Quarterly InsurTech Briefing Q1 2018

May 2018

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Quarterly InsurTech Briefing

Introduction

Rafal Walkiewicz
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Willis Towers Watson Securities

Foreword: Capital Wars

In this edition of our Quarterly InsurTech Briefing we take a look at the universe of InsurTech capital providers. Our aim is to understand their strategies and motivations in order to predict the likelihood of future investment success. We consider the strengths which these investors have and which they pitch to startups when looking for attractive investment opportunities and highlight potential weaknesses that capital raising entrepreneurs should be aware of.

Expanding on the Q4 2017 edition, we further explore the notion that incumbents have an advantage over financial capital when the value chain evolves through improvements to legacy systems, yet incumbents rarely win if technology ultimately drives the creation of a new value chain. We also discuss the nature of innovation. In the *Thought Leadership* feature, Paddy Jago calls attention to the peer-to-peer insurance economy and concludes that it is nothing more than a mutual reinvented. As is often the case with innovation, it does not have to be a supernatural event, but rather the reinvention of an existing model for which a new reality is finally ready.

As the explosive growth of the InsurTech ecosystem drives increased interest from a variety of investors outside of the traditional insurance industry, and that in turn forces incumbents to defend themselves by investing in new technology directly, differences between the value propositions of corporate VCs and independent funds are becoming more evident. Our *Q1 Industry Theme* catalogues the various forms of capital participating in InsurTech investments, ranging from traditional VCs such as Lightbank and Oak HC/FT to incumbent funds like XL Innovate, Allianz X and QBE Ventures. We also highlight hybrid solutions which try to bring to market the best of both worlds.

Incumbents want to learn how to do what they do better

Innovation happens when market participants face challenges that can no longer be ignored and commit to building solutions to deal with these pressure points. What are these pressure points for insurers? Distribution costs, claims handling and underwriting excellence often rise to the top of the list. Incumbents invest to improve existing processes and to focus on modules of the value chain that present the biggest challenges to them.

Incumbents seemingly prefer minority stakes and seek startups that can attack their pressure points. They offer startups access and knowledge, proof of concept testing and, if successful, long term partnership opportunities. There are various forms of incumbent investment strategies in InsurTech, but whether we talk about corporate VC, incubators, direct investments or in house R&D, these strategies primarily focus on learning how to improve processes while an outsized return on investment is a secondary consideration.

InsurTech startups are well aware that betting the company's future on a majority investment from one incumbent can diminish future flexibility of an exit and pressure valuation. In order to preserve their options, they try to choose partners and investors along the way while they are building value. However, it is often difficult to penetrate the complexity of a highly regulated insurance market and therefore startups need to be mindful of the potential benefits and limitations of receiving investments from, or partnering with, incumbents.

Outsiders search for breakthroughs and explosive value creation

Outside capital tends to focus on customer pressure points: cost of the product, ease of access and new or underserved markets. Independent VCs are sector agnostic and product focused. They use lessons learned in other industries and past investments to change the way the products are manufactured and sold.

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One of the things that outside capital is more likely to do is to take majority positions and to focus on integration across the full stack of the industry value chain rather than focus on distinctive modules and process enhancements. Independent VCs are solely driven by investment return and have access to technologies and investment themes that may not be on the top of mind for the insurance industry. This is why they are exploring broader themes such as the impact of quantum computing on technology while incumbents tend to invest in insurance-focused applications of big data and AI.

While independent VCs bring a unique approach to innovation as well as the potential for explosive value creation for a startup, they often lack meaningful access to the insurance industry. By their nature, they do not bring to the table the same connectivity that incumbents can easily deliver. As a result, InsurTech entrepreneurs seek independent VC money to fund revolutionary ideas - the challengers to the status quo of the insurance industry value chain.

In our *Transaction Spotlight* feature, we dive into the recent funding round for Root, a perfect candidate for independent VC investment. Focused on a product not a process, Root started with a specific customer pain point in mind and through innovation now offers fairer, simpler and more affordable insurance to its customers. Root is an integrated insurance company that has completely flipped the traditional pricing model. While incumbents issue policies and then monitor the driving habits of its policyholders, Root collects telematics data before ever providing a quote. The company is funded by VC money and competes with incumbents for business in auto insurance today, with plans to expand to other lines of business in the future.

Combining insurance insight with value creation mentality

With ever growing capital flows and increasing company valuations, the InsurTech funding scene is becoming more robust. It is no longer divided between incumbent-driven investment vehicles and traditional VC, but now also includes a subset of insurance specialists that combine the best of both worlds (i.e., traditional VC and corporate VC). As an example, we profile Aquiline Technology Growth's and Eos Venture Partners' models. Aquiline has been a dominant private equity investor in insurance companies for over ten years and has recently raised a specialist InsurTech-focused fund. We talked about Aquiline's prowess in early stage investing in Q1 2017 as demonstrated by its successful sale of Simply Business to Travelers. Eos Venture Partners takes a slightly different approach. It focuses on funding insurance startups to address the strategic interests of its limited partners, comprised primarily of insurance incumbents. It is not a corporate VC per se, but a combination of the traditional VC approach aligned with the strategic interests of incumbent LPs. The fund specializes in insurance only.

Hybrid models will continue to evolve and may be the ultimate answer for InsurTech entrepreneurs looking to balance industry expertise and the traditional VC value creation mentality. For InsurTech startups, the funding scene is more complex and finding the right investment partner has become more difficult to achieve.

Is global technology threatening regional players?

Both startups and investors see InsurTech as a global phenomenon. Technology is increasingly portable and can be quickly scaled and implemented across the globe. Insurance regulations can slow the process down, but are unlikely to stop it completely. There are many examples of the globalization of InsurTech ideas. The US-centric Travelers acquired Simply Business in the UK to leverage the startup's technology in its core market and Trōv has expanded from Australia, to the UK and finally to the US.

The global nature of InsurTech makes insurance investing attractive to two additional groups of capital providers: technology companies and developing markets insurers. Our *Venture Capital Investor Survey* participants predict that 20% of InsurTech funding in the next several years will come from tech companies. Taking a look at the product deployment strategies of Google, Amazon and Facebook, we see investment in products and services with global potential. Further, tech investors are well versed in developing and running technology pilot programs in smaller countries in order to deploy successful solutions into large developed markets afterwards. Additionally, there is a wave of InsurTech investment from the tech giants of developing countries. Tencent, Alibaba and Ant Financial are rapidly growing in their domestic market in China while building technologies that will enable them to conquer developed markets in the future. Finally, there are emerging markets insurers or financial institutions and their corporate VC arms. Ping An, PICC, CICC and others are funding radical new technologies in developed countries with an end goal of using them as a springboard for international expansion when the time is right.

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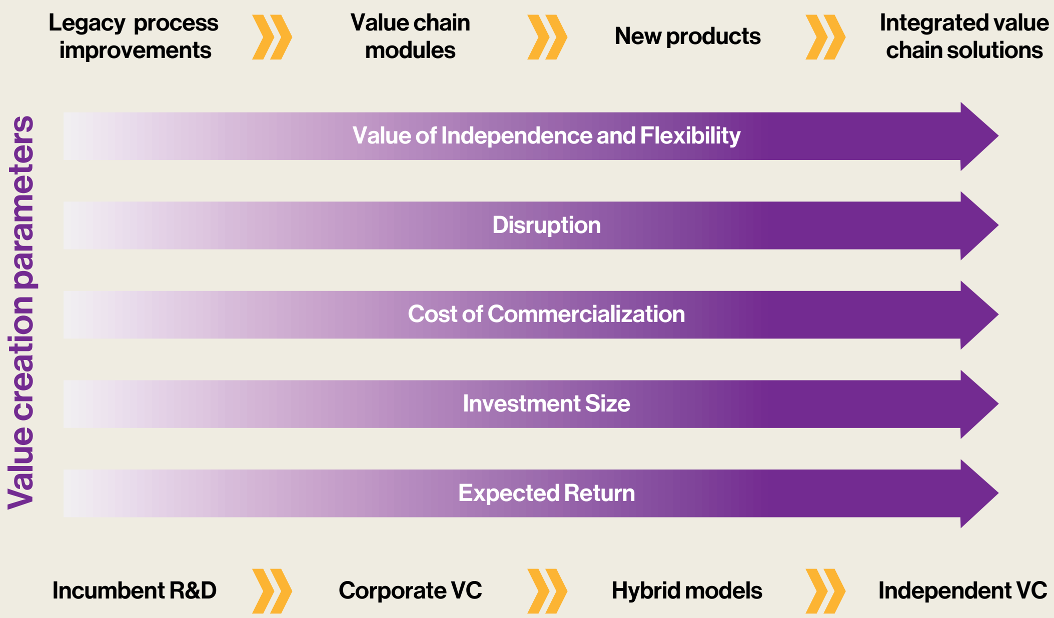
Raising the bets

The $724 million of InsurTech funding made available in Q1 was a slight increase over Q4 2017 and more than double the amount in Q1 2017. The quarter's 66 transactions represent the highest number ever recorded. One of the more interesting trends to develop in the quarter was the seven transactions that rose to over $30 million in recent funding rounds. Investors are clearly willing to make increased bets on InsurTech and funding rounds are becoming larger. Interestingly, of the seven transactions raising over $30 million, there was only one developed market incumbent insurer participating in the fundraising while the remaining funding rounds were dominated by traditional VC money. Perhaps the stakes are becoming too high for insurers, especially if they are mostly investing in order to learn how to improve their existing processes.

I want to thank you again for all the comments and guidance we receive. We want to continue to improve, and as ever, welcome your feedback and suggestions.

Value creation parameters by investor type



Quarterly InsurTech Briefing

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Q1 2018 Industry Theme

Landscape of InsurTech Venture Capital Investors

Venture Capital Activity in InsurTech Reaching New Heights

During the course of 2017, this publication focused on the activity surrounding new entrants/startups in the InsurTech sector. We covered topics such as the disruption of small commercial distribution (Q1), technology advancements enabling innovation in claims management (Q2), InsurTech activity in China and emerging Asia (Q3) and concluded the year with examples of how incumbents are using technology to adapt existing business models (Q4).

To begin the 2018 series of this newsletter, we wanted to focus on the universe of investors that have been actively investing in the InsurTech sector in recent years. According to data from CB Insights, the number of venture capital investors participating in the InsurTech sector has increased from 53 in 2012 to 217 in 2017 – a fourfold increase or +30% annual growth. From a transaction count and dollar investment standpoint, since 2012 we have tracked more than 700 InsurTech investments with nearly $9.0 billion of disclosed capital committed.

Segmenting the universe of InsurTech investors is not as straightforward as some might imagine as there are a multitude of criteria which can be used as a filtering mechanism. Rather than trying to micro-segment the group, we used broad strokes to segment investors into three categories of traditional venture capital, (re)insurer venture capital and the catch-all of other corporate venture capital (see following page for summary segmentation).

Traditional venture capital investors, independent firms with a focus on seed and early-stage investments, have the longest tenure investing in the FinTech/InsurTech sectors. Broadly speaking these firms are primarily focused on delivering financial returns to investors. However, there are variations of this model (example: Eos Venture Partners) which have a more balanced approach of delivering financial and strategic value to its investors.

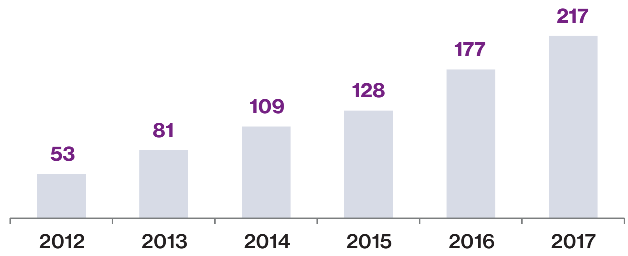
The development of (re)insurer venture capital has been more of a recent phenomenon. Only a small number, if any, were active prior to 2012. The primary motivation for this group is to create strategic value by developing a direct investment strategy to tap into emerging technologies and capabilities.

We have also identified a number of other corporate venture capital firms which are not native to the insurance sector that are becoming more involved in the wave of InsurTech investing. These firms are mostly comprised of large technology or financial companies that see insurance as one of the few remaining sectors that have not yet been revolutionized by emerging technologies.

To get a better sense of these investors' strategies, we spoke to a number of traditional venture capital and (re)insurance venture capital participants. Company profiles, Q&A and investments to date are found on the following pages.

Number of VC Investors in InsurTech

More than 4x the number of investors today than in 2012 (+30% CAGR)



Participating Firms in Newsletter

Traditional Venture Capital Investors

lightbank

OAK HC/FT

AQUILINE TECHNOLOGY GROWTH

Eos Venture Partners

(Re)insurer Venture Capital Investors

XL Innovate

QBE | Ventures

Allianz X

Q1 2018 Industry Theme

InsurTech Investor Universe

InsurTech Investor Universe by Segment

Selected Traditional Venture Capital Investors

PLUGANDPLAY, startupbootcamp InsurTech, 500 startups, BESSEMER VENTURE PARTNERS, Y Combinator, SOCIALCAPITAL, FOUNDERS FUND, THRIVE CAPITAL, SEQUOIA, techstars, Index Ventures, ROUTE SIXTY-SIX VENTURES, Foundation CAPITAL, 8VC, KPCB, BainCapital VENTURES, OAK HC/FT, SVAngel, NEA, ANDREESSEN HOROWITZ, anthemis group, First Round, Menlo, USV Union Square Ventures, Redpoint, Ribbit Capital, Eos Venture Partners, lightbank, Accel, GENERAL CATALYST, AQUILINE TECHNOLOGY GROWTH, TWO SIGMA VENTURES, maveron, SANDBOX INDUSTRIES, Social Intelligence, IDG Capital, propel VENTURE PARTNERS, nyca, HUDSON STRUCTURED CAPITAL MANAGEMENT, Maverick, PARTECH VENTURES, brainchild, FLYING FISH, Red Swan Ventures, THAYER STREET PARTNERS, PORTAGE, LOCALGLOBE, ROCK HEALTH, Lightspeed, InsurTech.vc, CV COMMERCE VENTURES, B BOXGROUP, khosla ventures, SAIF Partners, GREAT OAKS VENTURE CAPITAL, Horizons Ventures 維港投資

Selected (Re)insurer Venture Capital Investors

XL Innovate, QBE Ventures, AXA Venture Partners, Allianz X, SAMSUNG NEXT, SOMPO HOLDINGS, AVIVA Ventures, HISCOX, Cigna, Nationwide, Munich RE, AMERICAN FAMILY VENTURES, Allstate You're in good hands, hannover re, HARTFORD ventures, MassMutual VENTURES, Liberty Mutual, FAIRFAX FINANCIAL HOLDINGS LIMITED, CHUBB, TRANSAMERICA VENTURES, ASSURANT, SUNCORP, USAA, GUARDIAN, TOKIOMARINE HCC, Berkley, RGAx, MARKEL, STARR COMPANIES, MITSUI VENTURES, direct line, CNP assurances, NEW YORK LIFE VENTURES, Manulife, Humana Ventures, Sun Life Financial, Crawford, AmTrust, INTACT VENTURES, aetna, Aflac, helvetia Venture Fund, PICC, 中国平安 | 创新 PING AN VENTURES, FOSUN RZ CAPITAL

Selected Other Corporate Venture Capital Investors

Alibaba.com, Tencent, G/, COMCAST VENTURES, salesforce ventures, Goldman Sachs, MGV, SoftBank Investment Advisers, CICC 中金公司, 蚂蚁金服 ANT FINANCIAL, AMERICAN EXPRESS VENTURES, F-PRIME, GE VENTURES, Barclays Accelerator, YAMAHA, BMW i.

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Lightbank

Traditional Venture Capital

lightbank

Entrepreneurial DNA

Founded in 2010 by serial entrepreneurs Eric Lefkofsky and Brad Keywelll, Lightbank is an early-stage, sector agnostic venture capital firm. The founding members have collectively started six businesses and Lightbank is best known in the market for its entrepreneurial DNA and proprietary investment ideas. The firm is headquartered in Chicago and has a primary focus on seed stage and Series A investments in the Midwest.

The Lightbank team prides itself on its unique understanding of the insurance sector and its diverse network of relationships, which stems from the firm's collective decades of experience in venture capital roles and as investors and operators of insurance and reinsurance companies.

Lightbank has raised $200 million of committed capital and will typically invest between $500k and $1.5 million for seed stage companies and between $1.5 million and $5.0 million for Series A funding rounds.

The investment focus centers on opportunities which have an innovative approach to insurance product development and less so on solely distribution-focused intermediaries.

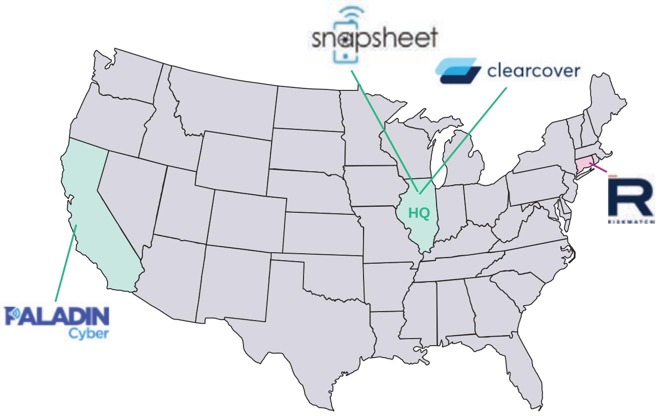
Lightbank's current InsurTech investment portfolio includes Snapsheet, Clearcover and Paladin Cyber. In 2017, Lightbank exited its investment in Riskmatch, a data analytics and information management solutions provider servicing various intermediaries, through a sale to Vertafore (a diversified technology services company backed by Bain Capital and Vista Equity Partners).

Investment Stage and Focus

Seed Stage
$500k – $1.5m

Series A
$1.5m – $5.0m

Geographic Distribution



InsurTech Investment Portfolio

Current Investments

snapsheet clearcover PALADIN Cyber

Exited Investments

R RISKMATCH

Sold to Vertafore in April 2017

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Lightbank

Traditional Venture Capital

Vic Pascucci – Partner

- Joined Lightbank in February 2017 to focus on FinTech and InsurTech investments
- Over 17 years of experience in VC, FinTech investing and financial services
- Prior to joining Lightbank, served as a Partner at Munich Re/HSB Ventures
- Previously built and managed USAA's corporate venture capital arm, leading investments in financial and insurance technology

Approximately what percentage does InsurTech comprise of Lightbank's overall portfolio? How has your focus on the sector evolved in recent years?

Approximately 25% of our recent investments have an insurance focus. We prefer true product innovation (companies that introduce a unique product into the marketplace) as opposed to distribution plays (companies that merely act as intermediaries without any product development). Further, we are open to investing in all areas of insurance, including but not limited to title, professional liability, life, health, specialty lines and more.

What are the key criteria that you look for in a potential InsurTech investment?

We generally look for a management team with a deep understanding of the market and extensive experience in their industry, innovative new product ideas and a sustainable advantage as to why this management team will outperform its competitors, if there are any.

How does Lightbank source potential InsurTech investment opportunities? Do you utilize any external resources?

Lightbank sources proprietary investment opportunities from its network that consist of:

a. *The partnership's decades-long experience in insurance and extensive network of contacts across (re)insurance both on the investments side and on the operational side.*

b. *Entrepreneurial DNA of the partnership that has founded six businesses and generated over $10 billion in value.*

c. *An extensive track record comprising 250 investments completed by the partnership team and 200 (co)founders that we have funded through Lightbank.*

d. *Methodical incubation and monitoring of companies started by talented entrepreneurs in our network.*

Which emerging technologies do you believe will have the largest impact on the (re)insurance industry over the next several years?

Blockchain, machine learning, predictive analytics and quantum computing.

What differentiates Lightbank from traditional venture capital firms and strategic (re)insurer corporate venture capital groups? Are there any sources of differentiation within your investment strategy which make Lightbank a more desirable partner for InsurTech start-up companies?

The partners at Lightbank have decades of experience in corporate venture capital and traditional venture capital in InsurTech investments. This experience comes in the form of having served in both investment and operational roles in primary insurance as well as reinsurance. Consequently, Lightbank's understanding and network within insurance is incredibly unique. In addition to the investments profiled on the next page, the Lightbank partnership has been previously involved in the following InsurTech investments: Trōv, Slice Labs, Next Insurance, Super, Bought by Many, Automatic Labs, Roost, Neos and Repair Pal.

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Lightbank

Traditional Venture Capital

lightbank

($ in millions)

Company	Capital Raised	Disclosed Investors	Description
Partnerships/Investments			
snapsheet	$49.9	▪ Commerce Ventures ▪ IA Capital Group ▪ Intact Ventures ▪ Liberty Mutual ▪ **Lightbank** ▪ OCA Ventures ▪ Plug and Play ▪ Pritzker Group Ventures ▪ USAA ▪ Other Investors [(a)]	▪ Self-service mobile app for estimating auto claims by photo ▪ Offers a full suite of products to help carriers, adjusters and customers analyze claims efficiently ▪ Enables insurers to handle approximately 90% of auto claims virtually within 30 days ▪ Clients receive claims estimates in an average of 2.7 hours after photos are received ▪ Hired Andy Cohen as COO in June 2017 (previously VP of Worldwide Field Operations at CNA)
clearcover	14.0	▪ 500 Startups ▪ Greycroft Partners ▪ **Lightbank** ▪ Silicon Valley Bank ▪ Undisclosed Investors	▪ AI-enabled online MGA that generates auto coverage recommendations depending on specific customer needs ▪ Allows customers to shop directly through their mobile device
PALADIN Cyber	4.1	▪ **Lightbank** ▪ Undisclosed Investors	▪ Offers comprehensive cyber security protection to small and medium size businesses ▪ Provides a free phishing test to assess company risk as well as cyber protection services and cyber attack support ▪ Offers a single plan with up to $1 million of cyber liability coverage

(a) Includes F-Prime Capital, Montage Ventures, Tola Capital and undisclosed investors.

