

# Counterrevolutionaries in the Financial Services Industry: Teaching Disruption – A Case Study of RoboAdvisors and Incumbent Responses

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## ABSTRACT

This paper addresses our teaching of strategies for incumbents to follow in response to disruption. We discuss Fintech and, specifically, Robo-Advisors, and how incumbent financial services companies have and will likely continue to respond to Robo-Advisors and other Fintech-driven innovations.

While the use of Robo-Advisors has disrupted the wealth management and financial services industries, we question whether legacy institutions (aka incumbents) may suffer ill results if they are late coming to the table or if they take the wrong directions. We consider possible strategies, including those discussed in Richard A. D'Aveni's paper in the *Harvard Business Review*, that incumbents may follow in response to Robo-Advisors and, more broadly, Fintech companies, and how we teach this material in our courses.

**Keywords:** Strategy, disruption, Fintech, Robo-Advisors, legacy banks, wealth management, asset management, money management, passive investment, personal financial management, D'Aveni

## INTRODUCTION

One of the popular topics in strategy courses as well as courses in innovation and finance is disruption. Our students are well aware of how companies like Uber and Airbnb have disrupted their industries. Indeed, many of us are likely often approached by students interested in starting companies that will in their words and the popular vernacular, “disrupt” incumbents in an industry.

Similarly, as part of our teaching and research, we consider and work with our students regarding how incumbents respond to disruption. The recent growth and evolution of Fintech companies, particularly companies offering financial advising services, known as Robo-Advisors, has provided us an excellent opportunity to introduce students to trends in the financial services industries, and, just as importantly, strategies covering how incumbents can respond to disruption.

The paper is divided into two sections. First, we discuss the wealth management industry with a specific emphasis on Robo-Advisors. We follow this discussion in the second section with a review of some of the strategies that incumbents can use to respond to disruption from Robo-Advisors. Our work in this section draws extensively from the work by Richard A. D'Aveni titled “The Empire Strikes Back: Counterrevolutionary Strategies for Industry Leaders,”<sup>1</sup> which we often use in our courses to provide a framework for students to use in their analyses. Depending on the course and the backgrounds of the students we typically either have a discussion with the D'Aveni paper as a foundation or assign students to do further research into Robo-Advisors and then address strategies, drawing from our course readings and related materials, for incumbents to follow to combat these disruptors.

## Wealth Management: A Brief History

Like many industries, the financial services industry has evolved over time, adopting technology to increase efficiency and profitability. One early example of mass-market financial technology that was widely adopted, the ATM or automated teller machine, supplanted the services of some human bank tellers. Wealth management, also known as asset management or money management, a facet of the financial services industry that has existed for decades in the U.S. and burgeoned in the 1970s, is also experiencing disruption today, led in huge measure by Internet technology.

Similar to the disruption in retail banking services caused by the ATM personal financial management is being impacted by Robo-Advisors and technology-driven innovations in personal finance technology. Today, the universe

of companies, services, technologies, and financial institutions within the personal finance and wealth management spheres is almost as vast and varied as the customers that it serves. It comprises companies that enable customers to monitor their bank accounts, their credit card accounts, and their assets; Internet-based investment advisories; and incumbent banking and investment institutions that have added technology services to their financial and wealth management offerings. Personal wealth management, thus, is a prime industry to study in regard to disruption and strategies for incumbents. In this paper we will focus primarily on Robo-Advisors and responses by incumbents to this disruption in wealth management and related services.

### **What is A Robo-Advisor?**

So, what's a Robo-Advisor? Is this a Rosie from the Jetson's cartoon program or a sophisticated Roomba vacuum cleaner now focused on finance? Will we soon be able to use Alexa, the artificially intelligence assistant with Amazon's Echo, to help us manage our finances? Well, no, but sort-of and maybe.

Robo-Advisors provide investing advice, wealth management services, sometimes in addition to data aggregation. These Fintech companies provide investment advice and trading services that are automated using algorithms and artificial intelligence. Other Fintech companies provide data aggregation services as well as traditional investment management expertise.

