

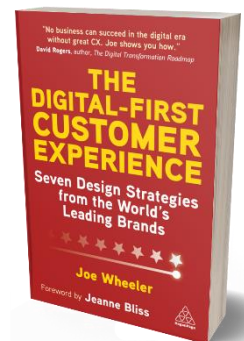


THE POWER OF A DIGITAL-FIRST FLYWHEEL

The Lemonade Insurance Story

CASE STUDY

Excerpt from the upcoming book: *The Digital-First Customer Experience - Seven Design Strategies from the World's Leading Brands*



THE POWER OF A DIGITAL-FIRST FLYWHEEL

Setting the Table

Let us begin with a few facts about the insurance industry:

- A 2017 Survey by Statista from 1,151 US consumers, reported the percentage of people that said they “don’t trust insurance companies very much” or “at all” ranged from 29% to 54%.¹
- In New Zealand, survey research revealed only 13% of customers reported to have confidence they could trust insurers with covering their claims and only 18% felt they fully understood the terms of their policies because of their difficult wording.²
- As many as 1 in 4 people had experienced a problem with their insurer with the top complaint about having a claim unreasonably, unexpectedly declined.³

In an industry suffering from a long-standing climate of mistrust, enters something quite refreshing: Lemonade, Inc.

Renowned behavioral economist, and Lemonade’s former Chief Behavioral Officer, Dan Ariely said in an article published in *Judicature*: “We decided to build a system with three parts: We have consumers, an insurance company, and a charity...We take a fixed income, so our amount of profit doesn’t change depending on whether we accept or deny claims. And at the end of the year, all the money that is left over in the pool of those consumers that picked the World Wildlife Fund goes to the World Wildlife Fund.”⁴

Lemonade eliminates the conflict of interest, endemic across the industry, and delivers several emotional peaks through a digital-first platform with both a cost and data advantage that would be hard to duplicate. As Lemonade co-founder Shai Wininger has said “Lemonade is a tech company doing insurance, not an insurer doing an app.”⁵

“Lemonade is a tech company doing insurance, not an insurer doing an app.”

The Experience

Entrepreneurs Daniel Schreiber and Shai Wininger decided to shake up the industry by launching Lemonade, Inc. in the US in 2016, a digital insurance company with absolutely no physical agencies or written policies, which embeds digital technology into the core operating model.

Making Lemonade

The Lemonade experience includes 3 ingredients. The mobile app uses an intuitive design to make the entire process of buying insurance more appealing and less frustrating. The second ingredient are chatbots AI Jim to handle claims and AI Maya, a chatbot capable of creating personalized insurance policies and quotes for customers, serving them with customized

responses for their queries, complaints, and reimbursements. It also can make changes to existing policies. Finally, eye-catching, colorful, and short ad videos with minimal words deliver their message as concisely as possible. Mobile app, Chatbots, and Ads. Simplicity personified. However, for emergencies related to the customer’s car, home or property -if you don’t have access to the app or the website you can call Lemonade’s 800 number. As Jeanne Bliss, one of the world’s leading customer experience experts often says, “Everybody wants self-service until they don’t.”