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Oak HC/FT Partners

Traditional Venture Capital

Investing in the Future of Healthcare and FinTech

Founded in 2014, Oak HC/FT is a venture capital firm investing in early to growth stage companies within the healthcare (HC) and FinTech (FT) sectors. The company was spun out of investment powerhouse Oak Investment Partners, a firm which manages more than a dozen funds focused on private equity investments in tech and cumulatively has invested billions of dollars in hundreds of companies since 1978.

Within healthcare, Oak HC/FT focuses on companies that are able to deliver value through cost containment and quality enhancement as well as customer care and customer satisfaction.

Within FinTech, Oak HC/FT focuses on next-generation payments, data-driven solutions and services that offer greater efficiencies, cost savings, transparency, fraud reduction or risk mitigation.

The investment decision process is driven by two core criteria: 1) technology-driven solutions with the power to transform industries and 2) mission-driven management teams who can turn these ideas into reality. The team aims to partner with companies who are at an inflection point and where Oak HC/FT can help management build and scale their businesses, improve performance and fundamentally accelerate growth.

In less than four years, Oak HC/FT has raised two investment funds ($500 million and $600 million, respectively). Most of the investment focus to date has been in the US; however, the team does have a strategy in place to seek investments in Europe.

Oak HC/FT has four current investments in the InsurTech sector: Trōv, CLARA Analytics, Devoted Health and Insureon.

Oak HC/FT Key Stats	
Assets Raised	▪ $1.1 billion
Industry Focus	▪ Healthcare Services (HC) ▪ Financial Services Technology (FT)
Key Statistics	▪ 70+ combined years of FinTech industry expertise ▪ Over the past decade, the partners at Oak HC/FT have had 25 realized investments with six companies achieving valuations of $1+ billion

Investment Portfolio

InsurTech Investments

Other Healthcare/FinTech Investments

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Oak HC/FT Partners

Traditional Venture Capital

Matt Streisfeld – Principal

- Joined Oak HC/FT in 2015 to focus on FinTech investments
- Previously a Vice President with LLR Partners and a Senior Associate at Lightyear Capital
- Began his career at Keefe, Bruyette & Woods in the insurance investment banking group

The HC/FT in Oak HC/FT stands for healthcare (HC) and financial services technology (FT). From a macro standpoint, what makes these two industries attractive to you?

Healthcare and financial services together make up about 30% of the US economy, but still they account for only 13% of total venture investment. Both sectors are clearly underweighted, although quickly gaining interest and investment from the venture community. Funding to both industries is increasing at a rate of three times the overall venture average.

Oak HC/FT has long been investing in both industries, and our partners' investment track record includes many of the earliest and most notable healthcare and financial services technology startups. Our strategy then, and still today, is to partner with entrepreneurs who have a clear understanding of the opportunities for achieving greater efficiencies. For healthcare, that includes leveraging tech-enabled solutions to reduce complexity, reduce administrative and clinical costs, and improve quality of care. And for financial services, we are partnering with entrepreneurs that leverage digitization, data, and technology to improve core operations like customer acquisition, onboarding, authentication, risk pricing and risk monitoring, transaction processing, customer service and claims management or collections.

What differentiates Oak HC/FT from other venture capital peers or (re)insurer corporate venture capital groups? How does this make Oak HC/FT a more attractive venture capital partner for InsurTech start-up companies?

Oak HC/FT's goal as a healthcare and financial services sector-specialist fund is to address big-dollar problems with systematic inconsistencies and unmet needs. We have years of immersing ourselves in both industries, with an overriding focus on investing in companies that improve or resolve key pain points. We also have broad and deep networks with enterprise customers, which allows our team to position portfolio companies successfully for growth within the healthcare and financial services ecosystems.

We are also differentiated by the strength and track record of our team. Our investment professionals have direct experience investing and operating in the insurance industry, and we are already building a portfolio of notable InsurTech startups, including Insureon, which enables carriers to market and bind commercial insurance to small and medium-sized businesses online; Trōv, which enables insurers to offer on-demand, micro-duration insurance for any product, anywhere globally; and CLARA analytics, which uses AI and machine learning to improve commercial claims outcomes and prevents claims leakage for insurance carriers and self-insured employers.

What key criteria do you consider in a potential InsurTech investment?

A fantastic management team is a key criterion. Innovation and disruption to the insurance ecosystem isn't easy (to say the least), so we focus on talented management teams that understand the complexities of insurance (i.e., regulatory environment) and also want to improve major pain points across the insurance supply chain. We also look for companies that want to build a market-leading position protected by a sticky product offering and clear ROI.

Expand upon the idea of investing in "mission-driven" management teams. What characteristics do these teams have that allow them to stand out from the rest of the management teams you meet?

Mission-driven management teams have clear vision and execution capabilities. Lots of teams want to conquer the world, which is novel, but there is a need for focus and discipline to solve a mission or problem at hand. Additionally, talented managers have a critical 'X' factor – they can hire the best teams, which permeates across an organization and creates a culture of ownership and accountability.

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Oak HC/FT Partners

Traditional Venture Capital

How does Oak HC/FT source potential InsurTech opportunities? Do you utilize any external resources?

InsurTech is a large focus of our investment strategy, and we have a dedicated, targeted outbound strategy based on several key investment theses. The team has been investing in and advising companies in the InsurTech space for more than a decade, and we have built a deep network of relationships in and around the industry ecosystem. As a result, we are constantly working with external resources and will continue to do so in the years to come.

While most of your portfolio companies to date have been US-based, you have a financial services technology effort underway in Europe. How do you view investment opportunities abroad? Any similarities or differences to the US?

Financial services and insurance groups are global in both scale and reach. While customer needs may vary from market to market, the underlying products and solutions are relatively consistent. So too are the underlying industry challenges – aging IT infrastructure; market inefficiencies in pricing and distributing products, etc. Financial services technologies, whether they are developed in the US, Europe or Asia, have the potential to be deployed globally. There are regulatory considerations to navigate, but the underlying technologies and platforms are relatively universal.

Take Trōv, as I've mentioned. They launched in Australia and have expanded their platform to the UK and recently the US. Similarly, Feedzai is a big data, machine learning platform focused on credit card fraud. This is a big problem globally, and the company's geographic presence includes the US, UK and Portugal, where the company was founded.

Over the last decade, Oak HC/FT has successfully realized six investments with valuations in excess of $1.0 billion. What advice do you have for entrepreneurs starting out in the healthcare and financial services sectors who are looking to take their concepts to the next big thing?

A few thoughts. First, I recommend focusing on unmet, big-dollar problems. Whether you're a B2B or B2C or B2B2C company, there's an overriding need to deliver a superior customer and user experience, as well as a clear customer ROI. In this context, technology is important in creating a core differentiator or moat, but entrepreneurs can't lose sight of delivering their product, service, or experience to the customer. Further, I recommend creating a mission-driven culture that rallies a team and builds a cadre of supporters.

Which emerging technologies do you believe will have the largest impact on the (re)insurance industry over the next several years? Describe the potential of each technology to create this impact.

Big data, artificial intelligence, robotic process automation, blockchain and chat-bot technologies will all have an important role in shaping the insurance industry's future. In particular, we see significant opportunity to leverage these technologies and innovations to improve every stage of the insurance value chain—from product development to customer acquisition, authentication, risk pricing, transaction processing, on to claims management and collection.

There's another insurance headache – people. Nearly 70% of underwriters and claims adjusters are over the age of 50. Millennials, the largest generation, show little interest in joining the industry. So, look for financial technology to help address the people problem and drive renewed interest in the industry. Technology can play an important role in that respect.

For example, the sharing and gig economies can play an important role in enabling the development of new products and markets. Trōv, one of our portfolio companies, offers single-item, on-demand coverage for any possession over any timeframe desired. They launched with Suncorp in Australia, have launched with AXA in the UK and recently signed a contract with Munich Re for the US.

Also, insurance is ripe for technological improvements, particularly in middle and back-office functions, using AI and machine learning. CLARA, one of our other portfolio companies, is driving 10-20% plus loss cost reduction and reducing average claims duration by over 15% for workers' compensation carriers.

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Oak HC/FT Partners

Traditional Venture Capital

($ in millions)

Company	Capital Raised	Disclosed Investors	Description
Partnerships/Investments			
trōv	$84.0	▪ Anthemis Group ▪ Baloise Group ▪ Guidewire Group ▪ Munich Re/HSB Ventures ▪ **Oak HC/FT Partners** ▪ Sompo Holdings ▪ Suncorp Group ▪ Undisclosed Investors	▪ On-demand insurance provider covering everyday consumer items ▪ Provides single item coverage for loss, theft, accidental damage, etc. for any duration via mobile app ▪ Munich Re had existing partnership and led Series D funding round ▪ Sompo also invested with the goal of introducing product in Japan
DevotedHealth	69.0	▪ **Oak HC/FT Partners** ▪ Venrock	▪ Healthcare startup aiming to provide Medicare Advantage coverages and personal healthcare advisory services to senior citizens by 2019
insureon	31.0	▪ Accretive ▪ **Oak HC/FT Partners**	▪ Leading online insurance distribution platform focused on serving small and micro businesses ▪ Provides coverage for 175,000+ small businesses through relationships with ~35 insurance carriers
CLARA analytics	22.9	▪ **Oak HC/FT Partners** ▪ Undisclosed Investors	▪ Easy-to-use, AI-enabled claims management software for workers' compensation insurance ▪ Connects insured workers to a large network of top-rated healthcare providers ▪ Full automation of simple claims with 99% accuracy

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Aquiline Technology Growth

Traditional Venture Capital

Deep Roots, Specialized Investors

Aquiline Capital Partners, based in New York City, has deep roots in the insurance industry and has been a specialized investor across financial services since its founding in 2005 by Chairman and CEO Jeff Greenberg. Recognizing that technology was, is and will be driving change in the insurance industry and financial services sector, Aquiline's strategy has incorporated FinTech from the start. In 2017, Aquiline launched Aquiline Technology Growth (ATG) as a natural extension of this focus.

ATG seeks to invest in early and growth-stage technology companies that are bringing innovation to the insurance industry and broader financial services sector. ATG leverages Aquiline's experience within financial services and technology to target businesses in FinTech, InsurTech and Enterprise Software with significant potential for growth.

The Aquiline Technology Growth fund, led by Max Chee and Mike Cichowski, held its final close in July 2017 after raising $190 million in commitments from investors. The Fund has made six investments to date.

Areas of Interest

InsurTech:

- Data and Analytics
- New Product Innovation
- Alternative Distribution
- Middle/Back Office Automation

FinTech:

- Asset Management
- Retirement
- Payments
- Banking and Lending
- Compliance and Regulation
- Blockchain

Enterprise:

- Enterprise Software
- IT Security
- Financial Services IT Infrastructure

Aquiline Technology Growth Investment Portfolio

As of April 26, 2018

InsurTech Investments

FRISS, CARPE DATA, SUPER, PALADIN Cyber

Other FinTech Investments

KRYON SYSTEMS, bitpay

Investment Profile

Investment Size	Investment Approach	Target Stage	Target Revenue	Geography
$3 – $15 million	Lead/Co-Invest Minority Investment	Early & Growth Stage	$1 – $20 million	North America/ Europe

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Aquiline Technology Growth

AQUILINE
TECHNOLOGY GROWTH

Max Chee – Head of Aquiline Technology Growth

- Joined Aquiline in January 2017
- Previously Managing Partner at Millennium Technology Value Partners and Vice President at Mellon Ventures
- Began his career at Salomon Brothers in the Financial Institutions Group

What differentiates Aquiline Technology Growth from traditional venture capital and strategic (re)insurer corporate venture capital groups?

One of our differentiators is that we are in constant contact with our partners, many of whom are major players in the insurance industry. This ongoing dialogue provides us with valuable real-time industry insight, which is helpful in identifying emerging companies that are well-positioned to capitalize on industry trends. We believe maintaining open communication with our partners is a powerful tool we, along with our portfolio companies, can use to further assess the potential market map for many areas in which we invest and operate.

What are the key criteria that you look for in a potential InsurTech investment?

Many InsurTech investment opportunities are in their seed or Series A stages. We are looking for companies with products that are in the market, either at the pilot stage or already in production. On the distribution side, we are looking for companies pursuing very specific parts of the market with differentiated technology, new forms of data or a unique product offering. Super Home, Inc., a subscription home warranty company that ATG invested in, is an example of a company with a differentiated tech-enabled product offering in a traditional industry (home warranty).

How does ATG source potential InsurTech opportunities? Do you utilize any external resources?

We are thematic and proactive in our approach to sourcing. Our team regularly attends industry events and conferences, and actively looks for opportunities that fit our investment themes. Additionally, ATG is incredibly fortunate to benefit from access to Aquiline's expansive network of insurance industry, advisory and investor relationships (including Aquiline's deep bench of investment professionals and executive advisors focused on the financial services sector). This access broadens our reach and allows our team to see many opportunities within the space.

What advice do you have for entrepreneurs starting out in the FinTech, InsurTech and Enterprise Software sectors who are looking to take their concepts to the next big thing?

When we look at investment opportunities, we favor companies that can clearly identify their value proposition and potential roadblocks. Capital efficiency is essential for early-stage companies determining product and market fit. Additionally, it is vital to have the right combination of skill sets on any team, especially given the regulatory complexity and go-to-market challenges of operating in these environments. Entrepreneurs should surround themselves with strong, experienced advisors and avoid the lone wolf mentality. In the insurance industry especially, instead of trying to tackle the entire value chain, new businesses should look for partnership opportunities to experience growth.

Which emerging technologies do you believe will have the largest impact on the (re)insurance industry over the next several years?

Some of the emerging technologies that we believe will have a large impact on the insurance industry are:

- *Artificial intelligence (AI)*
- *Cloud and agile software delivery*
- *Robotic process automation (RPA)*
- *Data, data collection and analytic applications*
- *Blockchain*

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Aquiline Technology Growth

Traditional Venture Capital

AQUILINE TECHNOLOGY GROWTH

Company	Disclosed Investors	Description
Partnerships/Investments		
FRISS	▪ **Aquiline** ▪ Other Investor(s)	▪ Netherlands-based analytics software provider for fraud and risk mitigation for P&C insurers across claims, underwriting, investigations and compliance ▪ Global footprint with over 130 insurers in 26 countries in North and South America, Europe, the Middle East and Africa
{CARPE DATA	▪ **Aquiline** ▪ Other Investor(s)	▪ Data mining company that utilizes web, real-time and social data to help insurers improve rating processes and identify fraudulent claims ▪ Provides products that will accelerate and improve underwriting and claims processes for P&C and life & disability lines of business
PALADIN Cyber	▪ **Aquiline** ▪ Other Investor(s)	▪ Offers comprehensive cyber security protection to small and medium size businesses ▪ Provides a free phishing test to assess company risk as well as cyber protection services and cyber attack support ▪ Offers a single plan with up to $1 million of cyber liability coverage
SUPER	▪ **Aquiline** ▪ Other Investor(s)	▪ Subscription service firm that provides coverage for home care and repair services ▪ Provides coverage for breakdown of home appliances and systems, a concierge service to manage logistics of home service needs and a comprehensive maintenance schedule

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Eos Venture Partners

Traditional Venture Capital

Eos Venture Partners

Strategic InsurTech Venture Capital

Eos Venture Partners is a strategic InsurTech venture capital fund founded in 2016 and is focused exclusively on investments in early and growth stage insurance technology businesses. The firm is globally focused, with offices in London and the US. The fund has seven investment professionals, including three General Partners, who have decades of transactional and operational experience in the insurance industry representing over $100 billion in aggregate value. Prior investment track record includes three IPOs, two of which were unicorns (+$1 billion company valuation).

Eos brands itself as a strategic InsurTech venture capital fund built to deliver measurable business value during this age of innovation and digital disruption. Eos is designed to deliver a return on investment and innovation and is the only InsurTech venture capital fund to uniquely align financial and business metrics. Eos has designed its business model to focus on strategic impact for its limited partners (LPs). As a strategic InsurTech venture capital firm, the Eos model complements LP participation in incubators, accelerators, corporate venture capital, etc., while maximizing the strategic impact of balance sheet investment (Table 1).

Eos develops bespoke solutions for each LP that ensures that investment priorities are aligned with each LP's growth framework and strategic initiatives. Eos has a tailored approach for working with each of its LPs that includes diagnostics, innovation heat maps and a proprietary growth framework that identifies innovation challenges and opportunities. This approach creates a set of personalized and prioritized digital initiatives. The Eos model provides its LPs with opportunities to interact with portfolio companies, prospective investments and a range of third party solutions sourced globally to enable LPs to efficiently test, pilot and develop tailored solutions.

Business-building is at the core of the Eos model. Eos augments its advisory board, comprised of industry leaders, with a network of operating partners and strategic advisors that provide value to LPs and portfolio companies. These operating partners and strategic advisors have expertise across different lines of business, operating functions and geographies.

Since its founding in 2016, Eos has made eight InsurTech Investments, with six having successfully completed follow-on funding rounds.

Eos InsurTech Investment Portfolio

neos
DEMOCRANCE
RightIndem
GENLIFE
ASSETVAULT
Concirrus
laka
DIGITAL FINEPRINT

Table 1: Eos' Unique Value Proposition for Limited Partners

	Incubators & Accelerators	Prototyping & Factories	Internal Corporate Innovation Labs/ Digital Garages	Corporate Venture Capital	Venture Capital/ Private Equity	InsurTech Venture Capital	Eos Venture Partners Strategic InsurTech Venture Capital
Description	Startup factories in cities designed to support emerging tech and management teams	Specialized environments that rapidly prototype tech innovations	Internal centers that prototype, validate and accelerate InsurTech and digital initiatives	(Re)insurer direct investment initiatives that aim to acquire third-party innovation	Traditional alternative asset class focused on technology and FinTech investments	Emerging subsector of VC focused on early stage investments specifically in InsurTech	*Combines InsurTech investment focus with alignment to strategic business priorities and financial incentives*
Proprietary Deal Flow							
Operating Costs	$	$$	$$$	$$$$	–	–	*$*
Balance Sheet	–	–	–	$$-$$$	$$-$$$	$-$$	*$$*
Management Time Required							
Strategic Value							

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – **Eos Venture Partners**

Traditional Venture Capital

Eos Venture Partners

Sam Evans – General Partner

- Previously a partner at KPMG, leading the Global Deal Advisory business for insurance
- Has worked on over $75 billion of insurance related transactions in over 30 countries

Jonathan Kalman – General Partner

- Twenty years of FinTech and InsurTech investing experience
- Entire career has been spent in the fields of technology and venture capital

Carl Bauer-Schlichtegroll – General Partner

- 25-year career spent as financial services investment banker focused on insurance
- Previously Head of FIG at J.P. Morgan and Credit Suisse and prior to that a MD at Goldman Sachs

Describe Eos Venture Partners' value proposition for (re)insurer limited partners. How can Eos enable these companies to increase their return on technology investments?

Eos is best described as a strategic InsurTech venture capital fund that targets both financial and strategic returns for our LPs, driving a return on investment and innovation. Eos is built on five key cornerstones:

1. *Exclusively focused on **InsurTech** – insurance is a complex industry that requires extensive knowledge and expertise*
2. *Deals sourced **globally** – a global footprint provides unique insights*
3. ***Proprietary deal flow** – source and create unique investment opportunities*
4. *Aligned **with the industry** – innovation that leverages and benefits our extensive relationships*
5. *Only InsurTech VC fund to align **strategic and financial** metrics – financial returns linked to strategic outcomes*

Eos has a tailored approach for working with our LPs that includes an LP diagnostic designed to identify innovation challenges and opportunities and allows us to create an innovation heat map of prioritized initiatives. Eos designed an innovation growth framework to help assess where (business transformation) and how (business optimization) to maximize resource effectiveness. Our focus includes driving top line growth, developing new product solutions, improving customer engagement, creating new distribution models, enabling process improvement, automation and STP as well as improving efficiency.

Describe Eos Venture Partners' organizational structure. Explain how the firm is "purpose-built to effectively bridge the 'digital chasm' between InsurTech start-ups and traditional (re)insurance companies".

Eos' structure is optimized to drive portfolio performance and strategic value. Eos has seven investment professionals who bring a range of complementary skills and expertise to select investments that will have the greatest impact on financial performance and the insurance industry.

The investment team is split between the UK and the US and is supported by an Advisory Board comprising leading insurance executives representing different lines of business, operating functions and geographies.

Once investments are made from the fund, business-building becomes the priority as the goal is to help portfolio companies develop long-term sustainable value. An innovator in venture capital business-building, Eos employs a network of operating partners and strategic advisors with broad domain experience, subject matter expertise and deep technology acumen. This powerful approach yields financial and strategic value for our LPs and portfolio companies.

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Eos Venture Partners

Traditional Venture Capital

Eos Venture Partners

What are the key criteria you look for in a potential InsurTech investment?