These algorithms are embedded software code that act simply as a set of formulas or rules to guide the process of suggesting and ranking investments. Using algorithms with the inputs from the client, Robo-Advisors suggest financial products and actions.<sup>ii</sup> Robo-Advisors help individuals make investing decisions based on data collected from the investor, such as financial goals and risk tolerance, to create and execute a goal-based investment plan. These Robo-Advisors can also perform important add-on services such as portfolio diversification, rebalancing, and tax optimization. Most Robo-Advisors presently suggest diversified investments, particularly exchange-traded funds (ETFs).

Robo-Advisors arrived on scene around 2008 following the breakdowns in the financial markets when traditional banks and brokerages were suffering. These technology companies took advantage of the low barriers to entry inherent in Internet-based companies as well as low confidence and trust in traditional financial institutions that made way for customers to trust technology over banks. The Robo-Advisors launched their technologies to offer personal financial management to the vast majority of the population that fell below the net worth threshold required by many banking and brokerage institutions that made it worth offering human-driven wealth management services. Many of the incumbent institutions were too focused on survival and responding to regulatory changes that they couldn't respond to the Robo-Advisors even if they wanted to make the effort. Additionally, until relatively recently many of the incumbents viewed Robo-Advisors as being exclusively for customers that were not worth the effort to seek, due to smaller-sized portfolios.

As the number and type of Robo-Advisors have grown and changed, various business models have emerged. There are the online-driven, pure-play Robo-Advisors, such as technology start-ups and early entrants like Betterment and Wealthfront that provide customers with the ability to view, manage, and invest from one digital platform. These sites enable clients to go through a self-guided questionnaire querying their preferences for risk and objectives; as well as collecting demographic information like age, income, household, and assets.

Other Robo-Advisors focus on related wealth management issues, for example, tracking spending and savings. NextCapital, for example, provides portfolio tracking, advice, and suggested investments for companies' 401(k) plans.<sup>iii</sup> The company's services enable clients to see all their investments on one dashboard and also links to their 401(k) accounts. NextCapital is now expanding to offer advisory services as a white label product for other investment advisories to manage client accounts and investments.<sup>iv</sup>

Although there are differences among the Robo-Advisors a consistent trait is that these companies are driven by automation and technology. As compared with incumbent wealth management firms and, more broadly, legacy financial institutions, Robo-Advisors automate services that are traditionally labor intensive including, for example, diversification, portfolio rebalancing, and tax loss harvesting, in addition to investment advisory. Most of the pure-play Robo-Advisors use passive investments (*i.e.*, ETFs or index funds). Customers save money, get faster and more reliable service whenever they want, and access their portfolios through multiple channels, particularly mobile.

## Robo-Advisor Services

The services and products offered by most of the leading Robo-Advisors are not much different from many incumbents. Robo-Advisors, however, keep it simpler by offering a digital space to collect and aggregate someone's total financial picture as well as use a digital process to on-board clients and walk customers them through a series of questions about their stage of life, goals, risk tolerance and any other data points pertinent to offering investment suggestions. The digital adviser then presents its recommended investment portfolio based on all the client input it has received and offers the client the option to purchase the investments. This process is transparent and client-driven.

The client ultimately knows what they are buying and how much it's going to cost them. Incumbents have not traditionally been as transparent, particularly in regard to ease-of-access, transaction costs and fees.

Once a client's portfolio had been purchased and is active Robo-Advisors concentrate on providing a one-stop, single-screen digital destination for clients to monitor their investments at any time they wish and on any device. Clients can, thus, easily track their investment activities on multiple devices, particularly their phones.