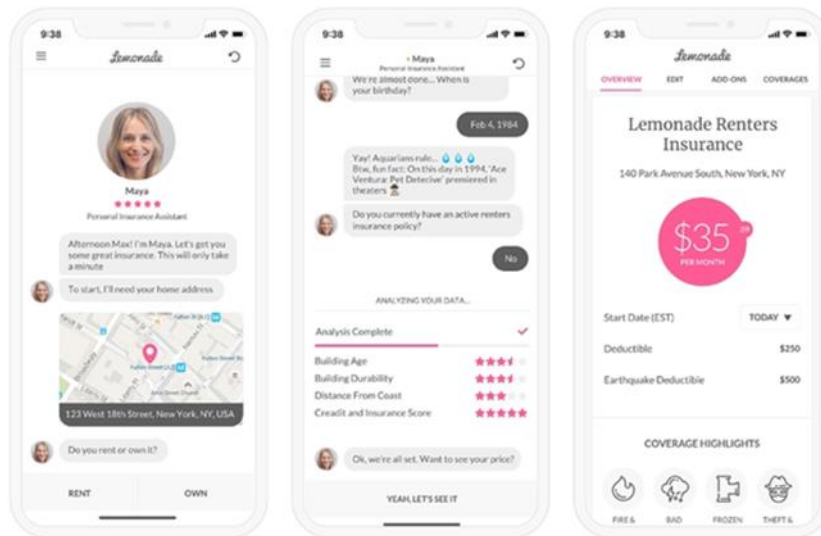


Figure 1 - Lemonade Screen Shots

Big Data Gets Granular

“At twenty data points much of humanity looks alike so you price and underwrite large numbers of people as if they are a uniform, monolithic group but we found that the data we were gathering... showed us that groups our competitors seemed to consider to be monolithic were actually made up of predictable subgroups with over 600 percent variation in their likelihood to file a claim.”⁶ Thus, Daniel Schreiber’s explanation of how Lemonade’s AI is able to price policies by classifying insurance risk using the ‘volume, variety and velocity’ of Big Data, resounded across the oak-paneled executive board rooms of his competitors. The company uses Big Data analytics to quantify losses and predict risks by categorizing the customer into a risk segment and quoting an appropriate premium based on their risk behaviors. Each segment is created using algorithms that warehouse extensive customer data, such as health conditions and other factors. This real-time, backend pricing engine is integrated with AI Maya’s Natural Language Processing engine, engaging customers as she presents choices and options. This becomes a powerful digital design that marries the ‘best of both worlds’, elegant, simple engaging, mobile first, empathic design with powerful, real-time sophisticated Machine Learning.

It’s All About Training

But it is harder than it looks. Lemonade uses Natural Action Synthesis and Natural Language Processing to ensure that AI Maya gets smarter daily. In 2017, Forbes reported a story of a customer wearing a disguise who uploaded a video on how his camera and other items were stolen and, in two days, received a claim deposit of \$677. Later that year, he changed his

disguise and account information and submitted an even bigger claim, but this time the AI caught the fraudster and escalated the information to the authorities. "Fool me once..." as the saying goes.⁷

Lemonade Takes a Stand

The company's mission is simple: *Harness technology and social impact to be the world's most loved insurance company.*

The most important thing about Lemonade however isn't how AI and Machine Learning drives the customer experience, it is the company's business model itself. When a customer interacts with AI Maya, buys insurance (often in just 90 seconds), and starts paying their premiums, Lemonade takes 25% as a flat fee to cover its operating expenses, while the remaining 75% is used to pay claims (including reinsurance) submitted by users. (By way of comparison, a typical for-profit insurance company would take 35% of premium fees.) At year-end, after paying off operating expenses (though no need to pay broker fees as they do not have any) and paying claims that are approved (quickly and painlessly), what's left over is donated to a charity of the user's choice. Lemonade calls this the "Giveback" concept. Traditional insurance companies apply those dollars to their income line. By doing this, Lemonade addresses the obvious conflict of interest since they don't make more money by denying claims. Lemonade takes that off the table because they allow their customers to guide what charitable organization those would-be profits should go to. So, no conflict in paying your claim, (which is all done about one third of the time through AI Jim and paid quickly).

Multiple Emotional Peaks and a Big Finish

If you have ever spent time on hold, trying to confirm that your insurance company received your claim and has even agreed to process it, well, you can appreciate the series of emotional peaks Lemonade generates, all without human intervention. This is the most searing pain point in the insurance industry - a real moment of truth - and one that Lemonade completely reimagined to the benefit of their customers by aligning interest with incentives and stripping out the friction, complexity and delays that currently exist with most of their competitors. Claims are usually paid in seconds and submitted via the app with no paperwork. The money is deposited back in your account minutes later.