Eos' investment approach begins with a detailed market analysis, modelling how future profit pools may migrate over the next three to five years, and then mapping these profit pools against potential for innovation and current activity. The result is a short-list of investment 'hot spots'. Eos then manufacturers investment opportunities based on existing solutions or an amalgamation of several solutions.

Each potential investment is then analyzed according to several important characteristics including: the experience of the team, value proposition, technology, business model, market potential, ability to scale, pace of adoption, uniqueness, ability to defend and importantly the ability of the team to execute.

How does Eos Venture Partners source potential InsurTech investment opportunities? Do you utilize any external resources?

Eos develops proprietary deal flow targeting investments that will have the greatest strategic impact to our portfolio performance and LPs. Eos leverages its network of industry relationships, tech entrepreneurs, investment bankers and Advisory Board members to source deals on a global basis. Our firm conviction is that InsurTech is a global phenomenon and as such investment opportunities will be created worldwide, with Europe, US and Asia all playing a key role.

As a result, Eos has created a global footprint with offices in the UK, US and an innovation center opening in India in 2018. We are a global partner of Startupbootcamp InsurTech, and work with other leading incubators and accelerators. The three GPs have lived globally so have extensive personal networks in key markets around the world. Eos also benefits, as one of the leading specialist InsurTech investors, from significant inbound interest from around the globe.

Which emerging technologies do you believe will have the largest impact on the (re)insurance industry over the next several years? Describe the potential of each technology to create this impact.

The four areas (although there are many) we would highlight are:

- ***a.*** ***Blockchain:*** *In the last six months blockchain applications in insurance have gained traction, with a shift from 'science experiments' to tangible applications. We are currently working on several live examples which include RiskBlock, an industry-led consortium in the US collaborating to unlock the potential of blockchain across the insurance industry. Blockchain allows data to be linked, authenticated and validated but also has the potential to change how risk capital is raised and the assessment of underwriting and pricing through a globally connected virtual network of experts.*
- ***b.*** ***Parametric sensors:*** *An extension of traditional internet of things (IoT) devices and use cases. Parametric sensors (weather patterns, climatic conditions, ocean water drafts and levels) that will help establish indices for parametric underwriting and claims (replacing indemnity based insurance). Potential applications include microinsurance covers for mobility companies, agriculture, marine, micro SME where the cost of distribution and servicing through traditional means is prohibitive and aviation insurance based on rainfall and runway slip factors.*
- ***c.*** ***Biometric sensors:*** *Biometric sensors that (when ingested, worn or encountered) provide real-time, deep diagnostics into an individual's health. Opportunity also exists to extend use of these sensors to monitor, detect and allow early intervention thereby allowing people to live longer, healthier lives while reducing the cost of treatment. Applications also exist in workers' compensation policies to help identify and mitigate causes of injury.*
- ***d.*** ***Virtual reality:*** *Underwriting and claims settlement based on 3D virtual reality imaging. Estimates (at underwriting, pre/post claims, claims settlements, renewals, re-underwriting) will be based on digital comparisons of 3D before and after VR/AR images.*

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Eos Venture Partners

Traditional Venture Capital

Eos Venture Partners

What differentiates Eos Venture Partners from traditional venture capital firms and strategic (re)insurer corporate venture capital groups? Are there any sources of differentiation within your investment strategy which make Eos a more desirable partner for InsurTech start-up companies?

A clear benefit of a relationship with Eos is insight and access to relevant and specific market-based insights and companies. Eos looks for areas where change will drive a shift in profits, where businesses can achieve significant scale and where it is possible to build defensible and differentiated business models. Our investment approach is to understand the dynamics of the market through primary and secondary research, leveraging our networks and relationships and working closely with our LPs. We understand the fundamental market drivers and the relationship between industry incumbents, new entrants, technology providers and buyers. Eos provides value to LPs by acting as an extension to their team to drive innovation, provide visibility and access to leading InsurTech companies and technology trends from across the globe and identify and execute on opportunities being created for business model transformation and/or business model innovation.

For InsurTech start-ups there are tangible benefits for partnering with Eos. We are independent but aligned to the industry, so we have in-depth understanding of the industry but don't create any conflicts of interest. We can scale and increase speed of adoption because we have a group of incumbents ready and willing to work with start-ups. In addition, because we are manufacturing deals to form larger platforms we enhance the chance of success. Finally, our team has significant prior experience working with early-stage businesses and helping drive them to successful exits, including two unicorns (+$1 billion valuation). We are a very engaged investor and will limit the number of investments that we make to ensure we can dedicate the time required.

Q1 2018 Industry Theme

InsurTech Investor Universe

Traditional Venture Capital – Eos Venture Partners

Traditional Venture Capital

Eos Venture Partners

($ in millions)

Company	Capital Raised	Disclosed Investors	Description
Partnerships/Investments			
Concirrus	$10.0	▪ **Eos Venture Partners** ▪ Touchstone Innovations	▪ Concirrus is the creator of Quest, an artificially intelligent marine insurance software platform ▪ With machine learning analytics and vast marine industry datasets, Quest enables marine insurers to actively manage risks in real time and to develop insights that are otherwise impossible to achieve
neos	8.5	▪ Aviva Ventures ▪ **Eos Venture Partners** ▪ Munich Re ▪ Angel Investors	▪ UK-based smart technology provider that offers home protection services warning of fire, burglary or water leak
Digital Fineprint	3.1	▪ Plug and Play ▪ **Eos Venture Partners** ▪ FinTech Innovation Lab ▪ PenTech Ventures ▪ Angel Investors	▪ Technology-enabled insurance services company that partners with insurers and brokers, using social media data analytics and digital capabilities to help improve customer targeting, conversion, sales, cross-selling and retention
Democrance	0.8	▪ **Eos Venture Partners** ▪ F-Horizon ▪ Fincluders ▪ Jabbar Internet Group ▪ Seedstars World ▪ TURN8	▪ Microinsurance provider for the MENA region via partnerships with Telcos
RightIndem	–	▪ **Eos Venture Partners** ▪ Startupbootcamp ▪ European Insurer ▪ Angel Investors	▪ Web-based self-service insurance claims platform servicing auto, home and marine coverage claims
laka	–	▪ **Eos Venture Partners** ▪ Startupbootcamp ▪ Angel Investors	▪ UK-based online MGA distributing bicycle insurance ▪ Premium charges are determined by the number of claims submitted by Laka's online cycling community ▪ Maximum policy premium of £1,500 per month; in months of no claims, policyholders pay nothing in premium ▪ Underwrites on behalf of Zurich
AssetVault	–	▪ **Eos Venture Partners** ▪ FinTech Innovation Lab ▪ Techstars ▪ Angel Investors	▪ Blockchain startup that allows customers to catalog all of their physical and digital assets in one secure register ▪ Provides a private marketplace for the secure transaction of real and digital assets ▪ Offers a secure database for insurance customers to store assets and to settle claims
GenLife [(a)]	–	▪ **Eos Venture Partners** ▪ AIA ▪ AmFam	▪ End to end digital L&H platform leveraging data analytics and blockchain to streamline underwriting and risk management

(a) Contingent equity options.

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – XL Innovate

Standalone Venture Fund with Corporate Roots

Founded in April 2015 and headquartered in Menlo Park, California, XL Innovate is the corporate venture capital arm of XL Catlin. The firm, investing in early-stage venture investments, is headed by InsurTech and insurance industry veteran, Tom Hutton.

XL Innovate does not define itself as a corporate strategic venture capital group in the traditional sense – it is structured as a stand-alone firm with traditional GP/LP responsibilities and incentives. The mission of XL Innovate is consistent with the goals of the limited partner, XL Catlin, which is to seek venture capital financial returns, while focusing on InsurTech and FinTech ventures that have the potential to help transform the property and casualty insurance sector in a positive way.

The strategy has involved investing in high potential ventures where XL Innovate can offer more value to start-ups than just capital, in the form of XL Innovate's own management expertise which is enhanced by resources of broader XL Catlin. In this way, XL Innovate seeks to strike a balance – instead of targeting investments of specific interest or value to XL Catlin, XL Innovate seeks to invest in ventures where XL Catlin can be most helpful.

Investment focus to date has centered around three specific areas of the InsurTech/FinTech space. First, XL Innovate has a strategy which includes an in-house startup that insures the performance of new industrial technologies, including those in renewable energy. Second, XL Innovate focuses on disruptive insurance models (Embroker, Lemonade, Stonestep and Slice). Last, the group invests in start-ups with a focus on data analytics with high value insurance applications (Cape Analytics, GeoQuant, Pillar Technologies and Notion).

Going forward, XL Innovate intends to also pursue new investments in the InsurTech space focused on commercial lines that apply artificial intelligence and security technologies, such as blockchain, to insurance processes.

Leadership Spotlight – Tom Hutton

- Veteran of the InsurTech venture community
- Long-term venture investor and a director in several successful insurance and financial technology companies
- In his mid-twenties, Tom owned a commercial fishing boat and grouped ten fishermen together to pool their risk to purchase insurance, thus creating a "pier-to-pier" insurance cooperative
- Former CEO of Risk Management Solutions, a pioneer and global leader in providing risk modeling software to the insurance industry
- Insurance career also includes serving as CEO of White Mountains Re and board director of (re)insurance companies XL Group, Safeco, Montpelier Re, Centre Cat and Palomar Specialty
- In 2011, founded New Energy Risk in partnership with XL Group (proprietary analytics, data and computational models for renewable energy projects)
- Has served as managing partner of XL Innovate since its founding in April 2015

XL Innovate Investment Strategies

In-House Startups to Address Emerging and Underserved Risks

NEW ENERGY RISK

Disruptive New Insurance Models

EMBROKER

Lemonade

Stonestep

Slice

Data Analytics Startups with High Value Insurance Applications

CAPE ANALYTICS

GeoQuant

PILLAR TECHNOLOGIES

notion

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – XL Innovate

(Re)insurer Venture Capital

XL Innovate

Does XL have any strategic InsurTech partnerships with InsurTech start-ups outside of XL Innovate's corporate venture investments? If yes, describe those business arrangements.

XL Catlin has an internal group called 'Accelerate' and has a mandate to seek out opportunities to work with innovative technologies and service partners. Accelerate centralizes proof of concept studies and helps implement promising relationships throughout the company. Accelerate is not concerned whether XL innovate has invested in a particular venture. It seeks strategic opportunities for XL Catlin.

What are your primary strategic objectives at XL Innovate? Are there any specific insurance functions that you have identified as potential areas of innovation that you are seeking to improve at XL?

Our strategic objectives are very simple to articulate. We seek to invest at an early-stage in ventures with high potential to have positive impact in the insurance value chain, that also demonstrate a high potential to become successful businesses. We are not constrained by the strategic or business focus of XL Catlin. However, we do study XL Catlin's needs and desires as indicators for what could be value creating opportunities.

Describe the nature of the relationship and interactions between XL Group leadership and XL Innovate. How do the group's strategic objectives influence your corporate venture investments? Are all corporate venture investments required to be strategic?

As our major investor, XL Catlin is represented on our Board and on our Investment Committee. Our Managing Partner was formerly a Director of XL, and we maintain close relationships with both XL Catlin leadership and with underwriters who serve as knowledge resources as well as potential clients for our portfolio companies. As stated above, we seek investments where we can collectively be as helpful and add as much value to our portfolio companies as possible.

Have you given any thought to the potential business interactions between XL Innovate and AXA Strategic Ventures following the recent merger? Are there any notable similarities or differences between XL Innovate and AXA Strategic Ventures' respective business models and/or investment strategies?

We are at a very early-stage of investigating the opportunities provided by the pending AXA acquisition of XL Catlin. Certainly, there will be opportunities. The combination will result in the creation of one of the world's largest insurance companies, so the level of scale and overall resources increases considerably, for us, as it does for our portfolio investments. For the time being, AXA and XL Catlin are each focused on their existing business, as the merger will not be completed for several months. A simple comparison of investment portfolios indicates that while XL Innovate has had a tight focus in the property and casualty industry addressed by XL Catlin, AXA Strategic Ventures has had a broader focus, both in terms of industry sectors and in terms of global geography, reflecting the broader business of AXA.

What are the key criteria that you look for in a potential InsurTech investment?

First, we seek ventures providing valuable innovation, not those replicating or marginally changing the status quo.

Second, we seek skilled entrepreneurial management teams that will be able to execute in the industry, react to new information and change, and pivot for successful outcomes.

Third, we have a high degree of focus on value. Companies providing very high value to their markets are most likely to become valuable and sustainable themselves.

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – XL Innovate

(Re)insurer Venture Capital

XL Innovate

What differentiates XL Innovate from other strategic (re)insurers with corporate venture capital arms and independent venture capital firms? Are there any sources of differentiation within your corporate venture investment strategy which make XL a more desirable partner for InsurTech start-up companies?

There are a broad spectrum of approaches and structures in insurance sponsored venture capital. These range from investments being made by internal finance groups at one extreme (captive) to investment into third party funds as limited partnerships (arm's length). Companies are all different, and the models that are most appropriate will be defined by corporate strategy, by culture, by available options of leadership, and so on.

It appears that XL Innovate is fairly unique, which was our intent. We are structured as a standalone fund; we are staffed with experienced venture capital professionals, not insurance veterans; and we all have experience building and operating technology ventures in insurance and finance. For our team and for XL Catlin, our structure and relationship fit and have worked well.

With respect to competitive strategy and gaining access to the most potentially attractive investments, we simply try to focus our attention on situations where we have the most value to add, due to our personal and firm experience and our relationships with XL Catlin and its industry partners (to include AXA). We try to recognize what our strengths are and to leverage them.

Which emerging technologies do you believe will have the largest impact on the insurance industry in the next several years? Describe the impact that you believe each technology can have on specific aspects of the insurance value chain.

Customer facing digital distributors (primarily evidenced to date in personal lines and small commercial lines) are setting new standards for customer experience and efficiency. A leading example is Lemonade, which is actually a full stack insurer but distributed directly. New and digitally enhanced distributors will either displace existing distributors or, more likely, cause the industry incumbents to dramatically improve their game. Eventually, an equivalent level of service and satisfaction will be expected in the large commercial sector.

New, digitally-based underwriting companies like Lemonade and Slice have built their own systems and have designed their own business processes. Their metrics for cost and efficiency are radical improvements to the status quo. These standards will drive incumbents to either acquire leading startups as catalysts for change or meet their performance metrics to remain competitive.

Analytics companies such as Cape, Notion, Pillar and before them, RMS and Cyence (both companies we were involved with) provide underwriters with tools to improve risk selection, structuring and pricing. They will become highly valued partners to insurers and reinsurers.

We are currently interested in pursuing new investments that apply artificial intelligence and security technologies such as blockchain, particularly those focused on large commercial insurance and reinsurance applications. Our interest is in the insurance focused applications, not the core technologies. These applications will create capabilities and efficiencies that help the industry to expand its reach into new risks and also to address its existing risks more efficiently.

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – XL Innovate

XL Innovate

($ in millions)

Company	Capital Raised	Disclosed Investors	Description
Partnerships/Investments			
Lemonade	$180.0	▪ Allianz X ▪ Google Ventures ▪ Sequoia Capital Israel ▪ SoftBank ▪ **XL Innovate** ▪ Other Investors [(a)]	▪ Licensed insurance carrier offering homeowners and renters insurance powered by artificial intelligence and behavioral economics through a direct-to-consumer online platform ▪ Targets urban dwellers and promises zero paperwork and instant everything (policy issuance, claims, communication, etc.)
Slice	20.3	▪ Horizons Ventures ▪ Munich Re/HSB Ventures ▪ Plug and Play ▪ Sompo Holdings ▪ Tusk Ventures ▪ **XL Innovate**	▪ The first on-demand insurance platform for the on-demand "gig" economy, providing pay-per-use insurance (ride sharing)
notion	16.5	▪ Draper Nexus Ventures ▪ Foundry Group ▪ Liberty Mutual ▪ TransLink Capital ▪ **XL Innovate** ▪ Undisclosed Investors ▪ Other Investors [(b)]	▪ Home awareness system and smart sensors developer ▪ Offers a home monitoring system that sends alerts to homeowners via mobile application ▪ Detects doors or windows opening, water leaks, temperature changes, smoke alarms and more
EMBROKER	14.3	▪ 500 Startups ▪ Bee Partners ▪ Clocktower Capital ▪ FinTech Collective ▪ Vertical Venture Partners ▪ **XL Innovate** ▪ Other Investors [(c)]	▪ Full-service technology platform distributing small commercial insurance coverages ▪ Distribution partnerships with over 25 leading carriers ▪ Also employs a team of licensed risk professionals to provide on-demand support to small business customers
CAPE ANALYTICS	14.0	▪ Data Collective ▪ Formation 8 ▪ Khosla Ventures ▪ Lux Capital ▪ Montage Ventures ▪ Promus Ventures ▪ Rich Boyle ▪ **XL Innovate**	▪ Data analytics service provider that leverages machine learning and geospatial imagery to quantify property risk
GeoQuant	4.0	▪ Aleph ▪ **XL Innovate**	▪ Specialized platform that uses artificial intelligence and big data analytics to measure political risk ▪ Backed by an in-house team of political scientists and regional experts, generates daily country scores and other high-frequency indicators that allow for benchmarking and pricing of global and international political risks

(a) Including Aleph, General Catalyst, Sound Ventures, Thrive Capital and Tusk Ventures.
(b) Including Camber Creek, DFJ Frontier, Drummond Road Capital, Gabriel Investments, Galvanize, Mesh Ventures, Metaprop and Techstars.
(c) Canaan Partners, Nyca Partners and Silicon Valley Bank.

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InsurTech Investor Universe

(Re)insurer Venture Capital – XL Innovate

(Re)insurer Venture Capital

XL Innovate

($ in millions)

Company	Capital Raised	Disclosed Investors	Description
Partnerships/Investments			
Stonestep	$4.0	▪ **XL Innovate**	▪ Switzerland-based microinsurer that offers consumer risk coverages in emerging markets ▪ XL provided the funding for the company to begin operations in Myanmar and will offer operational support and insurance capacity
Pillar Technologies	3.5	▪ 1517 Fund ▪ Insure.VC ▪ Plug and Play ▪ Sound Ventures ▪ Techstars ▪ **XL Innovate** ▪ Other Investors [a]	▪ Real-time risk management platform for general contractors that helps users predict and prevent damages ▪ Using on-site sensors, the company monitors for destructive environmental conditions such as fire, water leaks and mold
New Energy Risk	–	▪ **XL Innovate**	▪ Data analytics driven insurance underwriter focusing on industrial and energy technology coverages ▪ XL Catlin leads the capacity program, backed by a leading reinsurance panel

(a) Anil Jha, Hyperplane Venture Capital, Rough Draft Ventures and Sam Altschuler.

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – QBE Ventures

(Re)insurer Venture Capital

QBE | Ventures

Brilliant Basics

Founded in 2017 with an initial capital base of $50 million, QBE Ventures, the venture capital arm of QBE Insurance Group, invests globally in companies that provide differentiated innovations with the potential to enhance QBE's business model, drive efficiencies and develop new avenues of growth.

QBE Ventures' investment philosophy revolves around the concept of supporting and enhancing QBE's commitment to delivering 'Brilliant Basics' – consistently excellent underwriting, pricing and claims handling across every product and market. The team believes the application of intelligence and automation can streamline core insurance operations and processes, as well as increase accuracy and improve the customer experience.

What sets QBE Ventures apart from other corporate venture capital groups is QBE Ventures' strong desire to commercialize portfolio company products within the broader organization. While more challenging, QBE is making a bet that investing time and capital in early-stage companies will help QBE build and sustain businesses for the future through innovation and technology.

QBE Group Focus – Building For the Future

Innovation and Technology

- Building internal data science capability
- Investing in early-stage companies through QBE Ventures
- Accelerating the delivery of digital capabilities via QBE Labs

Operational Excellence

- Simplify operating model
- Process excellence and automation

InsurTech Investment Portfolio

Current Investments

Cytora · risk genius · (h[s]) HYPERSCIENCE

Selected Partnerships

CLARA analytics · DIGITAL FINEPRINT

Ecosystem Partner Strategy

A key component of QBE Ventures' operating strategy is working alongside selected ecosystem partners who can provide access to targeted markets, geographies, and deal flow/syndicate opportunities. QBE Ventures will initially gauge success based on the partner's impact on deal flow, the access that the partner provides to specific markets and segments and how the partner enhances the brand of both QBE and QBE Ventures.

sosa · PLUGANDPLAY · techstars

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – QBE Ventures

(Re)insurer Venture Capital

QBE | Ventures

Ted Stuckey – Managing Director, QBE Ventures

- Joined QBE in January 2016 leading emerging technology R&D and helped establish QBE Ventures in early 2017
- Previously served in senior business architecture roles at Travelers
- Began his career in underwriting at FirstComp (now Markel Specialty)

Marcus Marchant – Group Chief Digital and Innovation Officer, QBE Insurance Group

- Responsible for QBE Ventures, QBE Digital Labs and global digital and innovation strategy
- Joined QBE in September 2015, having previously led customer strategy at Citibank Australia and digital operations at Optus/Singtel
- Commenced career as a mergers and acquisitions attorney with Clayton Utz

Does QBE have any strategic InsurTech partnerships with InsurTech start-ups outside of QBE Ventures' investments? If yes, describe those business arrangements.