In fact, clients are not only able to monitor investments and accounts, but also modify their goals, risk tolerances and any other profile data points as necessary.<sup>v</sup> Automated for clients is account rebalancing and tax-loss harvesting, important practices not typically done by amateur, online investors. As we teach in finance, rebalancing helps clients' portfolios maintain the ratios of investment types – *i.e.*, equities, bonds, international, domestic, risk levels, etc. – by harvesting gains from higher growth areas and investing them in other areas of the portfolio to maintain the desired investment ratios in the portfolio.

Tax-loss harvesting is also an investment strategy implemented by Robo-Advisors. For the typical customer of a Robo-Advisor, the important attribute is that the rebalancing and tax-loss harvesting are automatic and systematic, removing any doubts or emotional decision-making by the investor, and instead maintaining the original investment strategy.

Finally, Robo-Advisors offer investment reporting so that clients can keep track of how their investments are doing and whether or not they are meeting expectations and goals. For example, Charles Schwab, an incumbent that has responded to the threat of Robo-Advisors, encourages annual portfolio review for clients of its automated Intelligent Advisory division.<sup>vi</sup> Having an annual performance review is an ideal opportunity use by Robo-Advisors to engage and build the relationship with clients.

As noted above, two of the early Robo-Advisor leaders are Betterment and Wealthfront, both seek to help those outside the purview of traditional wealth management firms.<sup>vii</sup> Most Robo-Advisors, like Betterment and Wealthfront, generate revenue by charging customers a small percentage – ranging from 0.12 to 0.94 percent -- of their holdings as an annual management fee. For a slightly larger percentage, some companies offer limited exchanges with a human advisor.

## Venture Capital Investments in Robo-Advisors

Many venture capital firms have recognized the disruptions in the wealth management business and have, accordingly, invested in Robo-Advisors and other types of Fintech. Betterment and Wealthfront, for example, have raised more than \$100 million in venture funding since their founding. Numerous additional start-ups in the personal financial space have come to market, each with its own perceived competitive advantage. In Q1 of 2016, (the latest publicly-available data at the time of our research), the sector received \$114 million in venture investment; in 2015 Robo-Advisors received \$192 million in venture funding and \$312 million in 2014.<sup>viii</sup>

## Revenue Models for Robo-Advisors

Automated investment services have adopted various different revenue models. As low-cost services targeted toward entry-level or first-time investors, usually between the ages 25 and 45, the revenue models are similar to a traditional investment management service, but at a much lower rate. For example, a traditional wealth management firm will charge 1-2 percent of investments under management with a \$50,000 minimum investment.

Automation and simplicity have also allowed Robo-Advisors to show incumbents how operating costs can be slashed in this traditionally labor and human-intensive sector. Traditionally human activities like new client onboarding, portfolio rebalancing, and risk adjusting has been largely automated, cutting costs and enabling Robo-Advisors to charge a fraction of what a human advisor charges.

Through the use of technology and automation, thus lower costs, Robo-Advisors have opened up the option of wealth management and investing to a much larger pool of clients, a previously underserved population of investors seeking advice and assistance in wealth building and money management. Financial advisors were traditionally only accessible to people with sizable assets to invest and manage. Many Robo-Advisors have no or very low minimums for very similar services and respectable returns. For example, the large majority of Wealthfront's clients have less than \$100,000 invested with the company.

Just as importantly, though, many consumers, particularly millennials, are specifically choosing Robo-Advisors, even though their personal portfolios are sufficient to meet the minimums among many of the incumbent firms. Indeed, many people think that the future will be bright for Robo-Advisors as these Fintech companies disrupt the wealth management industry and, more broadly, incumbent financial institutions. Betterment, for example, reported having 118,000 customers and assets under management (AUM) of \$7 billion in 2016;<sup>ix</sup> it reported \$10 million in revenue in 2015. Wealthfront reportedly has about \$1.5 billion in AUM (assets under management).<sup>xi</sup> One independent analyst firm, *Business Insider Intelligence* forecasts that Robo-Advisors will manage \$8 trillion in assets globally by 2020.<sup>xii</sup>

### Strategies for Incumbents In Response to Robo-Advisors

Given the predilections for Robo-Advisors and the “facts on the ground” with respect to the already established and growing Robo-Advisor firms, the incumbents in wealth management and, more broadly, legacy institutions face a strategic challenge, *i.e.*, what to do?