I was shocked by how easy the process has been with Lemonade. I signed up for Lemonade because it was no frills, the most affordable option, and took no more than two minutes on my couch...I already assumed there was no way that I'd recover my losses: other insurers either pile paperwork or deduct tons of charges that I don't understand. But this time was different. I signed an honesty pledge, answered a few questions, and Lemonade reimbursed me in a matter of seconds! The service is amazing, and I am so happy that I signed up!⁸

Customer comments reproduced below are from the Lemonade website:

- This company made INSURANCE of all things fun and exciting. And then backed it up with a fantastic biz. I'm in awe of @Lemonade_Inc. 🙌

- I had just joined the "Lemonade" family and can't tell you all how elated as well fortunate I am to be part of the wonderful experience! - What a truly caring and amazing team, too! #SanDiegoCitySendingLove
- Love Lemonade as a thing in the world. Glad it's here.
- Just bought a new 20-year term life insurance policy from @Lemonade_Inc.
- Not going to lie...@Lemonade_Inc is a model example of how easy every insurance company should make it to buy their products.
- My mind is blown every time I use @Lemonade_Inc

When your customers start telling you that you have "blown their mind" every time they interact with you, you can stop reading case studies like this one.

Flywheel Strategy

In reading through Lemonade's 2020 Security and Exchange Commission S-1 filing document one statement stands out: "In insurance, data science is not helpful to the business, it is the business."⁹

Although the industry has been mining data for decades to define pricing and other decisions, Lemonade, without the constraints of legacy thinking and systems, has built a vertically integrated platform that gets better over time as it ingests more data. In effect a "flywheel" that delivers greater value over costs for their customers the faster it turns.

"In insurance, data science is not helpful to the business, it is the business."

They summarize their strategy as including three elements:

1. Harnessing our delightful experience, aligned values, and advantaged cost structure to appeal to more consumers broadly, and particularly to the next generation of consumers, whom incumbents struggle to serve.
2. Then growing with those customers as their insurance needs increase naturally and substantially.
3. All the while leveraging our closed-loop system, by which copious amounts of data we generate make our business ever faster, cheaper, and more precise, to further delight consumers and extend our competitive advantage.

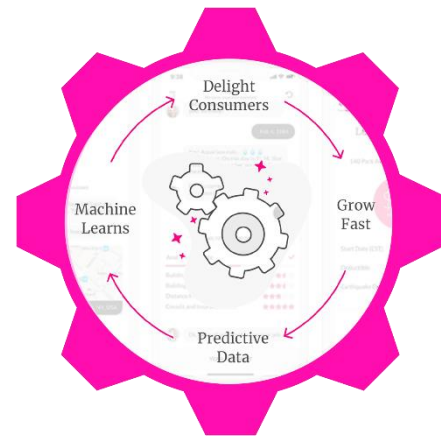


Figure 2 - Lemonade's Flywheel - Form 10-K
Lemonade, Inc. Annual Report 2021

Target Customer

While much of the insurance industry focused on the "I switched and saved" formula, Lemonade targeted younger, mobile-first, first-time buyers of insurance. Approximately 90% of Lemonade's customers were not leaving another carrier to join them and about 70% are under the age of 35, a demographic that have grown up digitally native, with a general distrust

of institutions and found Lemonade’s Giveback feature aligned to their own values. Most importantly, as they age, their needs for insurance grow. Case in point, 3 years after signing up, Lemonade’s customers on average increase their spending with the company by 56% just 3 years later. In fact, the company’s data reflects that of the economy in terms of the curvilinear increase in net worth of American from the ages of 35 to 75. This has two implications: 1) In terms of coverage, Lemonade identified a theme they call “graduation”, which is when an original renter upgrades to a condo and their average annual premium goes \$150 per year to \$900 per year. 2) The diversity of their need’s increases from property and casualty to auto, pet, life etc.

