Series B led by Allianz Life Ventures and Northwestern Mutual Future Ventures.

Bestow

Launched in 2016, Bestow is a digital term life insurance platform, which uses algorithmic underwriting to pair buyers with the right coverage and rates. By asking users questions about their lifestyle and health, Bestow eliminates the need for a medical exam, relying on predictive analytics to identify a risk profile. Its policies are underwritten by North American Company for Life and Health Insurance and to date, it has raised $18M in funding.

Fabric Technologies

Launched in 2017, Fabric offers a digital insurance-buying experience targeted at new parents. Fabric Instant is an Accidental Death product for people between 25 and 50 years old, with coverage of up to $500,000. Fabric Premium Is a 20-year all-cause term life product providing coverage of up to $5 million. In addition to accidental death and 20-year term life insurance, Fabric offers a free will-creation tool through a simple questionnaire.

In 2018, Fabric launched a Trusted Contacts product, enabling policyholders to give beneficiary spouses or partners digital access to their policy information and customer service. With no agents, Fabric sells policies online nationwide, mostly without the need for a medical exam. Its policies are backed by Vantis Life Insurance Company and to date, it has raised $12.5M in funding.

Ethos

Founded in 2017, Ethos offers term life coverage for policies of up to $1M without a medical exam (and coverage of up to $10M with an exam). Ethos application process is paperless and completely digital; non-commissioned agents are available to answer customers' questions during the sign-up process. Ethos policies are backed by Assurity Life Insurance Company and it has raised $47M of funding to date.

Radical Simplification

Life insurers can take a number of steps to simplify their product offerings and improve customer interaction. A typical life insurance company offers hundreds of products, across a wide array of geographies and demographics. These products range from simple life insurance to highly complex and customized financial strategies, with new products constantly being designed to reach new markets and potential clients.

This creates the need for more actuaries to design the products, more agents to sell these products, and more staff to support and integrate these products into existing systems. Instead, incumbents should strive to simplify their product offerings.

Simplify Product Set

In 1997, Apple had asked Steve Jobs to return as CEO, after a series of sprawling and costly missteps by former management had almost bankrupted the company. As one of his first objectives, Jobs had asked Apple to simplify its product offerings to a 2x2 matrix:

Similarly, life insurers could benefit from simplifying their business into the most fundamental of product offerings:

	Consumer	Pro
Desktop	 iMac	 Power Mac
Notebook	 iBook	 PowerBook

	Individual	Institutional
Life Insurance		
Annuities		

Rather than eliminating products entirely – and risk alienating portions of the market – life insurers should strive to create customized products at scale, with minimal friction.

Customize Products at Scale

Product offerings could be redesigned with user experience in mind. For instance, annuity offerings could be re-branded as “living insurance” and offered as a complement to life insurance. Benefit riders should be invisible to the end user, who should only have to answer a series of simple questions to obtain a customized product that fits his or her individual needs. This product should be a dynamic, pay-as-you-go policy, covering as many risks as possible within the regulatory environment, and allowing the policyholder to adjust coverage in real-time.