QBE has partnered with a variety of early-stage technology start-ups globally - here are a few specific examples:

a. *CLARA Analytics – a suite of artificial intelligence tools focused on getting injured workers back on track rapidly by providing claims teams with the most advanced, scalable and easy-to-use analytic products.*
   - *Business Relationship: Our Australian business units have been using CLARA Analytics for our workers' compensation claims since the beginning of 2018.*

b. *Digital Fineprint – a start-up that links social media identities to commercial insurance identities and uses data analytics to help improve sales, cross-selling and retention.*
   - *We have been using Digital Fineprint across our European Operations to support external marketing and communications initiatives.*

Which emerging technologies do you believe will enable insurers to build the strongest partnerships with customers? Describe the potential of each technology to accomplish this.

QBE Ventures backs early-stage companies which provide intelligence and resolution to the global insurance ecosystem through technically-challenging and industry-changing ideas. We believe that these types of companies have the potential to enhance QBE's business model, drive efficiencies and develop new avenues of growth.

There are countless ways to embed intelligence throughout the insurance lifecycle and within the operations of insurance carriers. We're excited about opportunities to support the decision making of our underwriting and claims professionals as well as extremely interested in how the application of advanced machine learning techniques can provide us with differentiating insights from the vast amounts of data that we have access to. Through the application of intelligence and automation, we believe that we can not only streamline operations but also improve accuracy and turnaround time in a variety of different areas – thus improving customer experience and our bottom line.

We know that advances in the resolution of data will present both opportunities and challenges to insurers throughout the insurance lifecycle – from customer acquisition and market segmenting, to underwriting, pricing and claims. Not only are we now able to gain highly detailed information about the risks that we insure thanks to onboard and embedded sensors, but we're also able to obtain high-frequency, high-resolution satellite imagery of anywhere on the earth's surface which will transform the way that we underwrite property risks. While the opportunities with these developments in data resolution are exciting, they introduce new challenges for carriers, intermediaries, regulators and customers.

What are your primary strategic objectives at QBE Ventures? Are there any specific insurance functions that you have identified as potential areas of innovation that you are seeking to improve at QBE?

A lot of what we're focusing on at QBE right now is around what we call our 'Brilliant Basics'. Specifically, it's a focus on underwriting, pricing and claims – the 'basics' of what we do as an insurer. We've shown an appetite to support these basics through our current investment portfolio and continue to target companies that can provide us with ways of differentiating ourselves in the market specifically in these areas.

Describe the nature of the relationship and interactions between QBE Group Executive and QBE Ventures. How do the group's strategic objectives influence your corporate venture investments? Are all corporate venture investments required to be strategic?

We view QBE Ventures as a vehicle the Group Exec may use to accelerate QBE's strategic goals, complement our existing businesses, and explore potential new markets. Our frequent interactions with the Group Exec ensures continued alignment with our global and divisional strategies as well as provides us with a forum to debate emerging trends and global marketplace opportunities. We are passionate about establishing commercial relationships between our portfolio companies and QBE globally. We view all of our portfolio companies as investments to help drive our strategic goals.

What are the key criteria that you look for in a potential InsurTech investment? And what differentiates QBE Ventures from other strategic (re)insurers with corporate venture capital arms and independent venture capital firms?

We're looking for solutions that have the potential to transform QBE and the global markets that we operate in. Most important to us are incredible founders with demonstrated domain experience and a team who we feel has the ability to deliver.

To me, our desire to commercialize our portfolio companies' products within QBE is what makes us unique compared to other sources of investment capital. Although the process is arguably more challenging, we know that partnering with early-stage technology companies can help accelerate the startup's growth and QBE's transformation. Because of this, it's incredibly important for us to have a portfolio of investments that are complementary to where QBE is at today and where we're going in the future.

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – QBE Ventures

(Re)insurer Venture Capital

QBE | Ventures

($ in millions)

Company	Capital Raised	Disclosed Investors / Partners	Description
Partnerships / Investments			
risk genius	$7.5	▪ Flyover Capital ▪ Mid-America Angels ▪ Plug and Play ▪ **QBE Ventures** ▪ Undisclosed Investors	▪ ClaimKit (parent co. of RiskGenius) deploys experienced claim consultants to collect documents and data anytime, anywhere ▪ The team replicates on-site file organization, collects electronic data and generates organized and searchable claim files ▪ RiskGenius allows users to analyze insurance policies in minutes and leverages a patent pending Policy Analytics technology
Cytora	8.8	▪ Cambridge Seed Funds ▪ Hank Greenberg ▪ Parkwalk Advisors ▪ **QBE Ventures** ▪ Starr Companies ▪ Plug and Play ▪ Fintech Innovation Lab ▪ Other Investors [(a)]	▪ UK-based data analytics solutions provider ▪ Risk engine captures the online footprint of risks clients continually face from crawling data from company websites, news articles and government datasets, and processes it using AI algorithms to predict future claims, attractive risk profiles and quality of risk ▪ Strategic (re)insurer partnerships with QBE, Starr and XL Catlin
(h[s]) HYPERSCIENCE	18.9	▪ Acequia Capital ▪ Fecilis Ventures ▪ FirstMark Capital ▪ SV Angel ▪ BoxGroup ▪ Scott Belsky ▪ Slow Ventures ▪ Third Kind Venture Capital ▪ Shana Fisher ▪ **QBE Ventures**	▪ Artificial intelligence startup that offers products that automate office work and streamlines complex internal workflows ▪ Uses machine learning to extract data and make human-readable content machine-readable ▪ Software offers constant feedback and process improvement through usage
CLARA analytics	22.9	▪ Oak HC/FT Partners ▪ Undisclosed Investors ▪ **QBE Commercial Partnership**	▪ Easy-to-use, AI-enabled claims management software for workers' compensation insurance ▪ Connects insured workers to a large network of top-rated healthcare providers ▪ Full automation of simple claims with 99% accuracy
DIGITAL FINEPRINT	3.1	▪ Plug and Play ▪ Eos Venture Partners ▪ FinTech Innovation Lab ▪ Pentech Ventures ▪ Angel Investors ▪ **QBE Commercial Partnership**	▪ Technology-enabled insurance services company that partners with insurers and brokers and uses social media data analytics and digital capabilities to help improve customer targeting, conversion, sales, cross-selling and retention

(a) Including Alan Morgan, Cambridge Innovation Capital, Ilkka Paananen, Matthew Grant, Paul Forster and iLexIR.

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – Allianz X

(Re)insurer Venture Capital

A company of Allianz

Digital Ecosystem

Allianz X is the digital investment unit of the Allianz Group, one of the world's largest insurers and asset managers. Allianz X invests in digital growth companies that operate within the insurance ecosystem and offer strategic relevance to the goals of the Allianz Group. By providing an interface between portfolio companies and Allianz's digital ecosystem, Allianz X drives innovation across Allianz's operating entities and global lines of business. Allianz X is headquartered in Munich and currently has 22 employees.

Allianz X shifted strategies from being a company builder to a digital investment unit in November 2017. Allianz X focuses on investing in digital growth companies across five ecosystems: mobility, connected property, connected health, wealth management/retirement and data intelligence/cyber security. The investment team is not bound by the constraints of only investing in insurance or insurance services companies, but considers other tech-enabled opportunities where Allianz can potentially apply the technology to the strategic goals of the Group. Since the strategy shift in 2017, Allianz X has made five investments and deployed more than €200 million.

16
Total Investments

5
Continents

+€200mn
Deployed since 2017

Allianz X's Investment Ecosystems

Mobility

Connected Property

Connected Health

Wealth Management & Retirement

Data Intelligence & Cyber Security

Investment Portfolio

InsurTech/Fintech Investments

BIMA
C2FO
Lemonade
moneyfarm
N26
simplesurance

Other Investments

1QBit
abracar
American Well
DRL
GO-JEK
Quantemplate
nauto
URGENT.LY

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – Allianz X

A company of Allianz

Dr. Nazim Cetin – CEO of Allianz X

- Joined Allianz X in August 2017 from Arvato, a subsidiary of Bertelsmann, where he served as Head of Business Development
- Founded agora42, the first German magazine focused on philosophy and economics

List Allianz X's corporate venture InsurTech investments, provide a brief description of each firm and explain each firm's business relationship with Allianz, if any.

Since formation in 2013, Allianz X has made 16 investments with a focus on investing in digital growth companies that are part of ecosystems related to insurance. All portfolio companies have strategic partnerships in place with Allianz operating entities. A summary of selected InsurTech investments is described below:

a) ***American Well*** *– Offers telemedicine solutions to improve access to quality care. Through partnerships with the nation's largest healthcare systems, insurers, employers and retailers, American Well connects millions of Americans with a network of trusted doctors via a video consulting telemedicine service.*

b) ***Lemonade*** *– A licensed insurance carrier offering homeowners and renters insurance powered by artificial intelligence and behavioral economics. Lemonade replaces intermediaries with bots and machine learning to provide customers with zero paperwork and instant insurance access.*

c) ***BIMA*** *– Uses mobile technology to deliver affordable insurance and health products to underserved consumers in emerging markets and families who cannot access vital products through traditional channels. BIMA's tech-enabled approach is key to its ability to reach 30 million subscribers in 14 markets across Africa, Asia and Latin America.*

d) ***Simplesurance*** *– A platform for simple consumer access to insurance. The company enables customers to purchase insurance with just a few clicks within its flagship stores or via its cross-selling solution for e-commerce and within a digital insurance manager.*

e) ***GO-JEK*** *– leading Indonesian on-demand service provider that provides a variety of complete services starting from transportation, logistics, payment, food delivery and other on-demand services, by connecting users to more than 1 million driver partners, more than 150,000 food vendors and more than 30,000 other services.*

Additionally, Allianz X has backed other digital growth companies related to insurance and asset management. These include: ***N26****, Europe's first mobile bank;* ***MoneyFarm****, UK-headquartered digital roboadvisor, and* ***C2FO****, the world's first working capital marketplace.*

Does Allianz have any strategic InsurTech partnerships with InsurTech start-ups outside of Allianz X's corporate venture investments? If yes, describe those business arrangements.

The broader Allianz Group does have strategic InsurTech partnerships outside of our digital growth investments. These range from partnerships with existing early-stage startups (e.g. AGCS partnership with Flock), incubator and accelerator programs (e.g. L'accélérateur Allianz, Allianz Ayudhya Activator) to industry groups focused on supporting the InsurTech ecosystem locally and globally (e.g. Plug and Play InsurTech, InsurTech Hub Munich, B3i).

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – Allianz X

(Re)insurer Venture Capital

What are your primary strategic objectives at Allianz X? Are there any specific insurance functions that you have identified as potential areas of innovation that you are seeking to improve at Allianz?

Allianz X invests in digital growth companies that are a part of our ecosystems related to insurance. Our goal is to identify and invest in the best digital frontrunners that are strategically relevant to Allianz Group and provide an interface between portfolio companies and the digital ecosystem within Allianz. We also look to drive innovation across Allianz's operating entities and global lines of business. We believe in the potential to innovate in every step of the insurance value chain – with the common goal to improve customer centricity.

What differentiates Allianz X from other strategic (re)insurers with corporate venture capital arms and independent venture capital firms? Are there any sources of differentiation within your corporate venture investment strategy which make Allianz a more desirable partner for InsurTech start-up companies?

Allianz X is built on four fundamental values: excellence, trust, passion and partnership. These guide us day-by-day in everything we do. We act with sincerity, honesty and transparency and have a long-term vision to create mutual value with our partners. Through mutual trust and respect, we develop bigger and better ideas.

Our business is set up into two pillars: the first is an investment pillar and the second is the strategy and new business pillar. The second works very closely with our portfolio companies and Allianz's global operating units as well as enables us to achieve our strategic mandate. We are able to tap into Allianz's 127-year expertise and resources across insurance and asset management.

Describe the nature of the relationship and interactions between Allianz Group leadership and Allianz X. How do the group's strategic objectives influence your corporate venture investments? Are all corporate venture investments required to be strategic?

Allianz X is the digital investment unit of Allianz SE. We have a close relationship with the Allianz Group leadership and they provide input on the investments we make. Our objectives are aligned and they have supported us in our goal of investing in the best growth companies that are strategically relevant for the broader Allianz Group. In fact, selected representatives of our global leadership team sit on our investment committee.

What are the key criteria that you look for in a potential InsurTech investment?

We assess from the beginning the digital growth potential of the target company's business, its potential touch points with Allianz and where cooperation is possible and meaningful. This provides the best basis for a mutual partnership where the most value can be generated. Apart from the above, we assess companies along the same standard dimension and with the same diligence as every institutional investor would.

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – Allianz X

(Re)insurer Venture Capital

A company of Allianz

Which emerging technologies do you believe will have the largest impact on the insurance industry in the next several years? Describe the impact that you believe each technology can have on specific aspects of the insurance value chain.

Allianz is actively looking for new technologies that could have a positive impact on the insurance business in the future. Among the several emerging technologies identified, some have already proved their benefits and need to be further implemented to fully impact the industry. This is the case for cloud computing or API management which can lead to quantifiable improvement in the insurance business as they enable flexibility and cost effective availability of data and services.

Three additional technologies have the potential to impact the insurance business in the future and need to be further tested:

***Data-driven technologies** – advanced analytics and artificial intelligence will be crucial in the future to innovate and broaden the insurance core business by offering new products and services based on data processing, e.g. parametric insurance. In addition, these technologies enable the next level of automation into the core insurance value chain by providing better, more efficient, highly automated pricing, underwriting, claims management, asset allocation, etc.*

***Blockchain** – has the potential to help make insurance products & services more accessible and to remove inefficiencies in managing contracts. The technology can support the cancellation of non-value adding costs and help to build more efficient and secure processes. As an example, the integration of Blockchain technology around Digital Identity could streamline the KYC/AML processes and make it practically impossible to steal someone's identity. Another example is on contract management where Blockchain integration could tremendously increase efficiency across the contract lifecycle (contract development, settlement and claims).*

***IoT** – All "things" are becoming smart and connected. This changes the underlying risk and offers opportunities for new products and services. Current offerings have to be upgraded to deal with the change in the risk profile. For example: smart homes can prevent damage actively and limit the impact if something bad happens. This reduces the overall risk/ uncertainty and allows for a different pricing. However, new, cyber related risks are becoming relevant which requires new offerings.*

Q1 2018 Industry Theme

InsurTech Investor Universe

(Re)insurer Venture Capital – Allianz X

(Re)insurer Venture Capital

A company of Allianz

($ in millions)

Company	Capital Raised	Disclosed Investors	Description
Partnerships/Investments			
GO-JEK	$2,235	▪ **Allianz X** ▪ Astra International ▪ BlackRock ▪ blibli.com ▪ Capital Group Co. ▪ DST Global ▪ Farallon Capital ▪ Formation Group ▪ Google ▪ JD.com ▪ KKR ▪ Meituan-Dianping ▪ Other Investors [(a)]	▪ Leading on-demand service provider that provides a variety of complete services starting from transportation, logistics, payment, food delivery and other on-demand services ▪ Connecting users to more than 1 million driver partners, more than 150,000 food vendors and more than 30,000 other services ▪ GO-JEK's main focus is to empower informal sector in Indonesia ▪ By joining GO-JEK, partners will have access to financial services such as saving, insurance, mortgage and affordable installments
American Well	200.1	▪ **Allianz X** ▪ inVenture Partners ▪ Teva Pharmaceuticals ▪ Thomas Spiegel	▪ Telehealth services company that connects patients and clinicians through virtual doctor visits using an online and mobile platform
Lemonade	180.0	▪ **Allianz X** ▪ Google Ventures ▪ Sequoia Capital Israel ▪ SoftBank ▪ XL Innovate ▪ Other Investors [(b)]	▪ Licensed insurance carrier offering homeowners and renters insurance powered by artificial intelligence and behavioral economics through a direct-to-consumer online platform ▪ Targets urban dwellers and promises zero paperwork and instant everything (policy issuance, claims, communication, etc.)
BIMA	114.2	▪ **Allianz X** ▪ Axiata Digital ▪ Kinnevik ▪ LeapFrog Investments ▪ Millicom International	▪ Leading mobile life and health insurance distribution platform in emerging markets ▪ Currently serves seven million people across eight countries in Africa, Asia and Latin America, including Ghana, Senegal, Tanzania, Mauritius, Bangladesh, Sri Lanka, Indonesia and Honduras
simplesurance	32.7	▪ **Allianz X** ▪ Assurant Growth Investing ▪ Mountain Partners ▪ Rakuten Ventures ▪ Rheingau Ventures ▪ Route 66 Ventures ▪ Other Investors [(c)]	▪ Germany-based technology solutions company facilitating the cross-selling of insurance products at the point of sale in e-commerce transactions ▪ Integrates into the checkout process of online shopping sites to offer a one click experience for customers

(a) Including Northstar Group, OpenSpace Ventures, Rakuten Ventures, Samsung Ventures, Sequoia Capital, Temasek Holdings, Tencent Holdings, Vanedge Holdings and Warburg Pincus.
(b) Including Aleph, General Catalyst, Sound Ventures, Thrive Capital and Tusk Ventures.
(c) Including Fines Holding, German Startups Group, Groger Management, Ilgner.Leeheim.de and KfW.

Q1 2018 Industry Theme

InsurTech Investor Universe

Other Corporate Venture Capital

Other Corporate Venture Capital – Selected Firms and Funds

Company	Selected Investments	Description
Alibaba.com	▪ CompareAsiaGroup ▪ Zhong An Insurance	▪ Early stage investments initiative of a Chinese multinational ecommerce and technology conglomerate ▪ Manages several venture capital funds that invest globally
American Express Ventures	▪ Next Insurance ▪ Simplee	▪ Venture capital arm of American Express, founded in 2011 with a $100 million fund ▪ Initial focus on mobile and online payment services, but has since expanded its investment focus
蚂蚁金服 Ant Financial	▪ MassMutual Asia	▪ Ant Financial is a subsidiary of Chinese conglomerate Alibaba Group and the most valuable FinTech company in the world ▪ Since its founding in 2014, Ant has made 44 investments in industries including cybersecurity, e-commerce and education
Barclays Accelerator	▪ Bought by Many ▪ Cuwa ▪ eCOIDA ▪ Edgepoint	▪ 13 week financial technology-focused innovation lab program partnership between Barclays and Techstars ▪ Provides startups with Barclays technology and comprehensive coworking spaces
BMW i.	▪ Zendrive	▪ VC arm of BMW, founded in 2016 with a €500 million fund ▪ Focuses investments in autonomous driving, AI, cybersecurity, energy services and other industries
CICC 中金公司	▪ Distinct Healthcare ▪ Zhong An Insurance	▪ Leading domestic Chinese investment bank, founded in 1995 ▪ CICC has made investments in a range of industries, including pharmaceuticals, energy and financial services
Comcast Ventures	▪ Bunker ▪ Hippo ▪ Zenefits	▪ Comcast Ventures is the venture capital arm of Comcast Corporation which was founded in 2011 ▪ Firm manages a $750 million portfolio, investing in technologies within advertising, enterprise, consumer and infrastructure sectors
F-Prime	▪ Stride ▪ Liazon ▪ Oscar ▪ iPipeline	▪ Fidelity Investments' venture capital arm investing globally in healthcare, enterprise IT and FinTech companies ▪ Manages the private capital of the Johnson family
GE Ventures	▪ Bright Health ▪ Gravie	▪ GE Ventures is a part of GE's Business Innovation Organization ▪ Invests in startups that develop transformational technologies and applications to solve big problems ▪ Since formation, group has made more than 190 investments across a number of industries

Q1 2018 Industry Theme

InsurTech Investor Universe

Other Corporate Venture Capital – Selected Firms and Funds

Company	Selected Investments	Description
Goldman Sachs	▪ Oscar Health ▪ CompareAsiaGroup	▪ Technology-focused venture capital and growth equity arm of Goldman Sachs ▪ Founded in 2003 and has invested more than $6 billion to date
GV	▪ Clover Health ▪ Collective Health ▪ Gusto ▪ Lemonade ▪ Oration ▪ Oscar Health ▪ Climate Corporation	▪ Google Ventures is the corporate venture capital arm of Alphabet Inc., formed in 2009 ▪ Have made investments in more than 300 companies ▪ Over time GV's investment focus has shifted to more mature companies vs. seed stage investments
MGV Monsanto Growth Ventures	▪ The Climate Corporation	▪ Venture capital arm of the Monsanto Company ▪ Team invests in teams and ideas that improve agriculture across technologies and geographies ▪ MGV has a preference to lead investments (seed and Series A) and will selectively invest in subsequent investment rounds
salesforce ventures	▪ GoCo.io ▪ Gusto ▪ Wefox	▪ Founded in 2009, Salesforce Ventures is the venture capital arm of Salesforce.com ▪ Focuses on investing in enterprise cloud companies
SoftBank Investment Advisers	▪ Lemonade ▪ Sherpaa Health	▪ Technology investment subsidiary of a Japanese multinational technology and telecommunications-focused conglomerate ▪ Manages the $100 billion Vision Fund which focuses on global technology investments
Tencent	▪ Shuidihuzhu ▪ Cover ▪ Zhong An Insurance	▪ Venture capital initiative of one of China's largest diversified technology companies ▪ Primarily focuses on investing in startups within China
YAMAHA	▪ PrecisionHawk	▪ Venture capital arm of Yamaha Motor Company, which has completed five investments since 2016 ▪ Invests in and partners with companies in robotics, industrial automation, IoT, unmanned systems and other industries

InsurTech Investor Strategy
InsurTech Investor Survey

InsurTech Investor Benchmarking

To better understand the state of investor activity in the InsurTech market sector, we again partnered with CB Insights to develop a survey which was distributed to a list of Willis Towers Watson Securities' (WTWS) investor contacts as well as CB Insights' weekly insurance technology newsletter.