As Lemonade adds more products to their portfolio, they are seeing the confluence of their customer life cycle approach with product bundling. In one quarter alone, bundle rates in Illinois increased 40% versus the national average. Customers with two Lemonade products outspent the average single product customer 3:1. For customers with three Lemonade products, the ratio was 7:1 and customers with all four products in the two markets where they are available, that ratio jumped to 9:1.¹⁰

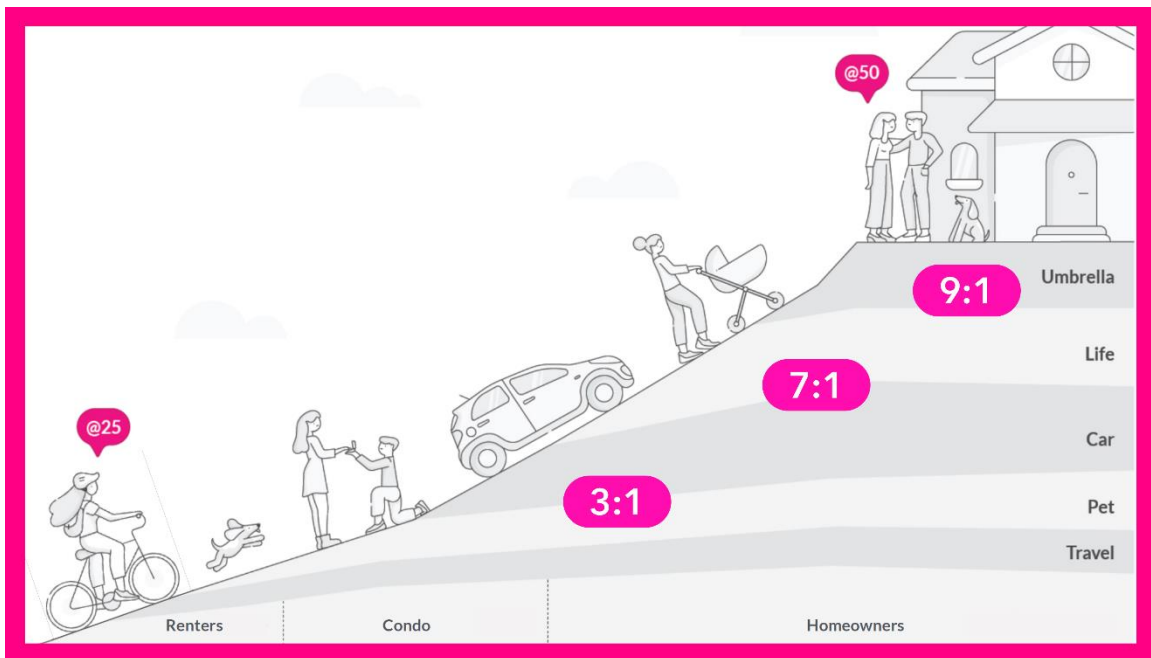


Figure 3 - Target Customer

But one salient point, unique to the insurance industry, cannot be overlooked. Because of Lemonade’s structural cost advantages (no brokers, no branches, no paperwork, faster processes etc.) the pricing they can offer to these target customers is typically 50% cheaper than the minimum premiums offered by their competitors. But here is the sweetener that makes Lemonade: The industry regulators must approve pricing to ensure policies aren’t offered below cost, as a result, no subsidies can be offered to ‘buy’ market share. Now that is a tall cool glass of competitive advantage served with plenty of ice.

Business Model

A second advantage is the operating leverage that comes from what they describe at their “Closed-Loop System.” At its highest level, Lemonade’s digital experience creates delighted customers that are retained and grow their spending as their needs expand. This itself generates a lot of data, providing greater granularity to feed the firm’s predictive analytics and Machine Learning algorithms improving their ability to price and evaluate risk more precisely. Delighted customers share their experiences with their friends and family through social channels and this virtuous cycle continues. As one colleague of mine asked me while I was writing this: “Don’t other insurance companies use data science and Machine Learning to compete in the marketplace? What makes Lemonade so different?”