We pose this question to our students and ask them to consider the materials covered in our strategy courses and specifically Richard A. D'Aveni's article “The Empire Strikes Back: Counterrevolutionary Strategies for Industry Leaders.” This article, published in the *Harvard Business Review* nearly fifteen years ago, is still quite relevant for managers and remains useful as a framework for student learning and practice.

We add to D'Aveni's work our own research and analytical frameworks that we want our students to learn and apply. One of these strategies, “wait and do nothing” is particularly valid in regard to Robo-Advisors. More specifically, we have our students investigate the marketplace data as well as external factors like regulatory changes, so that they recognize that most industries are not like taxicabs that have been disrupted by Uber and Lyft. We stress to our students that they see beyond the Fintech “hype cycle” and go deeper into the data, including macroeconomic factors and regulatory policies from federal and state agencies.

Another strategic issue we ask to students to investigate in regard to learning about disruption is resources of the respective players - Robo-Advisors and incumbents. Unlike razor blades where Dollar Shave Club has disrupted Gillette's business model by leveraging existing sources and combinatorial innovation, other industries are different and aren't as easily disrupted. Here the data provides an important learning point for our students. Consider that per an article in *TechCrunch*:

Wealthfront has raised \$130 million, Motif Investing \$126 million, Personal Capital \$104 million, Betterment \$45 million and FutureAdvisor \$22 million....Let's put their war chests in perspective. The asset management industry generates \$215 billion in sales every year. Charles Schwab, a giant in the retail space, spends \$300 million a year on marketing, just 5 percent of its net revenue. BlackRock, a global giant, spends \$400 million a year or 4 percent of its net revenues. Both companies have healthy growth and high margins.<sup>xiii</sup>

It's obviously impossible to know what will happen going forward with Robo-Advisors, but, nevertheless, given that it's relatively easy for incumbents to invest directly to build their own software platforms or acquire a successful

upstart, panic isn't a strategy. We remind our students that only about five percent of Americans even recognize the term *Robo-Advisors* and that switching financial services providers has much higher transactions costs than changing to Uber from taxicabs or buying razor blades.

### Applying D'Aveni's Work

Richard A. D'Aveni in his article titled, "The Empire Strikes Back: Counterrevolutionary Strategies for Industry Leaders" suggests five types of counterrevolutionary strategies for incumbents: (1) containment; (2) shaping; (3) absorption; (4) neutralization; and (5) annulment.<sup>xiv</sup>

We ask our students to study D'Aveni's work and apply it to developing strategies for incumbents in the financial services industry, particularly wealth management. To give our students a headstart we suggest that they research activities by startup robo-advisors and well-known incumbents. This enables the students to see that the playing field of robo-advisors already has startups and incumbents. The students also quickly learn that some incumbents have already begun to respond to the disrupters by, drawing from D'Aveni's work, containment, shaping, absorbing, neutralizing, and annulling.

One of our first discussion points is how some of the incumbents have already entered the marketplace with their own Robo-Advisors. We cite Fidelity, Vanguard, TDAmeritrade, Schwab, and E\*Trade, all major companies that have begun to respond to the disruptors. These incumbents are locking in their customers, leapfrogging the threats from the "disrupters," and effectively swamping distribution channels by launching their own brands, all strategies that students can cite from D'Aveni's work.