This survey focuses on the characteristics and strategies of over 100 InsurTech investors as well as viewpoints on which investors have been the most successful to date and why.

Key findings from the survey are summarized on the right side of the page. Participant demographics are outlined below and charts depicting the complete survey results are provided on the following pages.

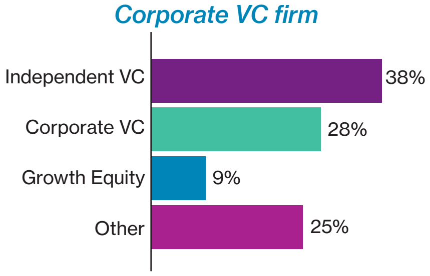
Summary of Survey Findings

- *InsurTech investment teams predominantly comprised of a team of 2-4 investment professionals, and more than 30% of respondents cited investment teams of 5-10 professionals*
- *As expected, multiple channels are used for sourcing InsurTech investments; primary channels are Internal Relationships (87% used) and Industry conferences (69% used)*
- *Most participants view independent VCs as the most successful investor group to date (42% of responses); however, more viewed incumbents/ corporate VCs as likely to be more successful investors over the long run*
- *Most respondents cite data & analytics as the primary InsurTech subsector their company is focusing on (also viewed as the subsector with most attractive investment prospects)*
- *Most innovative incumbents/corp. VCs – **Allianz, Munich Re, XL Innovate** and **American Family** were most cited*
- *Most innovative independent VCs/investors – **Sequoia, Softbank, Plug and Play, Andreessen Horowitz** and **Kleiner Perkins** were most cited*

Survey Participant Demographics

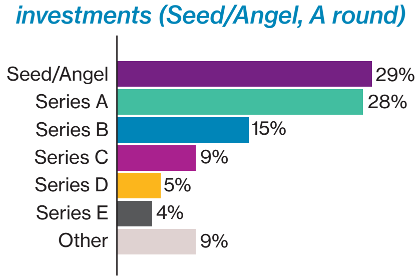
Investor Type

66% work for an Independent or Corporate VC firm



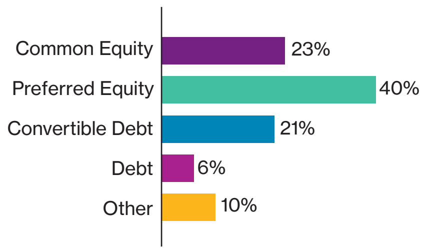
Investment Stage Focus

57% have a focus on early-stage investments (Seed/Angel, A round)



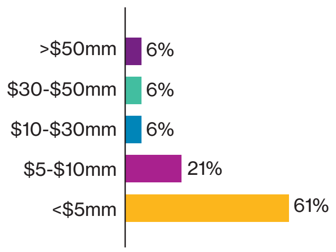
Capital Structure Focus

Higher usage of preferred equity in investment structuring



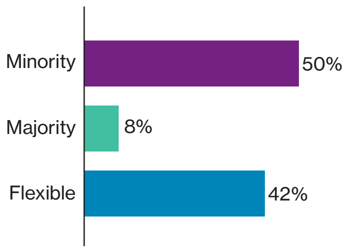
Preferred Investment Size

Over 80% of respondents target investments under $10 million



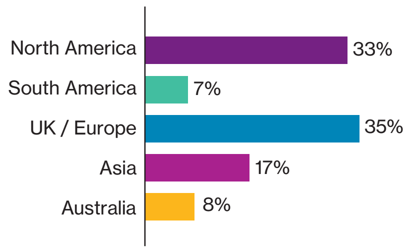
Majority vs. Minority Investments

50% target minority investments only; 8% majority only



Geographic Focus

North America and UK / Europe remain key investment focus areas

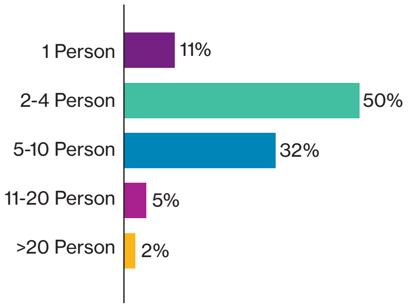


InsurTech Investor Strategy

InsurTech Investor Survey

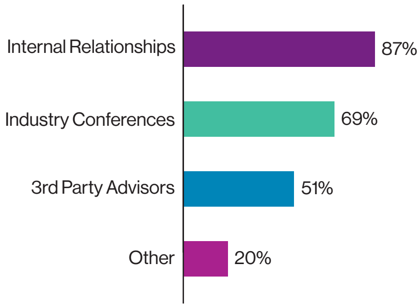
Size of InsurTech Investment Team

Most teams have 2-4 professionals; 30% have between 5-10



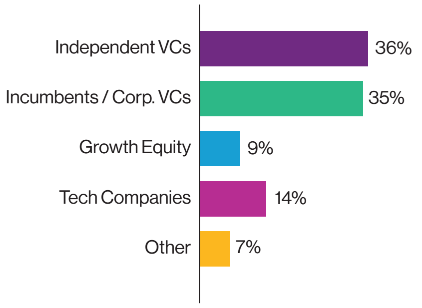
Sourcing Channels Used (multiple responses)

Multiple sourcing channels used; internal relationships are critical



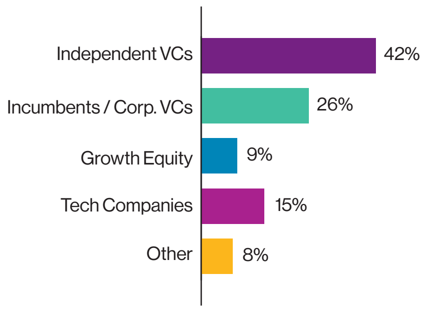
Most Advantaged Investor Group Today

Respondents evenly split between traditional and corporate VCs



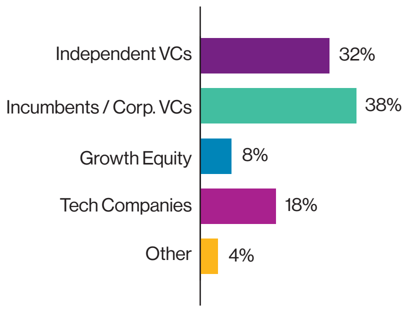
Most Successful InsurTech Investors to Date

Independent VCs viewed as having the most success to date...



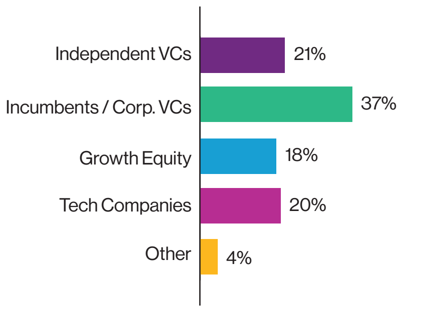
Most Successful Investors Over the Next Several Years

...however, incumbents/corp. VCs are viewed as long-term favorites



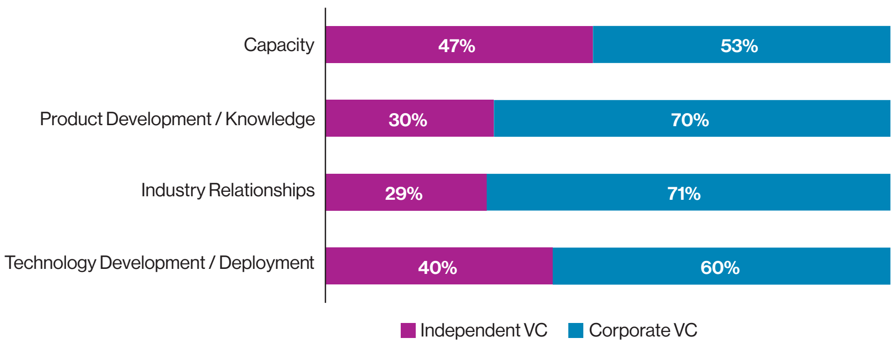
Most Funding Over the Next Several Years

Incumbents/corp. VCs are expected to be main capital providers



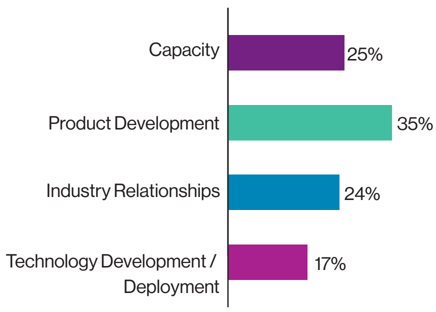
From Perspective of InsurTech Firm, Which Group Offers Better Long-Term Business Development Opportunities

Over the long-term, respondents feel that corporate venture capital arms provide InsurTech companies a greater set of future opportunities



Most Significant Benefit of Corporate VC as Investor

Most value add from corporate VC investor is product development

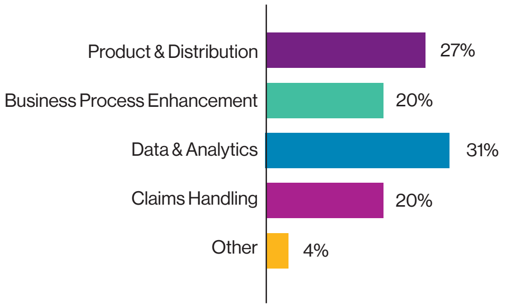


InsurTech Investor Strategy

InsurTech Investor Survey

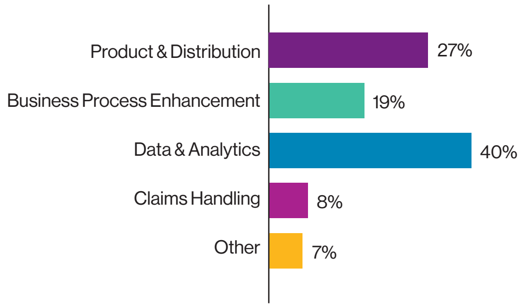
Primary Subsectors of Investment Focus

Product & Distribution and Data & Analytics are primary focus areas of survey participants



Most Attractive Subsector for Investment

Participants view data & analytics as the most attractive subsector for InsurTech investing



Outside of your firm, who is the most innovative InsurTech investor in the market today?

Corporate Venture Capital/Incumbents

Allianz, Munich RE, American Family Ventures, MassMutual Ventures, XL Innovate, R/GA Ventures, Aviva Ventures, Willis Towers Watson

Traditional Venture Capital/Other Investors

Andreessen Horowitz, Sequoia, SoftBank, Accel Partners, 500 startups, KPCB Kleiner Perkins Caufield Byers, Alibaba.com, G/, Eos Venture Partners, Aquiline Technology Growth, Financial Technology Partners, Creandum, Plug and Play, canaan partners, NEA

What advantage does your firm provide compared to other investors?

- Nimble execution
- Excellent management capability and support
- Deep industry relationships and dedicated innovation team
- Expertise in marketing/digital advertising
- Local market presence and expertise
- Strategic guidance and product development expertise
- Knowledge of the industry; LPs that are insurance cos.
- Access to reinsurance platform and dedicated capacity
- Automotive expertise, OEM network
- Subject matter expertise, connections and startup mentality
- Access to industry mentors and carrier connections
- Global scale & access to bus. dev. opportunities
- Combination of corporate and startup experience

Specific criteria your firm looks for in potential InsurTech target companies

- Scalability and convenience
- Solving deep and complex problems
- Cutting-edge; ready to deploy product
- Technologies that create new product areas
- Technologies that expedite digital servicing
- Industry fit, market size and right management team
- Strategic benefits to current network of investors
- Accuracy, ease of use & addressable market
- Market access, better underwriting and claims
- Visionary team with a scalable idea and ability to execute
- Path to monetization ahead of potential exit
- Ability to bend the risk curve
- Solving a clearly defined industry issue
- Competitive moat, capital efficiency & strong momentum

Transaction Spotlight

Root's Series C Funding Round

Rebuilding the Insurance Model from the Ground Up

In March 2018, Root Insurance closed a $51 million Series C funding round led by Redpoint Ventures, with participation from Scale Venture Partners and Ribbit Capital and a follow-on investment from Silicon Valley Bank Capital Partners.

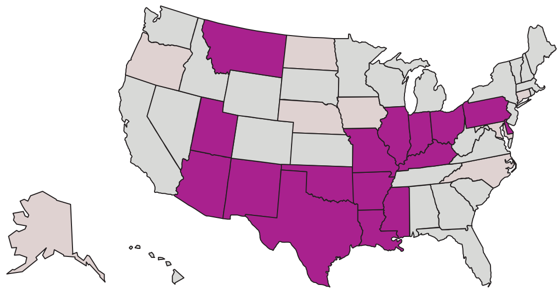
Founded in May 2015, Root Insurance is the first mobile-only auto insurance carrier in the country. It collects telematics data via its smartphone app and uses this information to give fair prices to potential customers.

Root has flipped the model for issuing car insurance quotes. While other carriers issue policies and then use telematics to adjust rates after the fact, Root collects telematics data from every driver before providing a quote. By not insuring bad drivers (the 30% of drivers responsible for 50% of claims), Root is able to save good drivers up to 50% off their current rates.

Currently available in 16 states, Root has ambitions to expand into a national insurance platform by the end of 2019. Root has also begun to fully reinvent the customer claims experience, offering customers the ability to initiate a claim directly from their app, including uploading pictures of any damage.

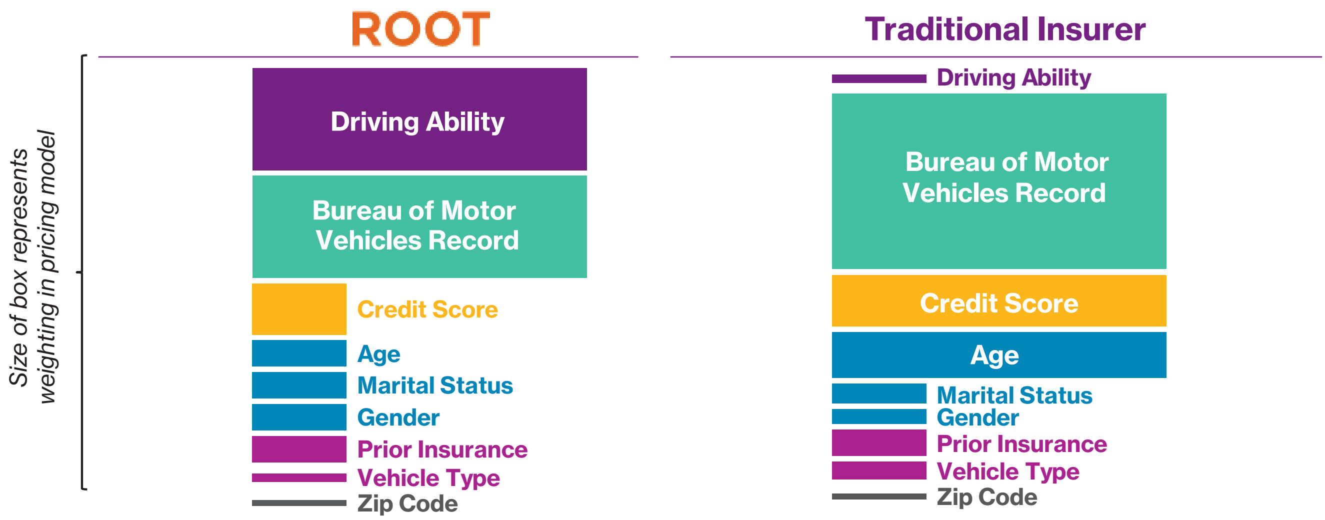
Further down the road, Root plans to extend its offering beyond car insurance. But it will always maintain its focus on revolutionizing the industry with products that leverage technology and data to make insurance fairer, simpler and more affordable.

Root Market Availability



Product Features

Root's Pricing Model vs. Traditional Pricing Model



Source: Company filings.

Transaction Spotlight

Root's Series C Funding Round

Alex Timm – Founder and CEO of Root Insurance Company

- Founded Root Insurance in May 2015
- Previously worked in Corporate Strategy at Nationwide Insurance

How did the concept for Root Insurance take shape? What were the driving forces that led you to believe that the traditional insurance model was ill-equipped to serve customers in the digital age?

I have been in the insurance industry since I was 14, working across a variety of departments in well-established carriers. In corporate strategy, I was responsible for identifying market and industry trends and making recommendations on how the business model should evolve in response. But I soon came to two realizations: consumers were embracing mobile technology at an unprecedented rate but we were still stuck in the age of internet quotes (or even brick-and-mortar agents); and, while big data opened up a whole world of possibilities to fix what was broken, we didn't have the ability to capitalize on that opportunity. The result – technology was moving forward and leaving insurance behind.

I saw a big opportunity for the auto insurance industry to completely reinvent itself. By taking advantage of what technology and machine learning have to offer, insurance companies could not only provide a truly modern customer experience, but they could also make things better. Fairer. Traditional carriers, though, have been largely unable or unwilling to take this leap. So I decided to build a modern auto insurance company from the ground up – one founded on the principle of fundamental fairness that is also dedicated to making consumers' lives easier.

Describe the Root Insurance value proposition. Which customer segments stand to benefit the most and are there others that are best served elsewhere?

Root is the nation's first mobile-only carrier that uses telematics to give fair prices to potential customers. Unlike traditional insurers, we calculate insurance rates primarily based on actual driving behavior. Using the power of technology, we gather data on individual driving behaviors such as braking patterns, acceleration and mileage – more than 200 different variables. Since we don't give a quote to bad drivers – the 30 percent of drivers who are responsible for 50 percent of claims – we are able to give good drivers a discount of up to 52 percent off their current rates.

There is a sizable number of InsurTech startups entering and operating in the telematics and auto insurance services space. How does Root provide a differentiated product to customers in an increasingly competitive industry?

We aren't the first company to use telematics. We're just the first company to do it right.

While other carriers have dabbled in telematics, they largely use the data to give small discounts and (rare) small surcharges. When they do surcharge for bad driving behavior, the amount isn't commensurate to the additional risk. It's a patch on a broken system. Good drivers are still subsidizing bad ones.

Root, on the other hand, is using data and technology to eliminate that subsidy and give good drivers the rates they actually deserve. Essentially, we're building a new kind of insurance system from the ground up – one which is fundamentally fair.

Transaction Spotlight

Root's Series C Funding Round

ROOT INSURANCE CO.

Unlike most InsurTech companies, Root acts as a risk-bearing insurer. Was this always the intention or was there a point in time along the way in which it just made more sense to take on underwriting risk (vs. purely being a distribution company)?

It was always our intention to build Root as a risk-bearing insurer. Early on, we explored partnering with other companies in an effort to gain speed to market, but we quickly discovered that their technology wasn't flexible enough to meet our needs. And we knew that for us to truly reinvent the product and customer experience, we needed to rebuild insurance from the ground up. We are re-examining every aspect of the insurance process, from pricing to claims and beyond, and identifying opportunities to leverage technology and data science to make the experience as simple, modern and fair as possible for our customers.

Root recently completed a Series C financing round of $51 million. To date, all funds have been raised from 'traditional' venture capital funds. How do you evaluate the decision to go to 'traditional' capital pools vs. increasingly active corporate venture arms of (re)insurer incumbents?

We haven't prioritized strategic investment from a particular capital pool. We selected our current investors because they each offer valuable experience and expertise, and we are excited to partner with them to deliver Root's next phase of growth.

Root is currently backed by Munich Re, Maiden Re and OdysseyRe. What has the experience been like as a startup working with some of the largest names in the industry?

All of our reinsurers have embraced our business model and have been great partners for Root.

Where would you like to see the Root Insurance franchise five years from now? Ten years from now?

In the near term, our goal is to be active in all 50 states and Washington, DC. As of April 2018, we insure drivers in sixteen states, with plans to expand to eight additional states in the coming months. And while our customers can notify us of a claim directly from their phone and upload photos to help speed up the claims estimate process, that is just the beginning of our journey to also fully reinvent the claims experience. Further down the road, I'd like to offer multiple insurance products in addition to car insurance, continuing to revolutionize the industry with products that leverage technology and data to make insurance fairer, simpler and more affordable.

Thought Leadership

While the technology around us is changing, many traditional insurance models are holding fast and remaining relevant in the digital age

Paddy Jago
Global Chairman, Willis Re

While the technology around us is changing, many traditional insurance models are holding fast and remaining relevant in the digital age. The influx of InsurTech has reinforced this. The technology around us is changing at a rapid pace, but very interestingly, many of the insurance structures that the technologies are supporting and enabling have themselves not changed dramatically. Despite the view held by many new entrants, the incumbent market has actually been relatively receptive to taking a serious look at the digital innovation that is going on around us, and those driving it. Most of us know that to remain relevant, we need to embrace change. I have always believed that we cannot view change and not change ourselves.

While the growth of the InsurTech space has been met with a combination of excitement and fear, at Willis Re, we aim to be very realistic about the real value added which certain InsurTechs are bringing to the market. There have certainly been cases where InsurTechs have been very good at changing the look and feel of our industry through very innovative technology, but most have been unable to fundamentally improve the pricing of risk and the structure of various insurance models.