A fair question and one that deserves a thoughtful response. There are three parts to the answer:

First, every insurance company hires data scientists. They all have Machine Learning capabilities. The challenge is that the data they are working from is generated from their legacy processes. For example, when signing up a new customer, a human-based broker model might capture 20 to 50 data points on a specific customer (birthday, address etc.) and the variation generated from each individual brokers notes about that customer will vary dramatically. When AI Maya onboards a new customer, in just 13 questions prior to providing a quote, she generates 1,700 data points. Machine learning that produces insight is only as powerful as the quality, quantity, recency, and corollary attribution of the data it is based on. Here, Lemonade wins hands down since AI Maya doesn’t decide to call it a day at 4 PM and expedite a customer through the forms that need to be completed. Ticking a box here and forgetting to fill in an answer there.

Second, with many insurance companies today, data is still quite siloed. Call center logs are retained by some CRM system. Claims data resides on a mainframe. Field data is often sparse and fraught with human bias and error. Lemonade on the other hand was developed on a “digital substrate” with integration designed from the beginning to share both data and feedback loops between customer data, quotes, pricing, customer support, claims, marketing, vendors etc. And this all happens in real-time. For example, while Lemonade’s competitors might release updates to their software systems a few times per year, Lemonade generates an average of 16 daily releases updating the entire platform.

Third, because part of their business model asks customers to pick the charitable organization, they wish to see their “Giveback” dollars go to, Lemonade can segment those customers into cohorts based on the charity they chose. This generates significant insights about those customers, including the probability that people choosing a charity like the World Wildlife Fund might be open to an offer of Pet Insurance at some point.

A flywheel strategy of this magnitude must be turned by some powerful technology. Let us take a brief tour of the elements of Lemonade’s technology stack.

Digital-First Customer Lifetime Value

Digital-first companies like Lemonade calculate Customer Lifetime Value (LTV) differently because of the massive data sets they accumulate over time. They use it as a leading indicator of performance and to guide a myriad of decisions from marketing spend to pricing and customer segmentation targeting, (or avoidance.) Lemonade recently released their 6th generation of their LTV model, LTV6 which for every individual customer predicts their likelihood to file a claim, churn or be cross-sold another product.

“LTV1 through LTV3 were humdrum in comparison.” Lemonade reported in a recent news release. “For instance, they allowed us to estimate claim frequency, but not claim severity. We were able to differentiate high-risk users, but overall, the models weren’t as granular or accurate as we’d like.”

LTV6 comprises Machine Learning and deep learning models using state-of-the-art natural catastrophe models, and it was trained on Lemonade’s proprietary, and highly textured data. Hindsight may be a perfect science, but at Lemonade, so is foresight. For example, thanks to LTV6, the analysis was able to flag certain homeowner policies in California that provided riskier than originally expected and would prove to be loss-making over time. With 6 years of data to pull from, LTV6 revealed the mix of profitable pockets within California, reducing the likelihood of worsening loss ratios and aligning pricing accordingly.

In fact, by using big data and Machine Learning to predict lifetime loss ratios, Lemonade can time shift a ‘lifetime’ of future data into the present, allowing for optimization of the current business for the long term. Now as they continue to grow their customer base and observe data points from longer retention levels, claims and cross-sell behavior, their Machine Learning becomes even more precise, as the next releases of LTV7, LTV8 etc. will inform critical decisions from pricing to marketing spend and more.

Technology - Lemonade’s Customer Cortex

At the center of Lemonade’s Flywheel Strategy is something they call the Customer Cortex. It is a fitting analogy as it combines Artificial Intelligence, Natural Language Processing and Machine Learning across both customer-facing and back-office platforms.

On the customer-facing front, we already talked about AI Maya’s role to onboard new customers, personalize their coverage options, and facilitating secure payments. Two other bots are important to mention:

- AI Jim, Lemonade’s claims bot takes the first notice of loss from a customer over 95% of the time and can handle the entire claim from submission to payment about a third of the time. When it can’t, it assigns it to a human claims expert based on their qualification and capacity and forwards on, much of the data needed to approve or deny the claim.

- CX.AI is a support bot designed to instantly resolve customer requests, handling about a third of all inquiries. Like AI Maya and AI Jim, it uses Natural Language Processing (NLP) to handle requests and Machine Learning to improve its impact. On one specific request: questions around when a customer moves from one location to another, going from renting an apartment to buying a condo, CX.AI improved its training and “learned” how to handle these requests. The support organization saw an 87% drop in these types of requests handled by a Lemonade Maker and this learning cycle has increased fivefold across a variety of other support topics.