We next cover how some incumbents have also developed partnerships, an example of D'Aveni's strategy of shaping by co-opting the disrupters, acquisitions, and neutralizing through creation and distribution of new and existing products. Some of the notable incumbents following this approach are: Bank of America, JP Morgan, and Wells Fargo. Wells Fargo, for example, partnered with SigFig Wealth Management LLC to develop its solution, the Intuitive Investor, slated for roll-out in 2017 as an offering to clients of the brokerage division of Wells Fargo, Wells Fargo Advisors. William Trout, a senior analyst at research firm Celent, noted: "They're going to try and leverage their existing client base and want to offer a price point roughly in with their other service channels."<sup>xv</sup> With a minimum investment of \$10,000 and a management fee of 0.50 percent, its services won't be cheap, but according to Ms. Angie Lai, a senior vice president at Wells Fargo and director of digital programs, "the price for the service factors in the research and expertise offered by Wells Fargo Advisors' investment office, as well as the ability to reach financial advisers for further guidance."<sup>xvi</sup> (Wells Fargo Advisors currently has more than \$1.5 trillion AUM and a network of 15,000 brokers throughout the U.S.)<sup>xvii</sup> BlackRock, by contrast, eager to have a Robo-Advisory up and running quickly, acquired FutureAdvisor for \$152 million in 2015.<sup>xviii</sup>

A third topic area of discussion in our courses borrows another page from D'Aveni's playbook; here we ask students to consider if incumbents are "creating smoke" and "delegitimizing the revolution," strategies that D'Aveni labels as containment. We reference (or hopefully our students have found this action on their own) how Citi, for example, seeks to combine its strengths in personal investment advice with Robo-Advisors. They see Robo-advice as a complement to human advisors, allowing them to become more efficient and allowing the institutions to reach a wider range of clients.<sup>xix</sup> Other well-known brokerage houses with Robo-Advisory services include Fidelity, Raymond James, TD Ameritrade, Edwards Jones, Merrill Lynch and Ameriprise.<sup>xx</sup>

A fourth example of D'Aveni's strategies that we discuss is giving away benefits offered by revolutionaries. Here we see incumbents lowering their fees and giving away services in response to competitive pressures from Robo-Advisors as well as other incumbents. Fidelity's Robo-Advisory, called Fidelity Go, for example, charges .35-.39 percent of client's investments as a fee. Rates for Schwab's automated advisor are similar. Vanguard's Personal Advisor Service, an automated and human hybrid, costs around 0.40 percent and requires a \$50,000 investment.

For wealthier clients, most services will cap their fees for portfolios; for instance, Schwab caps its fees for clients with portfolios over \$1.2 million at \$3,600. The implementation of this strategy leverages the scale benefits of incumbents. For example, consider start-up Betterment, which has about \$4 billion (AUM), making about \$10 million in revenue; whereas an incumbent brokerage, like Schwab, has \$2 trillion total AUM.



## Controlling Access to Customer Data

Perhaps the best example of incumbents neutralizing and annulling the disrupters is controlling access to their customer data. One of the greatest challenges for Fintechs and, more specifically, Robo-Advisors, is gaining access to the personal financial and account data for their customers in lieu of ‘data scraping,’ an arduous process involving logging into a customer’s account, capturing data from the screens, and, then, updating all of the account data.

This process is resource intensive and can bog down the servers of the legacy institutions from which the scraping is done. Because many incumbents did not appreciate the heavy burden put on their computing resources, many began denying access from the IP addresses of the Fintechs.

We discuss the challenge of obtaining customer data and how incumbents can “drag their feet” creating delays and related issues for the disrupters. Many incumbents, including, for example, Wells Fargo, Bank of America and J.P. Morgan Chase limited the flow of information. They cited, with justification, cybersecurity concerns because they often couldn’t discern whether a data scrape was coming from a legitimate source or not.

