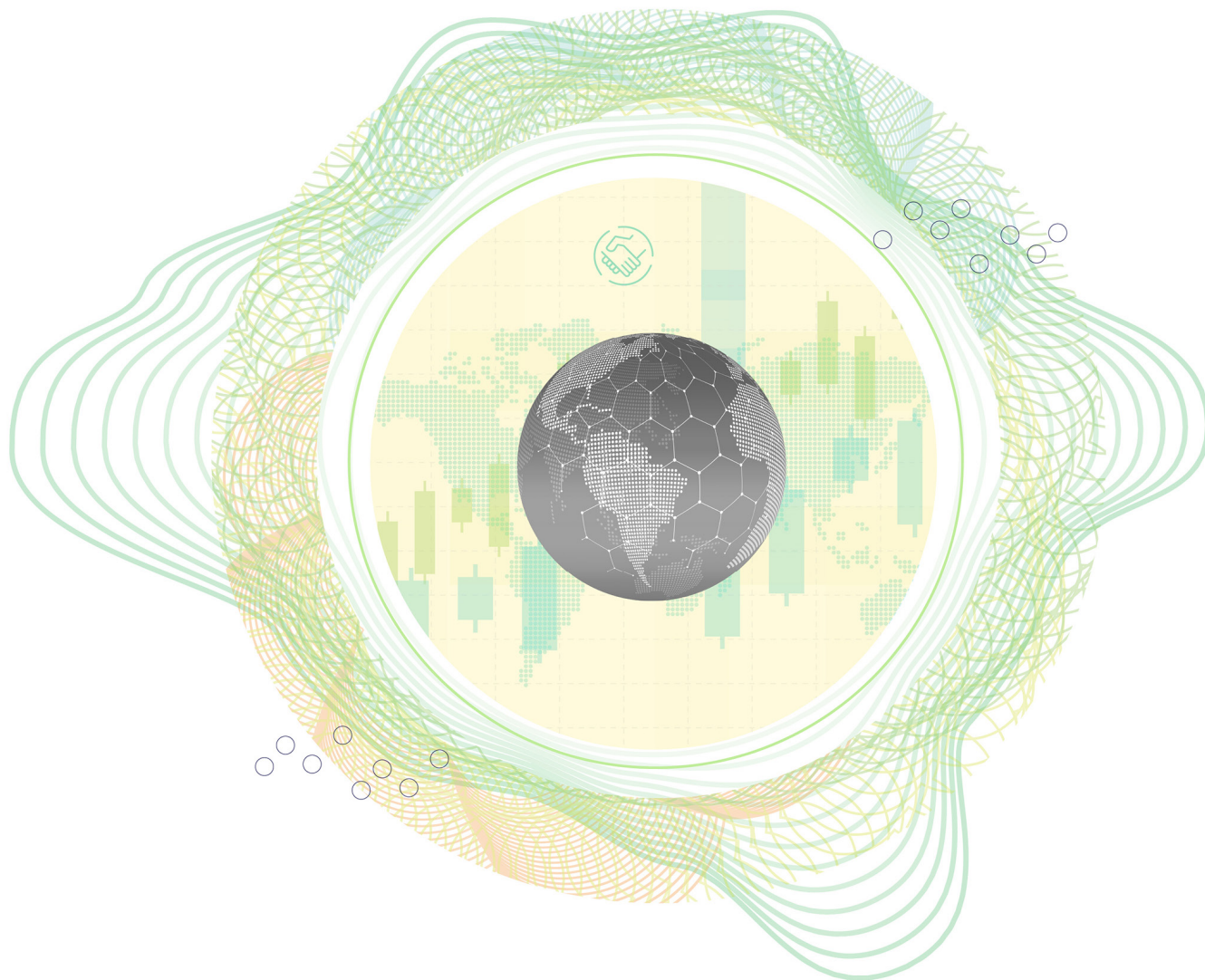


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# Financial services in an era of discontinuities

Charting a course for the new worlds

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# Enabling the future

Almost 70 years ago, Bank of America collaborated with the Stanford Research Institute and General Electric to create the first practical computer for business use. Called ERMA, this engineering feat automated the posting of checks to accounts, freeing up branch staff to serve customers.<sup>1</sup> Today, technological and scientific developments are ushering in new breakthroughs that are impacting the financial services industry (see sidebar).

Leaders should confront the reality that these changes could be more pervasive and impactful going forward in ways that can be scarcely imagined today. As the catalyst for progress in managing similar economic and societal changes throughout history, financial services will likely play an important role in helping these breakthroughs emerge to the benefit of all, while simultaneously opening up new avenues of revenue and profit. Put simply, the degree to which leaders choose to become more embedded in these changes now—to catalyze the creation of new products and services that can enable positive outcomes—could set the stage for competitive advantage for some time to come.