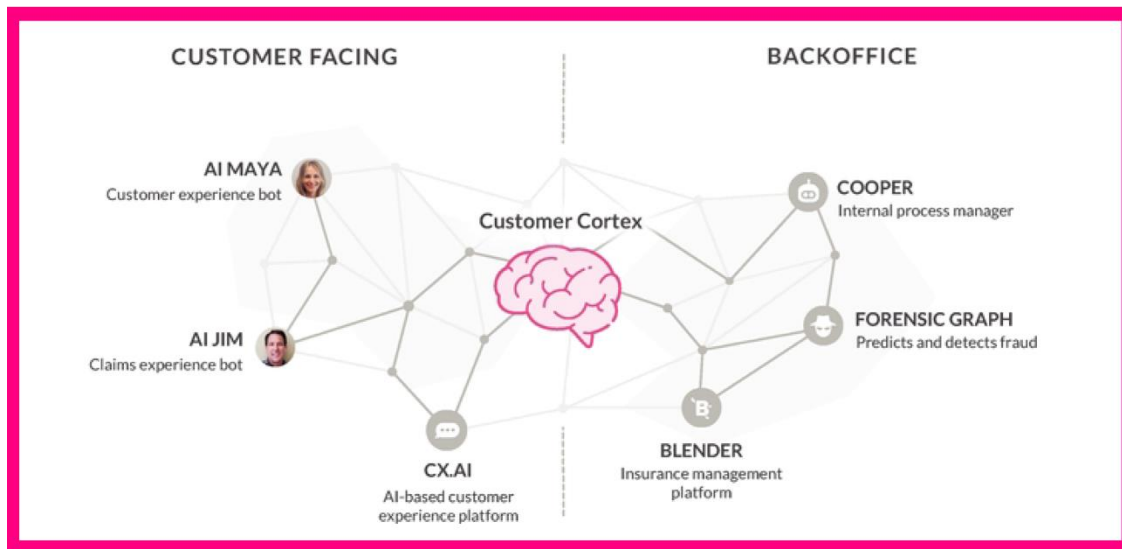


Figure 4 - Customer Cortex

The back-office includes four “behind-the-scenes” technologies:

- Forensic Graph is Lemonade’s fraud detection system that looks at relationships between different data points that would appear invisible to a human, but through the application of AI, Big Data and Behavioral Economics, saves the company millions in potential losses.
- Blender is just that. A proprietary, in-house built insurance management system to power the customers experience, underwriting, claims, growth, marketing, finance, and risk management.
- Cooper is Lemonade’s internal bot that streamlines processes like check processing, QA testing and it leverages data from NASA satellites to identify wildfires in real-time to block ads and sales in the impacted areas. Like AI Maya and AI Jim, Cooper gets better as its training grows with additional feedback, driving even more internal productivity for every Lemonade Maker that uses it.

Growth Opportunities

We could keep writing about this company for another ten pages but central to making this valuable to you is knowing when to stop. Lemonade has expanded to include Pet Insurance

and Life Insurance in some markets. On November 8, 2021, Lemonade announced their acquisition of Metromile, a leading AI-based auto insurer. Their press release stated:

While Lemonade has been at the forefront of using big data and AI in home and pet insurance, Metromile has been trailblazing a parallel path for car insurance. Metromile's car-mounted precision sensors took over 400 million road trips in recent years, covering billions of miles and sending real-time streams to the Metromile cloud. These were cross referenced with actual claims data, yielding precise predictions for losses per mile driven. These algorithms hold the promise of propelling Lemonade Car from a newcomer in the car insurance space to its vanguard.