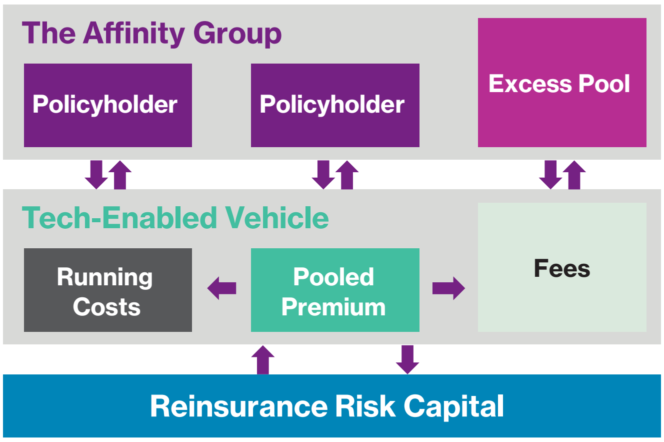
The steadfastness with which certain incumbent insurance structures and models are holding strong suggests to me that insurance models are actually still very efficient at matching risk with capital once they are in the same structure. It is getting them there in the first place where the greatest gains can be, and seem to be, being made. Whether it is the model of the stock company, MGAs, captives, mutuals etc. we are seeing certain InsurTechs focusing their technology at improving the look and feel of these models to help bring in new business and offer innovative insurance solutions for a different audience.

While I do not consider myself to be an InsurTech expert, I have been fascinated by the number of InsurTechs who come into our industry and who have repackaged traditional insurance models for the digital age. In some cases, no reference is made to the traditional model structure whatsoever; rather, it is rebranded entirely – perhaps this is a shrewd move to remove themselves from what has been historically considered expensive and inefficient.

One such example is the 'peer to peer' model. A number of the peer to peer InsurTechs want to offer insurance to an affinity group who will themselves, as the policyholders, own the company. Any profits earned by this group can be retained by the group, or rebated to the group as dividends or a reduced pricing of their premiums. As such, the group is supposed to attract like-minded people, and those who can self-select the group, making it as efficient, fair, cost reducing and socially conscious as possible. These InsurTechs look to the group and to peer financing as a vehicle to provide the risk capacity required. What I find particularly interesting is the fact that, tech-enabled or not, this is in essence the fundamental premise of a **Mutual** – somewhat ironically, the oldest insurance structure of all.

In 1696, the Hand in Hand Fire and Life Insurance Company was founded in Tom's Coffee House in London. Like most insurance companies of the day, it was created through necessity rather than desire, and set out to support the people of London after the Great Fire. For more than 140 years, the Hand in Hand Fire and Life Insurance Company supported itself as a mutual, and provided its policyholders not only with the guarantee of support upon a lawful claim, but also additional services which served the affinity group it had created; namely risk mitigation measures and firefighting services. The mutual model still thrives today and remains every bit as relevant as it once did.

Since the time of the Hand in Hand, insurance structures have broadened to meet the demands of multiple markets. Some of these structures are extremely sophisticated, and some less so. What is interesting is that 'millennials', or generation Y, or whatever you want to call the new consumer market seem content to compromise privacy for speed, convenience, efficiency and social responsibility. As such, the mutual model seems to have come back in vogue in a very big way! The InsurTech technology that helps to move this structure through the market today is very impressive, but the fundamental premise upon which the structure is based has changed very little. Most are tech-enabled mutual insurance companies which operate via the familiar structure below.



Thought Leadership

While the technology around us is changing, many traditional insurance models are holding fast and remaining relevant in the digital age

As previously mentioned, certain InsurTechs have been very good at adding genuine value to these incumbent models. A number of global InsurTechs (see table below) have been very good at bringing the traditional mutual model to the modern market, utilizing modern technology to penetrate underserved markets, and offer very relevant innovative products to an audience looking for an alternative way to engage with buying insurance. Their place and relative successes in the market suggest strongly that the mutual model remains very relevant and a very efficient way of offering insurance products to affinity groups.

The demonstrable advantages of technology in this space are obvious (and listed below).

Advantages:

- The coming together of the affinity group
- The distribution of innovative, relevant, demand-driven products
- Digital sales channels
- Transparent returns of pooling excess
- Reduction of inefficient running costs/fees
- Access to alternative sources of risk capital
- Upselling of other relevant products and services
- Instantaneous communication
- Reactivity to the changing demands of society

The InsurTechs listed below have targeted the stock company model as being expensive, inefficient, and ultimately not befitting the type of service and offering that you, the would-be policyholder, might want. Some of these companies explicitly target the stock company model, illustrating where the costs associated go, and what the cost of the actual insurance is (in some cases, claimed to be as low as 25% of the actual cost). Other costs being company profits, investors' profit margin, fraud, company overhead, bad risks, broker fees and so on.

Cost of distribution is certainly a feature of our industry that can be improved by technology, and it is therefore an obvious inefficiency that InsurTechs will target with a peer to peer model. If we look at history, however, as the traditional mutuals expanded, the company infrastructure was tested. In order to facilitate this growth, businesses had to commit an increasing percentage of the total cost to running the business itself. Perhaps technology will circumnavigate this issue entirely, but only time will tell. Where I see a huge opportunity is for incumbent mutual insurance companies to utilize some of the expansion technology being used by the peer to peer model. It may well prove to be the case that software is developed, specifically for this model that helps companies remain as true as possible to the original structure of the mutual. Only time will tell if this model will remain relevant in another 350 years' time.

Examples of Peer-to-Peer InsurTech Companies:

Company	Investors	Commentary
friendsurance	▪ German Startups Group ▪ Horizons Ventures ▪ VantageFund	▪ Germany-based peer-to-peer insurance network that offers cash-back insurance products ▪ Forms individual coverage networks where customers are given yearly cash back when their network remains claims-free
Pineapple	▪ Lireas Holdings	▪ South Africa-based flexible, scalable and decentralized peer-to-peer insurer that offers transparent coverages to members ▪ Allows users to pay and track their premiums online and choose members of their social network with whom to pool premiums
inspool	▪ Undisclosed	▪ UK-based peer-to-peer motor insurance provider that offers rewards to drivers for safe driving ▪ Offers discounts of up to 75% of premium when drivers in the Inspool network practice safe driving practices
insPeer	▪ BPI France ▪ Undisclosed Investors	▪ France-based online broker that helps users share risk with friends and family and collectively receive network discounts ▪ Offers motor coverages for electric vehicles on behalf of Generali
同聚保	▪ Chinaccelerator ▪ SOSV	▪ China-based peer-to-peer health insurance aggregator that helps users manage and share risks within an online community
Bought by Many	▪ Munich Re/HSB Ventures ▪ Octopus Ventures	▪ Free members-only service that develops specialized coverages with insurers based on individuals' needs ▪ Long-tail focus (pet, homeowners, gadget, private health)

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InsurTech by the Numbers

Strong Deal Volume to Kick off 2018

- **InsurTech funding volume of $724 million in Q1 2018**
  - 16% increase from $624 million in Q4 2017; 155% increase year-over-year from $284 million in Q1 2017
    - 66 total transactions in Q1 2018 represents highest transaction volume completed in any quarter to date; 29% increase from 51 transactions in Q4 2017 and 74% increase year-over-year from 38 transactions in Q1 2017
    - Continuation of international investment activity – U.S. accounted for 60% of transactions since 2013, but only 53% in Q1 2018
    - Early stage investments showing strength; Seed/Series A transactions comprised 66% of total transactions in Q1 2018 compared to 64% of all transactions since 2013 and 52% of transactions completed in Q4 2017
  - P&C funding volume was 47% lower from Q4 2018, but 95% higher than year-over-year Q1 2017
    - 43 P&C transactions in Q1 2018 represents a 5% increase from 41 transactions in Q4 2017 and a 95% increase year-over-year from 22 transactions in Q1 2017
  - L&H funding volume was 213% higher from Q4 2018 and 204% higher year-over-year Q1 2017
    - 23 transactions in Q1 2018 represents a 130% increase in volume from Q4 2017 and a 44% increase year-over-year from 16 transactions in Q1 2017
- **Seven $30+ million investment rounds contributed to the fourth highest funding volume in any quarter to date; investors continue to make increased bets in selected companies**
  - Oscar Health closed a $165 million Series D round in March 2018
  - Collective Health closed a $110 million Series D round in February 2018
  - Bind On-Demand Health Insurance completed a $60 million Series A round in February 2018
  - Root Insurance completed a $51 million Series C round in March 2018
  - Justworks completed a $40 million Series D round in March 2018
  - Qualia Labs completed a $33 million Series B round in March 2018
  - Ladder completed a $30 million Series B round in January 2018

Continued Concentration in Distribution Sector

- **56% of P&C and 70% of L&H transactions in Q1 2018 involved companies focused on insurance distribution, compared to 62% and 46%, respectively, of all such transactions since 2013**
  - Includes digital lead generation, brokerage and MGA platforms

Technology Partnerships Remain a Priority

- **27 private technology investments by (re)insurers in Q1 2018 represents highest Q1 activity in any previous year; slight decline from 35 investments in Q4 2017 and one more than 26 investments in Q1 2017**
  - Partnerships outside of the US remain in focus as 44% of Q1 2018 announcements were non-US compared to 39% of partnerships since the beginning of 2013
  - Partnerships in Q1 2018 favor later stage companies as Angel/Series A partnerships comprised 44% of the announcements compared to 48% of partnerships since 2013
- **(Re)insurers, directly and through corporate venture arms, are expanding their focus to invest in a broad range of technologies with potential applications to their core (re)insurance businesses**
  - Allianz invested ~$60 million in American Well, a telemedicine provider to develop a lower cost and more accessible healthcare product using wearable sensors and virtual doctor visits
  - Munich Re has signed an agreement with Bosch to develop packages of solutions for connected manufacturing
  - PartnerRe entered into a four-year agreement with Farmers Edge to develop new agriculture insurance coverages on a worldwide basis using Farmers Edge's satellite imagery and monitoring solutions
  - Assurant has partnered with TenantCloud, a cloud-based rental accounting software company to distribute renters through TenantCloud's mobile application
  - Sun Life announced a partnership with Collective Health in which the two companies would partner to integrate Sun Life's stop-loss offering into Collective's platform
  - Chubb's partnership with Grab to offer commercial auto insurance in Southeast Asia for Grab's on-demand ridesharing application
  - MetLife's partnership with Tencent WeSure, a digital insurance subsidiary of Tencent, to offer travel insurance through the WeSure platform

Startup Deals Show Increased Diversification

- **Announced Q1 2018 InsurTech deals included companies focused on broader insurance product strategies**
  - CLARA Analytics ($11.5 million Series A in January 2018) focuses on AI/machine learning analytics for workers' compensation claims management
  - Corvus Insurance ($4 million seed investment in February 2018) focuses on data and sensor technologies for cargo insurance products
  - Paladin Cyber ($4 million Series A in March 2018) and Coalition ($10 million Series A in February 2018) focus on cyber insurance and cyber security tools
  - Qualia ($33 million Series B round in March 2018) and SafeChain ($3 million Series A in February 2018) focus on products for the title insurance industry

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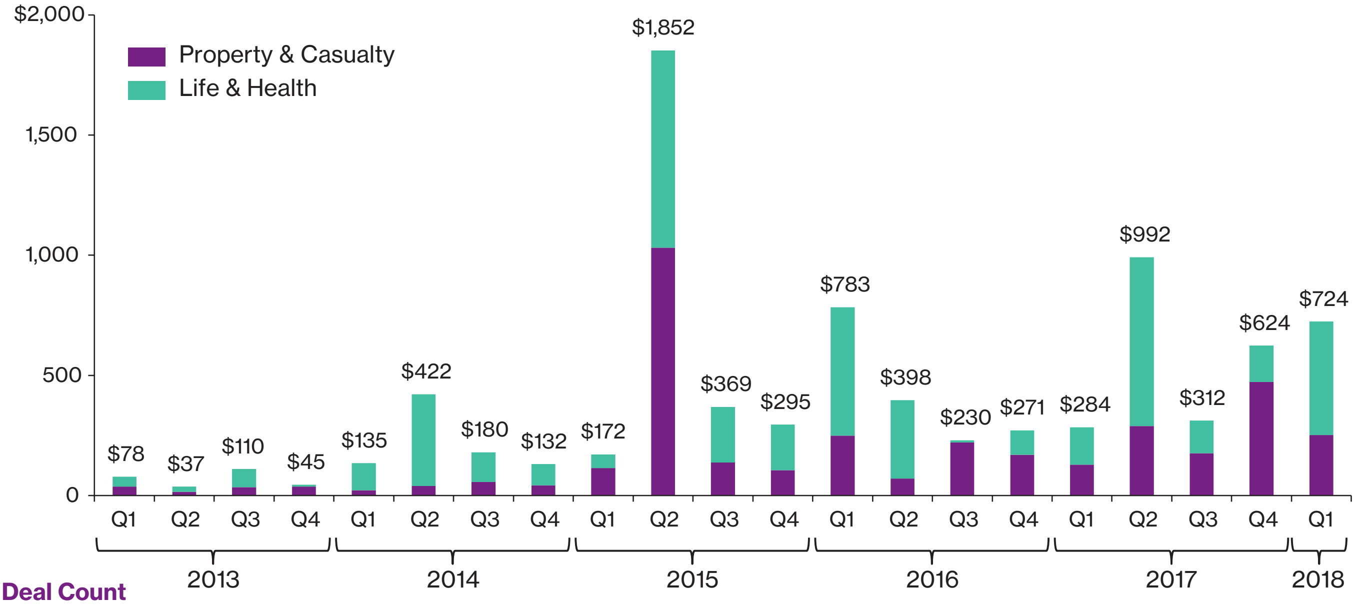
InsurTech by the Numbers

Quarterly InsurTech Funding Volume – All Stages

($ in millions)

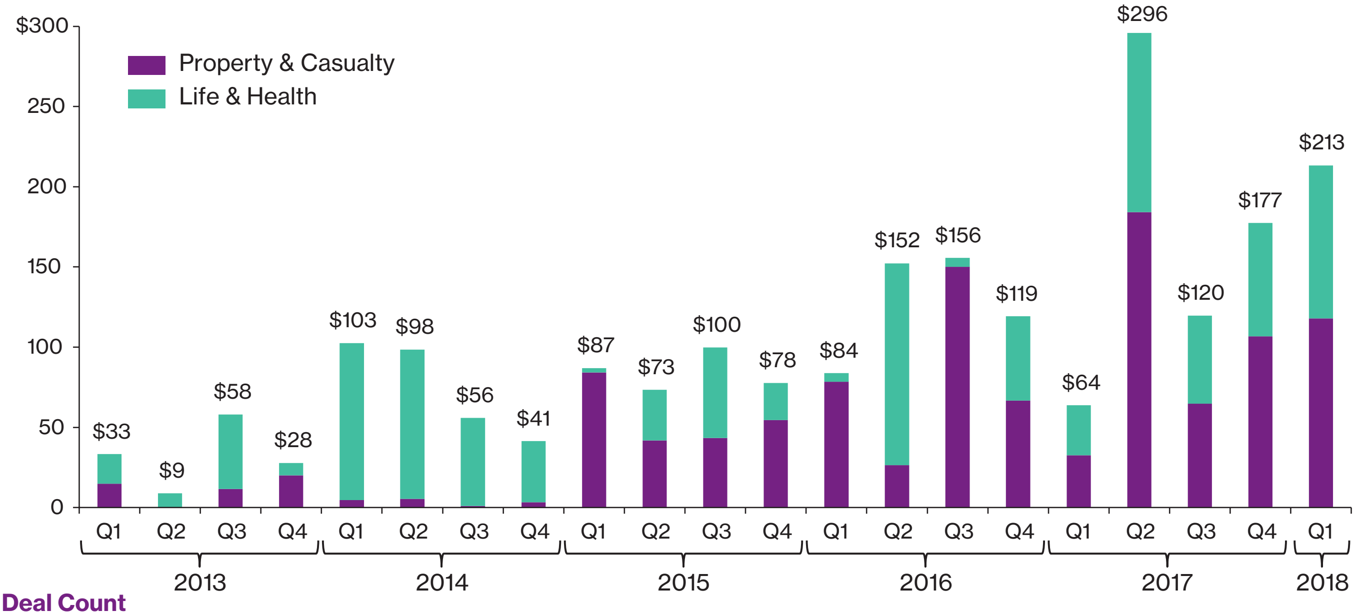


Deal Count

P&C:	5	4	11	8	8	6	10	8	12	12	13	19	41	18	30	28	22	33	25	41	43
L&H:	15	8	10	4	11	16	20	15	13	19	15	21	18	16	8	15	16	32	23	10	23

Quarterly InsurTech Funding Volume – Early Stage

($ in millions)



Deal Count

P&C:	4	2	5	5	4	2	4	6	8	7	8	14	33	9	23	20	14	21	17	23	31
L&H:	8	4	6	4	7	9	17	8	7	9	10	17	8	9	4	11	11	19	15	4	13

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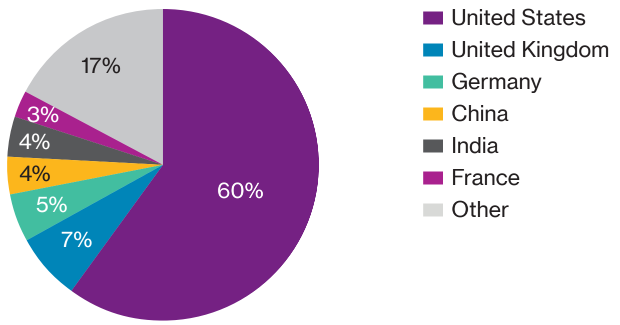
InsurTech by the Numbers

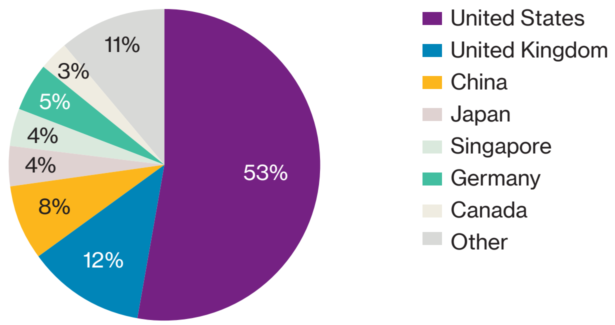
Quarterly InsurTech Transactions by Target Country

2013 – Q1 2018



2013 – Q1 2018 Transactions: 727

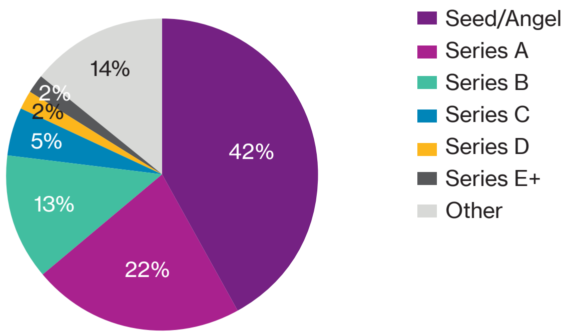
Q1 2018



Q1 2018 Transactions: 66

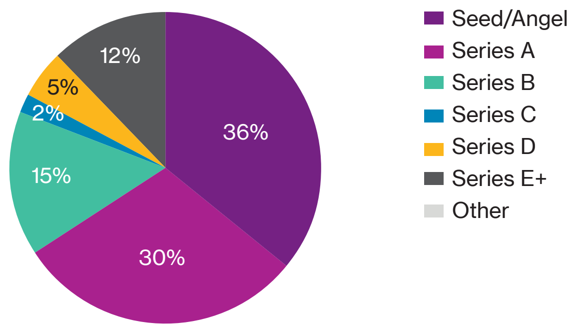
Quarterly InsurTech Transactions by Investment Stage

2013 – Q1 2018



2013 – Q1 2018 Transactions: 727

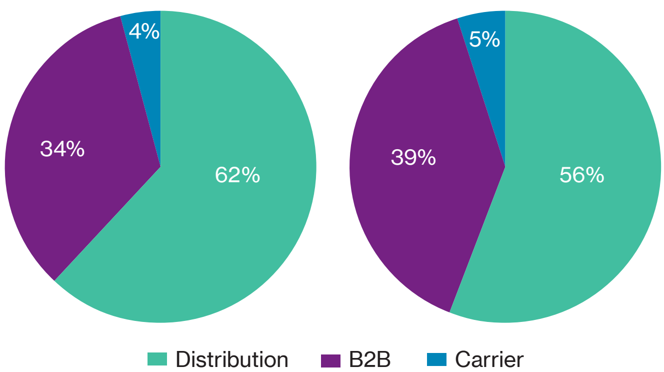
Q1 2018



Q1 2018 Transactions: 66

P&C InsurTech Transactions by Subsector

2013 – Q1 2018 | **Q1 2018**

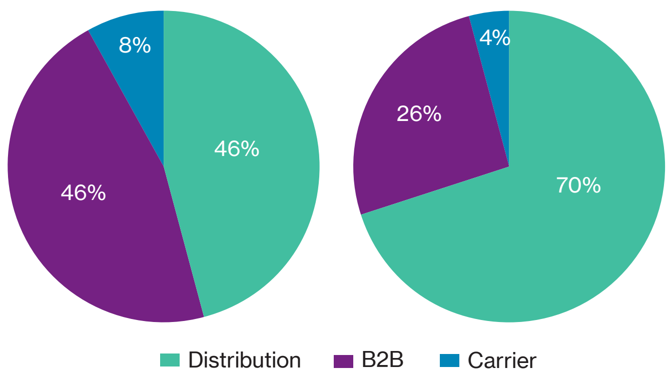


2013 – Q1 2018 P&C Transactions: 399

Q1 2018 P&C Transactions: 43

L&H InsurTech Transactions by Subsector

2013 – Q1 2018 | **Q1 2018**



2013 – Q1 2018 L&H Transactions: 328

Q1 2018 L&H Transactions: 23

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Q1 2018 InsurTech Transactions – P&C