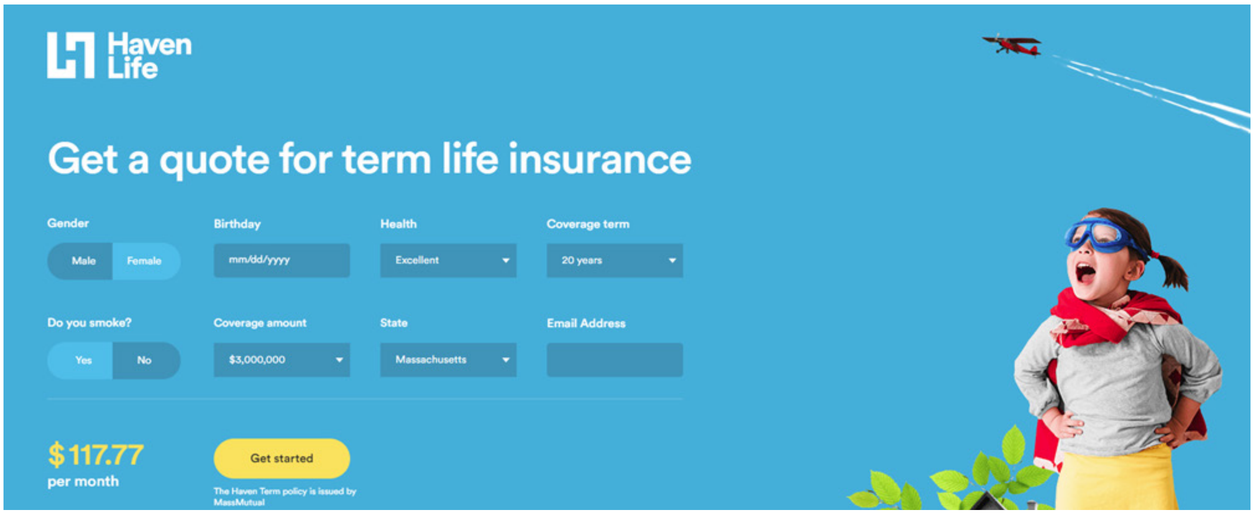
Minimize Friction

Friction with the customer could be reduced by eliminating complex product terminology that is inaccessible to most consumers. The complexity stems from the fact that most of life insurance product design is driven by actuaries, not marketing and UX experts. Even the term “annuity” makes consumers uncomfortable, as they associate it with complex financial engineering.

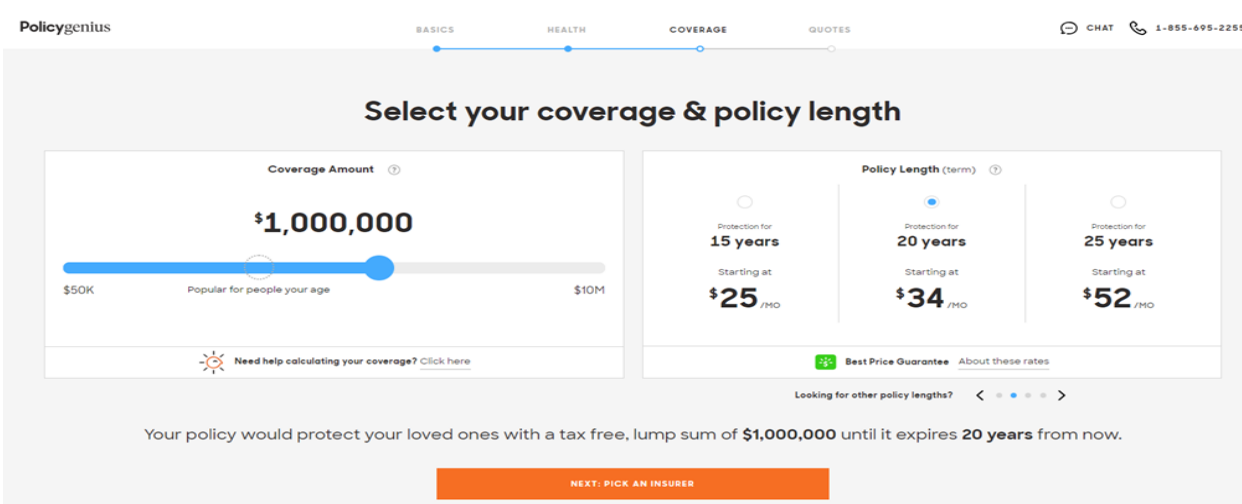
Despite of this, the insurance industry seems to have doubled down on jargon – annuities alone are comprised of variable annuities, indexed annuities, fixed-rate annuities, charitable annuities, long-term care annuities, longevity annuities, immediate annuities, contingent deferred annuities, and secondary market annuities, among others.

Product simplification should also extend to channel simplification. Websites of many insurers are still difficult to navigate for potential customers. Purchase of life insurance is oftentimes buried within multiple sub-menus, while coverage beyond a certain amount still typically requires a discussion with a live agent.