Results

How are they doing? As of Q3, 2022, YOY In Force Premiums grew 76% to \$609 Million, while Gross Earned Premiums increased 71% as compared to the prior year to \$136 million. Their customer count grew 30% to 1,775,824 from Q3 of 2021. As of this writing, Lemonade has yet to turn a profit, since their goal is to grow quickly and reap the rewards from the long tail generated by their Closed Loop virtuous cycle. This delay in profitability is driven in part by the dynamics of both the industry and Lemonade's strategy. Customer Acquisition Costs (CAC), which are front-end loaded, coexist alongside year-1 loss ratios, which tend to be the highest. As CEO Daniel Schreiber explains, "Even though they (customers) will be profitable over their lifetime, they're not profitable in the same accounting period and that is the predominant dynamic that's driving losses."¹¹

A fact worth noting, is that unlike other insurance companies that would typically see loss ratios get worse as premiums increase, Lemonade has seen simultaneous improvements in all three: lower risk, greater premiums and increase conversions which is evidence that their Flywheel strategy is working. Finally, Lemonade's Net Promoter Score (NPS) is over 70, in an industry the often reports single digit or negative NPS results.

Summary

This level of innovation is often pioneered by competitors from outside of the industry, so in some ways, perhaps what we have shared isn't a completely new idea. What is new is the how the playing field becomes leveled pretty quicky with the availability of Big Data and the Machine Learning/AI platforms which can turn an industry, on its ear, leaving the incumbents with nothing more than, shall we say it? Lemons.



Order your copy of *The Digital-First Customer Experience: Seven Design Strategies from the World's Leading Brands* today.

¹ Statista (2022) Level of trust in insurance companies among consumers in the United States as of July 2017. www.statista.com/statistics/727446/level-of-consumer-trust-in-insurance-companies-usa (archived at <https://perma.cc/5DAA-RK5P>)

² Why is public trust in insurance still so low? Insurance Business New Zealand. www.insurancebusinessmag.com/nz/news/breaking-news/why-is-public-trust-in-insurance-still-so-low-171630.aspx (archived at <https://perma.cc/G3NU-E3LA>).

³ Trust in insurance. International Insurance Society. www.internationalinsurance.org/sites/default/files/2018-04/Trust%20in%20Insurance%20Final.pdf (archived at <https://perma.cc/86KE-6BFB>).

⁴ Levi, D. and Ariely, D. (2021) What makes people do what they do? Judicature, 29 December. <https://judicature.duke.edu/articles/what-makes-people-do-whatthey-do> (archived at <https://perma.cc/V7ZY-2RSM>).

⁵ Kaplunou, P. (2021) What we can learn from Lemonade: An InsurTech case study, Smart IT, 19 March. <https://smart-it.io/blog/what-we-learn-from-lemonade-insurtech-case-study> (archived at <https://perma.cc/JQD9-BFX7>).

⁶ Azhar, A. (2019) Disrupting the insurance industry with AI, exponential view with Azeem Azhar, 22 August. www.exponentialview.co/p/-disrupting-the-insurance-industry (archived at <https://perma.cc/82WA-V8X7>).

⁷ Fromm, J. (2017) How startup Lemonade is redefining insurance for millennials. www.forbes.com/sites/jefffromm/2017/07/12/how-startuplemonade-is-redefining-insurance-for-millennials (archived at <https://perma.cc/YW9L-FCJC>).

⁸ Schreiber, D. (2021) Lemonade sets new world record. www.linkedin.com/pulse/lemonade-sets-new-world-record-daniel-schreiber (archived at <https://perma.cc/DPK2-7P5R>).

⁹ 2020 Security and Exchange Commission S-1 filing – Lemonade Inc. - page 13

¹⁰ Motley Fool Transcribing (2022) Lemonade, Inc. (LMND) Q1 2022 earnings call transcript. www.fool.com/earnings/call-transcripts/2022/05/10/lemonadeinc-lmnd-q1-2022-earnings-call-transcript (archived at <https://perma.cc/PHG8-2CZG>).

¹¹ Motley Fool Transcribing (2022) Lemonade, Inc. (LMND) Q1 2022 earnings call transcript. www.fool.com/earnings/call-transcripts/2022/05/10/lemonadeinc-mnd-q1-2022-earnings-call-transcript (archived at <https://perma.cc/JL7U-G9FY>).