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
01/02/18	CLARA analytics	11.5	23.0	▪ Oak HC/FT Partners ▪ Undisclosed Investors	▪ Easy-to-use, AI-enabled claims management software for workers' compensation insurance ▪ Connects insured workers to a large network of top-rated healthcare providers ▪ Full automation of simple claims with 99% accuracy
01/02/18	Indio Technologies	6.0	8.1	▪ 500 Startups ▪ 8VC ▪ Acceleprise ▪ Compound ▪ Hiscox Holdings ▪ Merus Capital ▪ New Enterprise Associates	▪ Workflow management platform that aims to automate processes for traditional commercial insurance brokers ▪ Automates the manual processes of retrieving quotes from carriers and processing insurance policy applications
01/02/18	Urban Jungle	1.3	1.3	▪ Rob Devey	▪ UK-based online broker for home contents and tenants liability coverages targeted for young adults ▪ Carrier partners include RSA, AXA, Legal & General, Zurich, Allianz, Towergate and UK General
01/03/18	Quilt	–	3.3	▪ Basset Investment Group ▪ Eniac Ventures ▪ Founder Collective ▪ NextView Ventures ▪ Plug and Play ▪ Titan Partners ▪ Undisclosed Investors	▪ Digital enrollment platform offering diversified personal lines coverages including renters, term life, pet and auto ▪ Underwrites life policies on behalf of Generation Life (Swiss Re)
01/05/18	Dinghy	1.2	1.2	▪ Balderton Capital ▪ Resolution ▪ Undisclosed Investors	▪ UK-based online platform offering liability coverages for freelancers ▪ Products include professional indemnity, public liability, cyber and business equipment insurance ▪ Partners with Beazley and places risk at Lloyd's
01/08/18	Digital Fineprint	2.7	3.1	▪ Andy Homer ▪ Eos Venture Partners ▪ FinTech Innovation Lab ▪ Force Over Mass Capital ▪ Pentech Ventures ▪ Plug and Play Accelerator ▪ Shailesh Rao ▪ Stephan Apel	▪ Technology-enabled insurance services company that partners with insurers and brokers and uses social media data analytics and digital capabilities to help improve customer targeting, conversion, sales, cross-selling and retention
01/09/18	Panda Insurance	7.7	15.0	▪ Hangzhou Win-Light ▪ Jiuguo Investment ▪ Legend Star ▪ Neovision Capital ▪ Origins Capital ▪ QF Capital ▪ Xinjun Capital ▪ Yonyou Happiness Capital	▪ China-based digital auto insurance distribution platform ▪ Allows consumers to make payments online and provides immediate quotes through mobile app
01/16/18	Hellas Direct	8.6	8.6	▪ Endeavor Catalyst ▪ IFC ▪ Jim O'Neill ▪ Perscitus Advisers ▪ Portag3 Ventures ▪ Third Point	▪ Greece-based auto insurer operating through an online and mobile direct-to-consumer distribution platform ▪ 50% of premium is reinsured by Swiss Re and Maiden Re
01/16/18	Praedicat	6.0	18.0	▪ American Discovery Capital ▪ RAND Corporation ▪ Risk Mgmt. Solutions ▪ Rustic Canyon Partners	▪ Catastrophe risk modeling and consulting services provider that combines data analytics with geo-footprint mapping ▪ Partnership with Allianz to provide catastrophe liability risk management prediction services
01/16/18	RateHub	12.0	12.4	▪ Elephant Venture Capital ▪ National Research Council ▪ Simon Nixon	▪ Canada-based online financial products aggregator and comparison website offering personal lines insurance coverages including home, auto and life

Note: Blue font denotes current round investors.

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Q1 2018 InsurTech Transactions – P&C

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
01/22/18	Hippo	25.0	39.0	▪ Angel Investors ▪ Comcast Ventures ▪ Fifth Wall Ventures ▪ GGV Capital ▪ Horizons Ventures ▪ Pipeline Capital Partners ▪ Plug and Play ▪ Propel Venture Partners ▪ RPM Ventures	▪ Low cost, affordable online home insurance agent operating in California, Arizona, Texas, Illinois and Pennsylvania ▪ Exclusively partners with A- or higher rated insurers
01/22/18	ProNavigator	0.3	0.3	▪ GreenSky Capital	▪ Canada-based online insurance sales platform streamlined for brokers and direct distribution carriers to process policy applications and requests
01/31/18	Inzura	1.0	1.0	▪ Hauw-Quek Soo Hoon ▪ Julian Edwards ▪ Michael Blaney ▪ Paul Cosh ▪ Phil Bunker	▪ Innovative cloud-based SaaS platform that enables insurers to rapidly deploy fully digital products across all general insurance lines (motor, home, travel and pet insurance) ▪ Utilizes telematics and image analytics software to support insurers in delivering app-based solutions across the full insurance lifecycle (quote, buy, policy admin., claims, cross-selling, rewards) ▪ Built-in "gamification" and rewards applicable across multiple product lines help insurers build loyalty with customers and incentivize beneficial consumer behavior
02/01/18	Wefox	–	39.3	▪ AngelList ▪ Davidson Technology ▪ Growth Debt ▪ Horizons Ventures ▪ IDInvest Partners ▪ Lena Meyer-Landrut ▪ Salesforce Ventures ▪ Samuel Skoblo ▪ Seedcamp ▪ Sound Ventures ▪ Speedinvest ▪ Target Global ▪ Victory Park Capital	▪ Germany-based tech-enabled service provider that streamlines the claims process by allowing users to upload photographic notice of loss through their phones and connect instantly to a large managed repair network
02/05/18	Vouch Insurtech	0.8	0.8	▪ GREE Ventures ▪ Nogle Group ▪ Swiss Re ▪ Undisclosed Investors	▪ Singapore-based online managing general agent offering auto insurance products targeted towards safe drivers ▪ Offers a no-claim rebate with up to 15% cash back ▪ Carrier partners are NTUC Income, Sompo and Tokio Marine
02/06/18	bsurance	0.6	0.6	▪ UNIQA	▪ Austria-based startup aiming to pair small businesses with relevant insurance products for their customers at the point of sale
02/07/18	justInCase	–	–	▪ 500 Startups ▪ Naoki Aoyagi	▪ Japan-based startup insurer offering insurance and third party warranty coverages for smartphones
02/08/18	Rhino Labs	0.8	2.7	▪ ff Venture Capital ▪ FJ Labs ▪ Lakehouse Ventures ▪ Picus Capital ▪ Red Dog Capital ▪ Undisclosed Investors	▪ Real estate technology company that acts as an intermediary for security deposits ▪ Ongoing partnership with Canopius where the renter pays a small monthly fee in lieu of a security deposit, with future payments insured by Canopius
02/12/18	Corax Cyber Security	1.0	3.7	▪ Undisclosed Investors	▪ UK-based cyber analytics platform that helps businesses determine their cyber risk and offers tailored recommendations on appropriate insurance coverage plans and pricing
02/12/18	Axinan	–	–	▪ Linear Venture ▪ NSI Ventures ▪ PayPal Incubator	▪ Singapore-based e-commerce focused insurer ▪ Currently offers free return shipping insurance for e-commerce retailers and companies
02/14/18	PingJia Technology	–	3.2	▪ CAS Inv. Mgmt. Co. ▪ China Merchants Capital ▪ Fosun RZ Capital ▪ HanFor Holdings ▪ Qianhai Suishi Capital	▪ China-based driver behavioral analytics data solutions developer ▪ Provides an open data platform that analyzes driver safety behavior through vehicle telematics and deep learning algorithms

Note: Blue font denotes current round investors.

The Data Center

Q1 2018 InsurTech Transactions – P&C

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
02/14/18	SafeChain	3.0	4.0	▪ Aspect Ventures ▪ Columbus Smart City Accelerator ▪ Fintech71 ▪ LOUD Capital ▪ NCT Ventures ▪ Pete Kight ▪ Precursor Ventures ▪ Rev1 Ventures ▪ Revolution ▪ Rise of the Rest ▪ Social Capital ▪ Undisclosed Investors	▪ Technology-enabled data platform that uses blockchain to provide title agents with secure, integrated title management software and real estate transaction processing programs
02/16/18	Go Maps	0.2	19.7	▪ Khosla Ventures ▪ Undisclosed Investors	▪ Innovative mobile application-based insurance broker allowing users to receive auto insurance quotes with just a picture of their driver's license ▪ Carrier partnerships with Munich Re and Knight Insurance Group
02/16/18	Kin Insurers	13.1	17.2	▪ 500 Accelerator ▪ 500 Startups ▪ August Capital ▪ Chicago Ventures ▪ Commerce Ventures ▪ Elmspring Accelerator ▪ Omidyar Network ▪ Portag3 Ventures ▪ Undisclosed Investors	▪ Mobile and web-based independent agent that markets homeowners insurance to the millennial generation ▪ Offers immediate quotes through a streamlined online portal
02/20/18	Upsie	2.2	4.0	▪ Gopher Angels ▪ Jim D'Aquila ▪ M25 Group ▪ Marc Belton ▪ Mark Addicks ▪ Matchstick Ventures ▪ Techstars ▪ Techstars Ventures ▪ The Syndicate Fund ▪ Village Capital ▪ Undisclosed Investors	▪ Website and mobile application offering low-cost third party extended warranties
02/21/18	gabi	9.5	12.1	▪ A Capital ▪ Canvas Ventures ▪ Correlation Ventures ▪ Northwestern Mutual ▪ Project A Ventures ▪ Securian Financial ▪ SV Angel	▪ Homeowners and auto data analytics-centric price comparison platform that reviews users' current insurance and finds the most economical alternative coverages
02/26/18	Socotra	–	3.3	▪ Undisclosed ▪ USAA	▪ Policy administration servicer that helps insurers automate underwriting processes and quoting and binding
02/27/18	Corvus Insurance Agency	4.0	4.0	▪ Bain Capital Ventures	▪ Big data analytics platform that provides risk management tools for commercial insurance brokers to predict and prevent losses in underwriting
02/28/18	FinanzRitter	–	0.0	▪ Axel Springer Plug & Play ▪ Reech Corporations Group	▪ Germany-based insurance advisor offering independent counseling services to help users choose the best coverage for their needs
02/28/18	XAGENT	2.1	2.1	▪ Brian Kapiloff ▪ Terry Scali	▪ Insurance intermediary connecting retail agents to national "A"-rated carriers with instant bindable quotes ▪ Provides a 50 state submission platform for a variety of standard and surplus lines commercial coverages
02/28/18	Coalition	10.0	10.0	▪ Deep Nishar ▪ Ribbit Capital ▪ Sam Altman ▪ Valor Equity Partners ▪ VY Capital	▪ Cyber risk managing general agent offering comprehensive risk management services and low-cost cyber coverages ▪ Underwrites on behalf of Swiss Re and Argo

Note: Blue font denotes current round investors.

The Data Center

Q1 2018 InsurTech Transactions – P&C

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
03/06/18	Coverfox	7.6	46.6	▪ Accel Partners India ▪ Aegon ▪ Catamaran Ventures ▪ InnoVen Capital ▪ IFC ▪ SAIF Partners ▪ Transamerica Ventures	▪ India-based online insurance comparison and distribution platform offering personal lines, health and travel insurance coverages ▪ Offers 100+ products through relationships with 25 insurers
03/06/18	KarloCompare	–	–	▪ Hina Khawaja Bayat ▪ Roger Dawood Bayat ▪ TPL eVentures	▪ Pakistan-based financial products price comparison website ▪ Offers customers access to a variety of personal lines coverages including travel, health and auto
03/07/18	Kelly Klee	4.5	7.0	▪ Angel Investors ▪ Langdell Investments ▪ Matt Coffin ▪ Undisclosed Investors	▪ Personal lines online insurance broker targeting the high net worth market and offering homeowners, auto, specialty vehicles, umbrella, boat and valuables coverages
03/07/18	Qualia Labs	33.0	40.1	▪ 8VC ▪ Barry Sternlicht ▪ Bienville Capital ▪ Clocktower Tech. Ventures ▪ Formation 8 ▪ Menlo Ventures	▪ Tech-enabled real estate services company that aims to streamline real estate transactions ▪ Offering a one-stop shop for home closings, the startup brings all transaction participants onto one platform to coordinate the process in real time, increasing visibility and efficiency
03/09/18	Covered Insurance Solutions	0.1	0.9	▪ Ozmen Ventures ▪ Rapid City Economic Dev. ▪ Undisclosed Investors	▪ Personal and small commercial lines marketplace featuring coverages from leading carriers
03/14/18	FIGO Pet Insurance	4.0	11.1	▪ HCS Capital Partners ▪ Undisclosed Investors	▪ Pet insurance distributor providing mobile applications for pet tracking, managing pet care and submitting claims
03/21/18	Paladin Cyber	4.0	4.1	▪ Lightbank ▪ Aquiline Technology Growth ▪ Undisclosed Investors	▪ Cyber security startup offering cyber insurance for small to medium-sized businesses ▪ Provides a free phishing test to assess company risk as well as cyber protection services and cyber attack support ▪ Offers a single plan with up to $1 million of cyber liability coverage
03/22/18	Everledger	10.4	10.5	▪ Accelerateur Allianz ▪ Barclays Accelerator ▪ BBVA Open Talent ▪ Bloomberg Beta ▪ Fenbushi Capital ▪ Fidelity Investments ▪ FuturePerfect Ventures ▪ GMP Securities ▪ Graphene Ventures ▪ MasterCard Start Path ▪ Rakuten Ventures ▪ Vickers Venture Partners	▪ Blockchain-enabled digital ledger that helps insurance companies and others record and protect digital assets ▪ Also provides anti-fraud detection mechanisms to help insurers combat fraudulent claims
03/23/18	Insly	3.1	4.3	▪ Angel Investors ▪ Black Pearls VC ▪ Concentric ▪ London Co-Investment Fund ▪ Nat'l Centre for Res. & Dev. ▪ Startupbootcamp Fin Tech	▪ Software-as-a-service solution for insurance brokers and agents to manage clients, policies and payments on one seamless platform
03/27/18	Root Insurance	51.0	63.0	▪ Drive Capital ▪ Redpoint Ventures ▪ Ribbit Capital ▪ Scale Venture Partners ▪ Silicon Valley Bank	▪ Online tech-enabled personal auto insurer that offers coverages and claims handling services through its mobile application ▪ Reinsured by Munich Re, Maiden Re and OdysseyRe
03/29/18	Bunker	2.0	10.0	▪ American Family Ventures ▪ Chubb Insurance ▪ Clocktower Tech Ventures ▪ Comcast Ventures ▪ Hiscox Holdings ▪ LaunchCapital ▪ Omidyar Network ▪ Route 66 Ventures	▪ Operates contract-related insurance marketplace initially aiming to improve the insurance experience of small businesses with gig economy workers ▪ Offers products to gig economy businesses and individual workers

Note: Blue font denotes current round investors.

The Data Center

Q1 2018 InsurTech Transactions – L&H

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
01/08/18	Plussimple	12.0	12.9	▪ Anthemis Group ▪ IDInvest Partners ▪ Olivier Duha ▪ One Ragtime ▪ Rothschild Family	▪ France-based digital insurance broker offering coverages for SMEs and the self-employed ▪ Provides group health, commercial property and commercial auto insurance products
01/10/18	Ladder	30.0	46.1	▪ 8VC ▪ Barney Schauble ▪ Canaan Partners ▪ Lightspeed Venture ▪ Nyca Partners ▪ RRE Ventures ▪ Thomvest Ventures	▪ Tech-driven life insurance distribution platform partnered with Fidelity Security Life and reinsured by Hannover Re
01/17/18	Covomo	2.5	2.5	▪ German Startups Group ▪ Michael Focking ▪ Policen Direkt ▪ Technologiefond Hessen	▪ Germany-based insurance comparison portal offering health insurance coverages
01/17/18	The Carevoice	2.2	2.2	▪ Chinaccelerator ▪ Haitao Capital ▪ SOSV ▪ Undisclosed Investors	▪ China-based independent healthcare recommendation platform that provides users with a comprehensive database of hospitals, doctors and clinics complete with user-submitted reviews
01/22/18	Anorak	5.6	5.6	▪ Kamet	▪ UK-based life insurance recommendation engine that analyzes life insurance policies in the market and provides immediate tailored suggestions for users ▪ Partnered with Aegon, AIG, Aviva, Legal & General, Zurich, Scottish Widows, Royal London and LV
01/23/18	SmartHR	13.3	18.2	▪ 500 Startups ▪ BEENEXT ▪ CVC Capital Partners ▪ DG Incubation ▪ East Ventures ▪ Jun Nishikawa ▪ Kotaro Chiba ▪ Nikko Asset Management ▪ Tokio Marine Capital ▪ World Innovation Lab ▪ Yu Akasaka	▪ Japan-based personnel management platform that automates procedures related to employees' insurance coverages
02/02/18	Sport Covers	–	1.4	▪ Bright Venture Capital ▪ Great Wall Fund ▪ Haitun Baobao ▪ Kangyuan Huiying	▪ China-based online portal distributing sports insurance coverages
02/06/18	BeneStream	0.9	10.5	▪ ARC Angel Fund ▪ BCBS Venture Partners ▪ Esther Dyson ▪ Ford Foundation ▪ George Duczak ▪ Jeffrey Stephen Wald ▪ Kapor Capital ▪ Kevin Hill ▪ Martin Babinec ▪ Martin Investment Holdings ▪ Rafael Musher ▪ Relativity Healthcare Partners ▪ Sandbox Industries ▪ Serious Change Fund ▪ The Social Entrepreneurs Fund ▪ TLSG Investments ▪ Undisclosed Investors	▪ Intelligent software that helps employers ensure that their employees are receiving their entitled government benefits
02/11/18	Decent	–	–	▪ Foundation Capital	▪ Yet-to-be-launched InsurTech startup working to develop an affordable health insurance offering

Note: Blue font denotes current round investors.

The Data Center

Q1 2018 InsurTech Transactions – L&H

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
02/13/18	Tomorrow Ideas	5.9	8.8	▪ Allianz Life Ventures ▪ CFSI Catalyst Fund ▪ Clocktower Technology ▪ Ventures ▪ Curious Capital ▪ Echelon Capital ▪ Financial Solutions Lab ▪ Flying Fish Venture Partners ▪ Maveron ▪ Plug and Play ▪ Sinai Ventures ▪ Undisclosed Investors	▪ Self-help mobile application aimed at helping millennials and working families achieve long-term financial security ▪ Provides users with tools to assist with financial decisions including wills, life insurance and establishing trusts ▪ Distributes term life insurance on behalf of nine insurers in all 50 states and Washington D.C.
02/20/18	Bind On-Demand Health Insurance	60.0	62.5	▪ Lemhi Ventures	▪ On-demand health insurance MGA offering fully customizable coverages where users pay for what they need
02/20/18	Picwell	4.0	11.1	▪ Aflac Corporate Ventures ▪ Andrew Kress ▪ BCBS Venture Partners ▪ Bruce Perkins ▪ Kevin Hill ▪ MassMutual Ventures ▪ Osage University Partners ▪ Paul Kusserow ▪ Sandbox Industries ▪ Trevor Fetter	▪ Machine learning software that uses predictive analytics to deliver personalized healthcare and benefits recommendations to users
02/23/18	UEX	1.0	1.0	▪ Verspieren	▪ Singapore-based insurance platform offering personalized health insurance products for small commercial and individual customers
02/28/18	Collective Health	110.0	229.0	▪ Formation 8 ▪ Founders Fund ▪ Google Ventures ▪ Great Oaks Venture Capital ▪ Jeff Weiner ▪ Jeremy Stoppelman ▪ Maverick Capital ▪ Maverick Ventures ▪ Max Levchin ▪ Mubadala Investment Co. ▪ New Enterprise Associates ▪ Redpoint Ventures ▪ Rock Health ▪ RRE Ventures ▪ s28 Capital ▪ Scott Banister ▪ Social Capital ▪ Subtraction Capital ▪ Sun Life Financial	▪ Unified benefits platform that helps employers connect and administer health plans, benefits, spending accounts and employee support in a cost-effective and efficient manner ▪ Provides services to a diverse spectrum of leading U.S. employers including Activision Blizzard, Palantir, Red Bull and Zendesk
03/01/18	Blueprint Income	2.8	3.7	▪ Core Innovation Capital ▪ Financial Solutions Lab ▪ Green Visor Capital ▪ Jean Chatzky ▪ Kairos Society Ventures ▪ NextView Ventures ▪ Undisclosed Investors	▪ Pension planning digital advisor that helps users shop for retirement plans and annuities
03/02/18	Sasuke Financial Lab	0.5	0.5	▪ Global Catalyst Partners ▪ KLab Ventures ▪ Monex Ventures	▪ Japan-based startup operating Donuts, an AI-enabled platform that provides users with immediate tailored recommendations for life and health insurance

Note: Blue font denotes current round investors.