Compare this with a website for Haven Life, a MassMutual-owned term life insurance carrier offering instant coverage of up to $3 million per policy with no medical exam or need for a financial advisor consultation:



This can also be compared to the ease with which life insurance quotes could be obtained from an aggregator, such as PolicyGenius.com:



In order to attract the underserved mass-affluent demographic, life insurers need to offer a frictionless digital experience that doesn't rely on an agent network with significant cost outlays. One option of achieving this is to create a stand-alone brand under an existing business umbrella, offering simple term life / annuity products via a separate website.

Culture of Innovation

For life insurers to leap ahead of their competition, they must not only transform their current business practices, but also foster a culture of innovation to drive future growth. Below are some suggestions on how to develop a company-wide culture of innovation, focusing on employee training, new idea generation, and coordination of new product development.

Ongoing Employee Training

Given the accelerating pace of technological advancement, the quintessential skill of the 21st-century worker is the capacity for lifelong learning. A recent study by the Pew Research Center has shown that only 16% of Americans believe that a four-year college degree prepares students well for a high-paying job in the current economy.[52] Meanwhile, 54% of all Americans (and 61% of Millennials) believe that lifelong learning will be essential in order to keep up with workplace changes. As a result, many employers are creating resources that enable their workforce to quickly and efficiently learn new skills.

Agile Product Development

One of the most widely-adopted techniques in product development is Agile. The process involves a self-sufficient and cross-functional team working on rapid prototyping and iterative product deliveries, based on continuous user feedback. This approach differs significantly from a life insurer's typical product development lifecycle, which requires buy-in from numerous internal committees before a decision is made to move forward. While Agile is primarily utilized within the software industry, its principles can also be applied to insurance, which is essentially a digital data product. Life insurers could make Agile principles part of their enterprise-wide training curriculum, which could have a positive impact on idea generation and implementation.

Eric Ries, best-selling author of "The Lean Startup", captured this concept in his book "The Startup Way – How Modern Companies Use Entrepreneurial Management to Transform Culture and Drive Long-Term Growth":

> *"Overall, even among old-fashioned companies that are focused on short-term results (such as quarterly reports), most initiatives are impossibly slow, risk-averse, and invest on an all-or-nothing basis. Modern management requires a long-term philosophy coupled with extremely rapid experimentation to discover which strategies will support a long-term vision."*

Nanodegrees

Life insurers could offer customized employee training in specific skill areas. Bespoke learning programs can be created via Massive Open Online Course ("MOOC") portals, such as Coursera, Udacity, LinkedIn Learning, or edX. Life insurers could also partner directly with specific universities to offer accelerated degree programs for in-demand job functions. Online training would allow life insurers to track employees' participation and adjust the desired selection of courses, based on training success in the workplace.

For example, AT&T has created an ambitious employee training program to reskill its internal workforce and help fill some 50,000 vacancies per year. AT&T maintains an internal database called "Career Intelligence", which records each employee's skills and training, along with all open positions and the skills they require. Employees can then choose to bridge their skills gap for specific openings via AT&T's customized nanodegree programs (developed in partnership with Udacity), receiving reimbursement upon successful completion.[53]

Idea Submission Portal

A powerful way to incentivize innovation is to put ownership of ideas into the hands of employees. Life insurers could implement an enterprise-wide idea submission portal, which could be utilized by all employees. Submissions could be created by cross-functional teams and evaluated by senior management, with best ideas receiving funding from an in-house innovation fund for rapid prototyping and development over a set timeframe (e.g. 3 months, with employees allotted time per week to work on the idea). Development could be supported by experts from in-house incubators and accelerators. If the product or service gains traction in the marketplace, more resources and funding could be allocated, with winning teams receiving equity in the product.[54]

The idea submission portal could be objectively evaluated based on three sets of metrics:

- **Activity:** number of ideas submitted, accepted, funded, and launched into the marketplace
- **Traction/Usage:** user sign-ups, referrals, page views, and app downloads
- **Impact:** revenues, profitability, cost savings, and new customer acquisitions

Amazon Prime, one of the retail industry's most effective customer loyalty programs, was created through such a conduit in 2004. Software engineer Charlie Ward submitted an idea for a free "all-you-can-eat" shipping service via Amazon's internal Ideas Tool portal. His idea was escalated to senior management, including CEO Jeff Bezos, who commandeered resources to bring the concept to market.