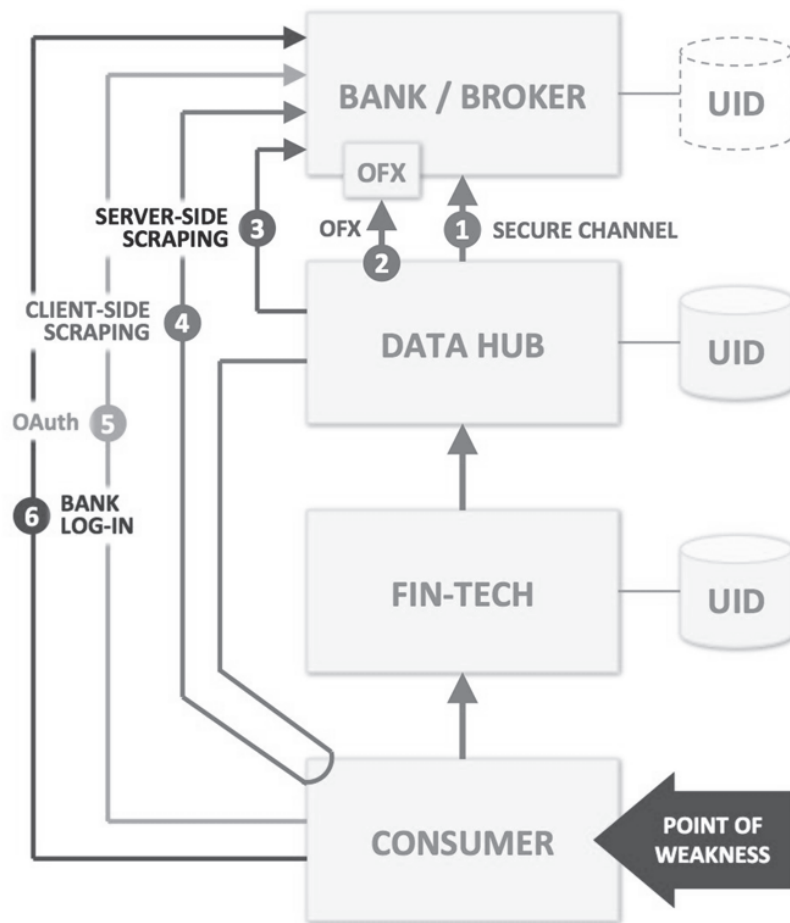
More recently, some incumbents, including Wells Fargo have enabled access to selected Fintechs, including Robo-Advisors, through API (application program interfaces). The European Union and UK are ahead of the U.S. on this issue as the government has already stepped in and issued regulations that mandate the financial institutions offer API access to Fintech companies by 2018.<sup>xxi xxii</sup>

Cybersecurity remains a critical concern for incumbents and Robo-Advisors. J.P. Morgan Chase CEO Jamie Dimon wrote to his shareholders: “One item that I think warrants special attention is when our customers want to allow outside parties to have access to their bank accounts and their bank account information. Our customers have done this with payment companies, aggregators, financial planners and others. We want to be helpful, but we have a responsibility to each of our customers, and we are extremely concerned... We are now actively working with all third parties who are willing to work with us to set up data sharing the right way.”<sup>xxiii</sup>

Currently, customer’s personal financial data is shared in numerous ways, with varying levels of security as shown in Exhibit 1 below:

## METHODS OF PROVIDING CONSUMER FINANCIAL DATA

- 1 SECURE CHANNEL**  
Data Hub connects directly to Bank to API with dedicated connection. Very secure.
- 2 OFX**  
Same as Secure Channel, but using OFX or other protocol at the Bank. Very secure.
- 3 SERVER-SIDE SCRAPING**  
Data Hub logs in to Bank and collects data from website. Highly secure.
- 4 CLIENT-SIDE SCRAPING**  
Data Hub connects to Bank via software on consumer's device. Moderately secure.
- 5 OAuth**  
Consumer sends password to Bank to receive a token. Less secure.
- 6 BANK LOG-IN**  
Consumer logs in to Bank website by entering username and password. Least secure.



Source: <http://www.prnewswire.com/news-releases/banks-plan-would-weaken-cybersecurity-of-consumer-bank-accounts-300410503.html>

In the example above, Personal Capital and J.P. Morgan Chase are not in agreement as to the most secure option for customers. J.P. Morgan is pursuing OAuth as its method of data sharing, whereas the CEO at Personal Capital believes that Secure Channel and OFX are the best solutions. This is one example and we take time to explain the above exhibit to our students. This, then, offers an opportunity to discuss the role of regulators in creating a “level playing field.”