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Q1 2018 InsurTech Transactions – L&H

Date	Company	Funding ($mm) Round	Funding ($mm) Total	Investor(s)	Description
03/06/18	Justworks	40.0	93.0	▪ Bain Capital Ventures ▪ Daring Journey Ventures ▪ FirstMark Capital ▪ Index Ventures ▪ LocalGlobe ▪ Redpoint Ventures ▪ Thrive Capital	▪ HR management and benefits administration software enabling employers to streamline administrative processes
03/09/18	Mintbao	-	-	▪ Bertelsmann Investments	▪ China-based personalized insurance recommendation engine that helps families and individuals configure customized products
03/09/18	SafetyWing	0.5	0.5	▪ The Nordic Web Ventures ▪ Y Combinator	▪ Health insurance comparison website offering short-term coverage targeted to online freelancers and entrepreneurs
03/15/18	Unqork	5.2	5.2	▪ Undisclosed Investors	▪ Software-as-a-service platform that streamlines the life insurance sales and distribution process to improve customer experience
03/26/18	Employment Hero	6.2	9.6	▪ AirTree Ventures ▪ AMP New Ventures ▪ OneVentures ▪ SEEK	▪ Australia-based human resources software provider that streamlines functions such as payroll, employee benefits and more on a single application
03/28/18	Atidot	5.0	5.0	▪ Bank Hapoalim ▪ D.E. Shaw ▪ Moneta Seeds ▪ Plug and Play ▪ Vertex Ventures Israel	▪ Israel-based data analytics engine that evaluates life insurance customer behavior to help carriers better attract and retain profitable business
03/28/18	Oscar Health	165.0	892.5	▪ 8VC ▪ BoxGroup ▪ Brainchild Holdings ▪ Breyer Capital ▪ Brian Singerman ▪ capitalG ▪ Fidelity Investments ▪ Formation 8 ▪ Founders Fund ▪ General Catalyst ▪ Goldman Sachs ▪ Google Ventures ▪ Horizons Ventures ▪ Khosla Ventures ▪ Lakestar ▪ Ping An Ventures ▪ Red Swan Ventures ▪ Stanley Druckenmiller ▪ SV Angel ▪ Thrive Capital ▪ Verily Life Sciences ▪ Wellington Management ▪ Undisclosed Investors	▪ Technology-enabled health insurer founded in 2013 ▪ Sells individual and small group health plans, distributing both directly and through brokers (including online marketplaces) ▪ Offers an easy-to-use, comprehensive mobile app where customers can customize their policies, consult with a doctor and schedule appointments with in-network providers

Note: Blue font denotes current round investors.

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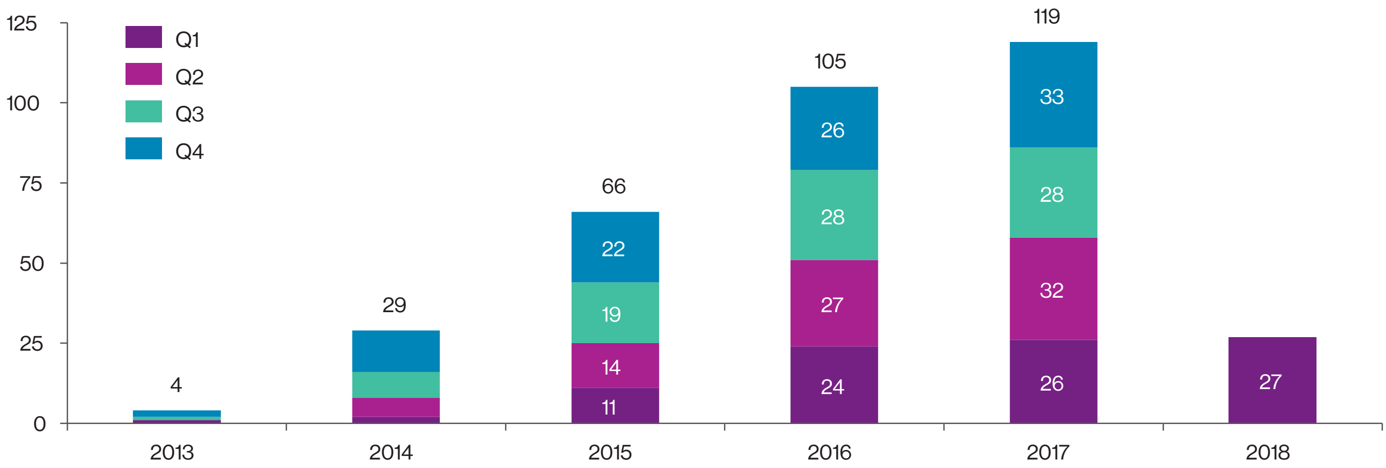
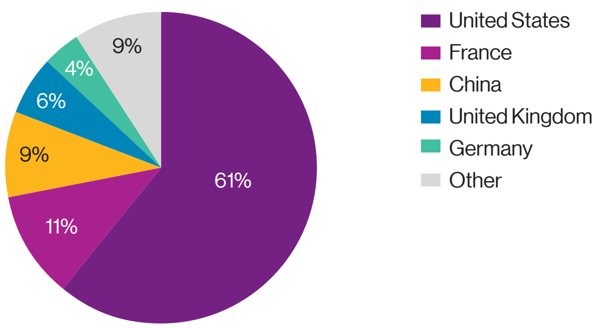
InsurTech by the Numbers

Private Technology Investments by (Re)insurers



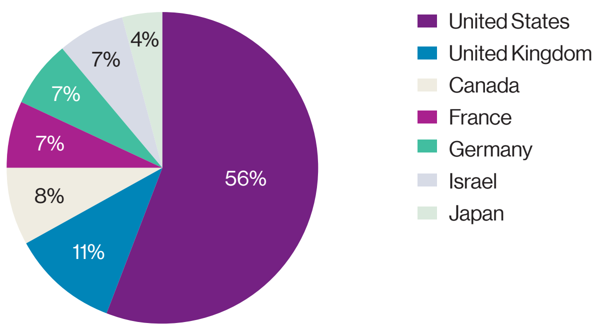
Private Technology Investments by (Re)insurers by Target Country

2013 – Q1 2018



2013 – Q1 2018 Transactions: 350

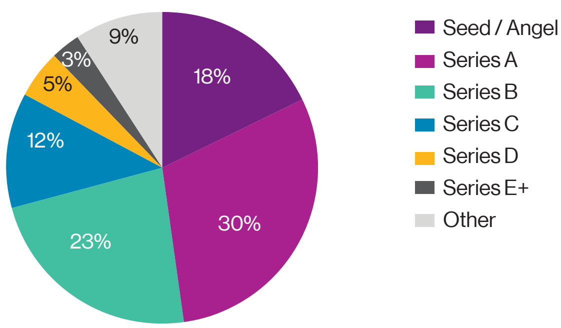
Q1 2018



Q1 2018 Transactions: 27

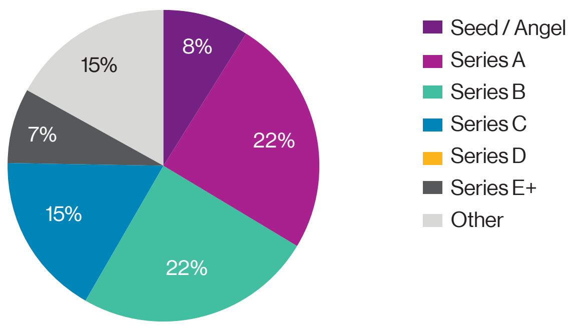
Private Technology Investments by (Re)insurers by Investment Stage

2013 – Q1 2018



2013 – Q1 2018 Transactions: 350

Q1 2018



Q1 2018 Transactions: 27

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Q1 2018 Private Technology Investments by (Re)insurers

Date	Company	Funding ($mm) Round	Funding ($mm) Total	(Re)insurer Investor(s)	Description
01/08/18	American Well	59.2	200.1	▪ Allianz	▪ Telehealth services company that connects patients and clinicians through live video doctor visits through an online and mobile application platform
01/09/18	Mylo	1.6	2.5	▪ Desjardins	▪ Canada-based mobile application that offers customized personal finance advice
01/10/18	Goji	-	-	▪ AXA Strategic Ventures	▪ Value driven online MGA designed to help users save money on auto, home, life and other personal lines coverages ▪ Carrier partners include MetLife, National General, Progressive, State Auto, Travelers, Mercury General, 21st Century and more
01/18/18	Adish	1.4	1.4	▪ Mitsui Sumitomo ▪ Mizuho	▪ Multilingual customer support provider offering services for video games and mobile applications ▪ Also offers School Guardian, an online social media management platform that can monitor students' online posts
01/22/18	Anorak	5.6	5.6	▪ Kamet	▪ UK-based life insurance recommendation engine that analyzes life insurance policies in the market and provides immediate tailored suggestions for users ▪ Partnered with Aegon, AIG, Aviva, Legal & General, Zurich, Scottish Widows, Royal London and LV
10/25/17	Precision Hawk	-	-	▪ Third Point	▪ Terrestrial data acquisition and analysis company providing an end-to-end solution for the use of unmanned aerial vehicles (UAVs) for data collection and related analysis software tools ▪ Owns terrestrial data software provider DataMapper, satellite imagery provider, Terraserver and the Low Altitude Traffic and Airspace Safety platform for drones, LATAS ▪ Industry tailored solutions include aggregates, agriculture, construction, energy and insurance
01/24/18	Nexar	75.0	104.0	▪ Nationwide Ventures	▪ Israel-based AI-driven mobile application that uses data analytics and a driver community to limit driving risk ▪ Uses computer vision to study the road and provide immediate alerts of danger ▪ Provides a vehicle-to-vehicle network that communicates danger warnings to nearby vehicles with the Nexar program
01/24/18	TytoCare	30.0	44.5	▪ Fosun ▪ Ping An	▪ Israel-based telehealth platform that allows doctors and other medical professionals to perform a variety of medical examinations and provide consultations remotely
01/29/18	StartUp Health	-	-	▪ Ping An	▪ Healthcare accelerator that helps health startups navigate the challenges of building a growing business ▪ Portfolio of over 200 companies across 19 countries
01/30/18	mnubo	19.3	27.7	▪ Munich Re / HSB Ventures	▪ Canada-based Internet-of-Things and data analytics platform enabling consumer products manufacturers to extract useful data regarding customer engagement and usage
01/30/18	Trifacta	-	-	▪ New York Life	▪ Startup that helps customers easily transform raw, complex data into clean and structured formats for analysis
01/31/18	Pop Valet	48.0	124.3	▪ MAIF Avenir	▪ France-based online platform offering on-demand car valet and car transportation services
02/02/18	Outdoorsy	-	-	▪ Aviva Ventures	▪ Digital RV rental marketplace connecting renters and RV owners
02/12/18	Payfone	25.0	25.1	▪ MassMutual Ventures	▪ Identity and network identification services provider that offers customers efficient, immediate authentication programs that streamline user experience
02/13/18	Roostify	23.0	92.0	▪ USAA	▪ Digital platform that allows users and customers to share and track information in the mortgage application and closing process
02/15/18	Lydia	25.0	30.2	▪ CNP Assurances	▪ France-based mobile payments application that allows users to keep track of their banking statements and credit cards all on one streamlined mobile platform

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Q1 2018 Private Technology Investments by (Re)insurers

Date	Company	Funding ($mm) Round	Funding ($mm) Total	(Re)insurer Investor(s)	Description
02/15/18	Lyric	16.2	29.3	▪ AXA Strategic Ventures	▪ Hospitality-focused startup that offers flexible, short-term stays for travelers in specially designed suites in iconic apartment buildings
02/20/18	Picwell	15.5	15.5	▪ Aflac Corporate Ventures ▪ Blue Cross Blue Shield ▪ MassMutual	▪ Machine learning software that uses predictive analytics to deliver personalized health care and benefits recommendations to users
02/20/18	gabi	4.0	11.1	▪ Northwestern Mutual	▪ Homeowners and auto data analytics-centric price comparison platform that reviews users' current insurance and finds the most economical alternative coverages
02/21/18	Socotra	9.5	12.1	▪ USAA	▪ Policy administration servicer that helps insurers automate underwriting processes and quoting and binding
02/26/18	C2FO	0.0	3.3	▪ Allianz	▪ B2B marketplace that connects companies in need of working capital and allows businesses to provide loans with flexible rates
02/27/18	Collective Health	100.0	199.7	▪ Sun Life	▪ Unified benefits platform that helps employers connect and administer health plans, benefits, spending accounts and employee support in a cost-effective and efficient manner ▪ Provides services to a diverse spectrum of leading U.S. employers including Activision Blizzard, Palantir, Red Bull and Zendesk
02/28/18	Owlstone Medical	110.0	229.0	▪ Aviva Ventures	▪ UK-based health diagnostics company developing a breathalyzer that enables early detection across multiple cancers and other diseases and conditions
03/05/18	Red Balloon Security	15.0	41.6	▪ American Family Ventures	▪ Cyber security provider offering defense services for embedded and smart devices including cars and office equipment
03/08/18	Solebit	21.9	21.9	▪ MassMutual Ventures	▪ Cyber protection software developer providing protection against zero-day attacks and malware
12/06/17	N26	5.9	8.8	▪ Allianz	▪ Germany-based digital bank that is accessible entirely through mobile platforms and smartphones ▪ The startup will be entering the U.S. market in mid-2018
03/14/18	omni: us	-	13.0	▪ Anthemis	▪ Germany-based online claims handling and policy processing platform that streamlines data processes through proprietary data analytics technology

The Data Center

Q1 2018 Strategic (Re)insurer Partnerships

Date	Company	(Re)insurer Partner(s)	Description
01/08/18	American Well	▪ Allianz	▪ Allianz X invested $59.2 million in American Well, a telemedicine provider, and partnered with the startup to develop a lower cost, more easily accessible healthcare product ▪ The two companies will use American Well's platform to develop wearable sensors, remote monitoring and virtual visits by healthcare professionals
01/19/18	Betterview	▪ Munich Re	▪ Under a new agreement, Betterview will offer drone imagery, analysis and data reports to Munich Re's insurance company clients
01/31/18	Mnubo	▪ Munich Re	▪ Munich Re / HSB Ventures led a $16.5 million financing round for Mnubo alongside an ongoing partnership with the startup to develop risk management products and solutions ▪ Mnubo is a Canada-based Internet-of-Things and data analytics platform enabling consumer products manufacturers to extract useful data regarding customer engagement and usage
01/31/18	TenantCloud	▪ Assurant	▪ Assurant has partnered with TenantCloud, a cloud-based rental accounting software company, to distribute renters' insurance through the TenantCloud's mobile application
02/05/18	Cisco, Apple	▪ Allianz	▪ Cisco, Apple, Allianz and Aon announced a new cyber risk management collaboration combining cyber resilience evaluation services from Aon, secure technology from Cisco and Apple and enhanced cyber coverages from Allianz
02/09/18	MarketInvoice	▪ Euler Hermes	▪ MarketInvoice, an invoice financing lender, is partnering with Euler Hermes to provide its small business borrowers with credit insurance policies to mitigate default risk
02/09/18	Roost	▪ Erie Insurance	▪ Erie will be offering Roost's Smart Water Leak and Freeze Detector products to homeowners insurance customers
02/13/18	SpatialKey	▪ Swiss Re	▪ SpatialKey will now offer Swiss Re's CatNet multiperil hazard data to insurer customers through SpatialKey's proprietary underwriting solution ▪ SpatialKey is a geospatial analytics and underwriting platform providing accurate risk selection and claims handling
02/13/18	Farmers Edge	▪ PartnerRe	▪ Under a new four-year agreement, Farmers Edge and PartnerRe will work together to develop new agriculture coverages worldwide ▪ Farmers Edge is an agriculture-focused data analytics company that offers daily global, high-resolution satellite imagery and other crop monitoring solutions
02/14/18	Vivametrica	▪ SCOR	▪ Vivavmetrica and SCOR have entered into a partnership to co-develop a new underwriting and risk assessment model that uses physical data to determine the 'biological age' of individuals ▪ Vivametrica is a predictive health data analytics platform that examines health data from wearable sensor devices
02/16/18	CoverWallet	▪ Zurich	▪ Zurich Insurance has launched ZurichEmpresas.es, a new digital distribution channel powered by CoverWallet that will provide end-to-end insurance solutions for SMEs in Spain
02/19/18	Slice	▪ Legal & General	▪ Legal & General and Slice Labs have partnered to develop an on-demand homeshare insurance product available through online and mobile applications, with backing by big data, AI and machine learning
02/22/18	Bosch	▪ Munich Re	▪ Munich Re has signed a cooperation agreement with Bosch to develop new solutions for connected manufacturing in Industry 4.0, the current trend of automation and data exchange in manufacturing technology ▪ Bosch is a Germany-based engineering and electronics company that manufactures a variety of automotive components, industrial products and household appliances
02/28/18	Collective Health	▪ Sun Life	▪ Collective Health will now integrate Sun Life's stop-loss offering into the Collective Health platform to protect self-funded employers from the cost of high-dollar claims
03/01/18	Coalition	▪ Argo Group ▪ Swiss Re	▪ With backing from Swiss Re and Argo, Coalition, a startup cyber insurer, raised $10 million in Series A funding
03/14/18	Grab	▪ Chubb	▪ Grab, the Southeast Asia on-demand ridesharing application and FinTech platform, has partnered with Chubb to offer commercial auto coverages for Grab's drivers
03/20/18	LifeScore Labs	▪ Swiss Re	▪ Swiss Re will now offer LifeScore360 as an additional analytics option for Swiss Re's automated underwriting system (Magnum) ▪ LifeScore 360 is a standards-based algorithmic risk scoring solution offered by LifeScore Labs, a company started by MassMutual to bring to market innovations developed by MassMutual's data science team
03/22/18	RightIndem	▪ XL Catlin	▪ XL Catlin has rolled out a new marine insurance online claim reporting engine powered by RightIndem, allowing XL's clients in North America to immediately share details and visual information of the claim
03/26/18	Jauntin	▪ AIG	▪ AIG's Travel Guard has launched an innovation travel insurance application powered by Jauntin allowing Canadian customers to purchase coverages in blocks of time through their mobile phones ▪ Jauntin is a digital broker that distributes on-demand coverages through a mobile application
03/27/18	SkyWatch.ai	▪ Starr	▪ SkyWatch.ai announced an exclusive partnership deal with Starr Companies to offer on-demand, usage-based insurance for drones
03/29/18	Bunker	▪ Chubb	▪ Bunker will be working with Chubb to develop new insurance products targeting the small commercial market
03/30/18	Tencent WeSure	▪ MetLife	▪ MetLife and WeSure, a digital insurance subsidiary of Tencent, announced a strategic partnership to offer travel insurance solutions through the WeSure online distribution platform ▪ WeSure is a digital MGA launched by Tencent in November 2017 offering personal lines coverages and claims servicing through WeChat

Quarterly InsurTech Briefing
Additional Information

The Quarterly InsurTech Briefing is a collaboration between Willis Towers Watson Securities, Willis Re and CB Insights. Production is led by the following the individuals. For more information, or to discuss the results of this report, please direct inquiries to InsurTech@willistowerswatson.com.

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Willis Towers Watson Securities

Willis Towers Watson Securities (WTW Securities) is a leading investment banking boutique focused exclusively on the insurance industry. We provide a broad range of services that combine unparalleled industry knowledge with analytical expertise, including strategic advisory, capital raising and ILS.

As a wholly-owned subsidiary of Willis Towers Watson, we offer a differentiated value proposition to clients operating in the (re)insurance sector. Our ability to provide a truly comprehensive and coordinated suite of M&A advisory services is based on delivering WTW Securities' established world-class insurance M&A execution capabilities in concert with analytical, actuarial, brokerage, rating agency, risk management consulting and other services from other areas within the broader Willis Towers Watson organization. We operate at the forefront of innovation within the insurance sector, evidenced by our track record of executing landmark transactions across various segments of the insurance value chain including, the first sale of a U.S. public insurance company to a China based acquirer, the first full company sale of an ILS investment manager to a strategic (re)insurer and the establishment of Resilience Re, the first turn-key cat bond lite platform providing issuers with access to a pre-selected pool of leading alternative capital investors.

Willis Re

Willis Re is one of the world's leading reinsurance advisors. Over our 180-year history, we have developed a deep insight into all aspects of the global insurance industry. In particular, we understand how individual insurance companies develop and drive their own unique strategies to achieve their goals. We offer you comprehensive service backed by stable, well-trained staff to help you reach and exceed your specific targets in the most cost-effective fashion.

We have a deep understanding of risk – and all the ways it affects capital and your organization's financial performance. Our core focus is to provide you with a superior understanding of the risks you face, and then advise you on the best ways to manage extreme outcomes.

CB INSIGHTS

CB Insights is a Pilot Growth and National Science Foundation backed software as-a-service company that uses data science, machine learning and predictive analytics to help our customers predict what's next – their next investment, the next market they should attack, the next move of their competitor, their next customer, or the next company they should acquire.

Quarterly InsurTech Briefing
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About Willis Towers Watson

Willis Towers Watson (NASDAQ: WLTW) is a leading global advisory, broking and solutions company that helps clients around the world turn risk into a path for growth. With roots dating to 1828, Willis Towers Watson has over 40,000 employees serving more than 140 countries. We design and deliver solutions that manage risk, optimize benefits, cultivate talent, and expand the power of capital to protect and strengthen institutions and individuals. Our unique perspective allows us to see the critical intersections between talent, assets and ideas – the dynamic formula that drives business performance. Together, we unlock potential. Learn more at willistowerswatson.com.

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