Chief Innovation Office

A Chief Innovation Office would allow life insurers to coordinate ideation and conceptualization across the enterprise, nurturing ideas to launch and sustaining a portfolio of Engine 2 businesses. It would be responsible for overseeing all corporate innovation drivers, including in-house venture capital funds, innovation labs, collaboration with start-up accelerators, and research partnerships with universities.

A number of insurers have already set up such groups to drive internal innovation. For instance, MetLife's multifaceted strategy, overseen by a Chief Innovation Officer, consists of the following components:

- **MetLife Digital Ventures:** A $100M internal venture capital fund focused on InsurTech, created in partnership with VC funds that MetLife has established relationships with.[55]
- **MetLife Digital Accelerator:** Created in partnership with TechStars, the accelerator accepts a limited number of start-up applicants onto MetLife's newly created Global Technology Campus for 13 weeks, seeking to bring new ideas to the insurance market. In 2018, ten startups have been selected for its inaugural class.[56]
- **MIT Media Lab Partnership:** A collaboration focused on advanced research within the insurance space, including fields of sensors, social data, digital records, machine learning, and data science.[57]
- **LumenLab:** MetLife's Singapore-based innovation center for collaboration with Asia-based InsurTechs.

Munich Re Group has one of the most comprehensive innovation strategies in the insurance industry, with over 300 dedicated employees worldwide. Its innovation ecosystem incorporates the following elements:

- **Innoscouts:** Employees located in global innovation hubs are responsible for identifying technology trends and start-ups with the potential to redefine the insurance industry.
- **Ideas.munichre.com:** An internal online platform used by employees to develop and share ideas for new products, solutions, and services.
- **Design Thinking:** A user-centered innovation method for products and services. Key elements include interdisciplinary teams, empathy for the user, rapid prototyping, and identification of unique solutions. Design Thinking approach to problem-solving is often used in conjunction with the Agile approach to product development.
- **Innovation Labs:** Established in Madrid, Berlin, US, Beijing, Tel Aviv, and other innovation centers, these internal incubators allow for rapid development of business concepts from idea to product, while providing tools, seed funding, and support of specialists and entrepreneurs-in-residence.
- **Partnerships:** Munich Re has partnered with start-up accelerators such as Plug & Play in the U.S., the Junction Accelerator in Tel Aviv, Startup Bootcamp in Berlin and London, and W1 InsurTech accelerator in Munich. The firm is also a Consortium Member of the MIT Media Lab.
- **Internal VC funds:** Internal and external ideas that present synergies to Munich Re's core businesses are funded via internal venture capital funds. Since 2015, Munich Re has invested over $150M into internal innovation projects and over $60M into external acquisitions and strategic investments.[58]

Going one step further, life insurers could create pooled venture funds to advance the technology underpinning the insurance industry. Early efforts to form such joint ventures include the Global Insurance Accelerator (GIA), the Startupbootcamp InsurTech, and the Plug and Play Insurance (PPI) accelerators.

Conclusion

The insurance industry is undergoing a period of profound change, brought about by paradigm shifts in demographics, technology, and consumer expectations. Companies in a position to capitalize on these trends by making innovation a fundamental part of their business strategy will benefit from first mover advantages.

Development of innovative culture, simplification of existing processes, concerted focus on employee training, and strategic acquisitions could all help life insurers harness the ongoing transformation of the insurance industry. This paper reviews some of the avenues life insurers could take to spur innovation and compete with both upstarts and incumbents, leveraging technology to drive future growth.

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