## CONCLUSION

This paper provides a review of our research related to Fintech and specifically Robo-Advisors and how we use this research in our teaching of disruption in our strategy courses. Given the great publicity surrounding disruption, for example, Uber and Airbnb, many students are interested in disruption, starting business that will “disrupt” an industry, and strategic responses by incumbents to disruption. Drawing from D’Aveni’s work and our own research we discussed how incumbent financial institutions can and have responded to Robo-Advisors and other Fintech ventures.

i Richard A. D’Aveni, “The Empire Strikes Back: Counterrevolutionary Strategies for Industry Leaders,” *Harvard Business Review*, November 2002.

ii Tom Baker & Benedict Dellaert, “Regulating Robo Advice Across the Financial Services Industry,” *Iowa Law Review*, Vol. 103, forthcoming, University of Pennsylvania Institute for Law & Economics Research Paper No. 17-11.

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- iii <http://riabiz.com/a/2014/3/31/how-one-Robo-Advisor-got-25-billion-on-its-platform-with-a-mintcom-mindset-401k-friendliness-a-merger-and-16-years-of-work>
- iv Ibid.
- v <http://www.wsj.com/articles/charles-schwab-joins-wave-for-robo-services-with-human-element-1481634379>
- vi Ibid.
- vii [http://www.wsj.com/articles/robo-adviser-betterment-adds-human-option-1485871204?mod=Evernote\\_wsj](http://www.wsj.com/articles/robo-adviser-betterment-adds-human-option-1485871204?mod=Evernote_wsj)
- viii “The Pulse of Fintech, Q1 2016, Global Analysis of Fintech Venture Funding, KPMG International and CB Insights,” (data provided by CB Insights) May 25th, 2016.
- ix Ibid.
- x Samantha Sharf, “The Fintech 50: The Complete List.” *Forbes*, November 7, 2016.
- xi <http://social.techcrunch.com/2015/01/27/will-2015-see-the-death-of-the-Robo-Advisors/>
- xii Sarah Kocianski | Senior Research Analyst, THE FINTECH ECOSYSTEM REPORT, BI Intelligence. Please note that Ms. Kocianski includes Robo-Advisory services from more than just startups in her analysis.
- xiii <http://social.techcrunch.com/2015/01/27/will-2015-see-the-death-of-the-Robo-Advisors/>
- xiv Richard A. D’Aveni, “The Empire Strikes Back: Counterrevolutionary Strategies for Industry Leaders,” *Harvard Business Review*, November 2002.
- xv <http://www.wsj.com/articles/wells-fargo-goes-robo-with-sigfig-wealth-management-1479242552> and <https://www.wsj.com/articles/wells-fargos-robo-adviser-to-cost-more-than-rivals-options-1490639957> (Accessed March 28, 2017).
- xvi Ibid.
- xvii Ibid.
- xviii <https://www.forbes.com/sites/samanthasharf/2015/08/26/blackrock-to-buy-futureadvisor-signaling-robo-advice-is-here-to-stay/#561fbcc43023>
- xix <https://www.bloomberg.com/news/articles/2016-03-31/citi-robo-advisers-will-never-take-the-place-of-traditional-investment-managers>
- xx <http://aitegroup.com/report/digital-advisor-technologies-Fintech-and-move-beyond-traditional-service>
- xxi [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/consumer-finance-and-payments/payment-services\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/consumer-finance-and-payments/payment-services_en)
- xxii <https://www.ashurst.com/en/news-and-insights/legal-updates/open-banking-can-apis-transform-the-banking-landscape/>
- xxiii <http://www.prnewswire.com/news-releases/banks-plan-would-weaken-cybersecurity-of-consumer-bank-accounts-300410503.html>

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