Increased attention to—and funding for—bioconvergence solutions that increase life expectancy are expected to have an impact on both housing design and demand (senior and other)<sup>2</sup> and investment planning horizons, placing additional longevity risk on public pension and social security schemes.<sup>3</sup>



As individuals begin to look for the ability to move across different metaverses, specialists predict that identity protection, verification, and validation will be the most integral part of any successful business operation.<sup>4</sup> The market potential for the financial services industry (FSI) could be big: A recent report from Deutsche Bank estimates that e-commerce value in the metaverse could reach \$2 trillion by 2030.<sup>5</sup>



A new LeoLabs space monitoring tool will reportedly allow insurance companies to more accurately assess risks that spacecraft will smash into each other or dangerous space debris while transiting the ever more crowded low Earth orbit (LEO) environment.<sup>6</sup> The space and satellite insurance market, with more than \$500 million in premiums for over a decade, is increasingly concerned about underwriting LEO satellites. And as the diversity of equipment being launched into space in the coming decades increases, changes to both revenue and risk lie before the industry.<sup>7</sup>



Hacktivist groups on both sides of the Russia-Ukraine conflict have been involved in distributed denial-of-service (DDoS) attacks, data leakage, and website takeovers since the invasion began. Financial firms in countries that Russia considers hostile have been singled out for attacks and called out by name as targets on hacktivist forums.<sup>8</sup>



Goldman Sachs has estimated an average annual investment in decarbonization efforts of \$1.9 trillion through 2050 will be required if global warming is to be limited to 1.5°C.<sup>9</sup> A recent BlackRock report puts the current funding level—from both public and private sources—as meeting only one-sixth of the total need. Clearly, private funding needs to increase rapidly, authors of the report argue.<sup>10</sup>

# New worlds emerging

In a recent [report](#), Deloitte identified a coming age of “discontinuities” that leaders can expect to confront and manage.<sup>11</sup> These discontinuities, influencing society and industry over the next decade, include the exponential progress in science and technology, globalization and the return of active governments, the shift from individual companies to ecosystems and the concurrent increased level of power derived from networks, and an overall increased shift to stakeholder capitalism.

Some of the same forces were identified in our [recent future of financial services report](#),<sup>12</sup> where we pointed out that the future of the industry would be influenced by technology and data, regulation and talent, and the emergence of new platforms and business models. Since then, leaders have been confronted by global pandemic, the Russia–Ukraine war as well as other global tensions, global inflation and increasing political polarization. More recently, the world has witnessed how the recent disruption in the US banking industry materialized over the span of days, if not hours, in part accelerated by new networks, technologies, and forms of media and communications.<sup>13</sup>

Among all these discontinuities, the progressive advancements in technology will be fundamental building blocks to how firms can succeed in the future and how society can confront these and other challenges to come. Indeed, one only needs to look at the future of quantum computing and alternative data, leading to such innovations as generative artificial intelligence (AI) and behavioral biometrics that provide challenges and opportunities to all industries, financial services among them. This progress in science and technology has the potential to enable the development of five “worlds” that could transform society as it exists today. While each may seem futuristic, there may be elements of each of these worlds that didn’t exist a few years ago, as highlighted in the sidebar above. Looking at the future in this way can help leaders to think differently about the financial services industry as well. Not least, each of these involves both opportunities and risks (figure 1), so leaders have choices to make: What can help enable best-case scenarios, and what is the likelihood of adverse outcomes if action isn’t taken?

**Figure 1. Potential future worlds: Best- and worst-case scenarios**

World	At best	At worst
<b>Inner World:</b> Technology conjoining with life and interacting with the human body	Earlier disease diagnosis, increasing life and health spans	Reduced health equity, security, and privacy
<b>Mirror World:</b> Technology creating an increasingly perfect and connected replica of Earth	New forms of communication and social intercourse, prototyping, and community formation	Increased biases and disinformation, isolation, and cyberattacks
<b>Off World:</b> Technology expanding beyond Earth	New energy sources and more ubiquitous connectivity, creation of new materials and products	New geopolitical tension, military dynamics, resource governance
<b>War World:</b> Technology enabling new fighting capabilities	Global cooperation; greater security and peace	Increased cyberattacks, societal division and mistrust, and undermined democracy
<b>Habitable World:</b> Technology developed to help protect and heal the planet	New smart infrastructure, increased carbon capture and clean energy, increased sustainable food production	Increased climate refugee activity, food and water scarcity, and increased climate-related damage

# FSI leaders have choices to make

Given these developments, how should financial services leaders think about their firms' role in making this future? There are three capabilities within financial services (and frankly, other industries as well) that could end up making the difference between these futures emerging either in a positive way or to the detriment of our planet. Essentially, the power to shape the future direction will likely be held by a combination of those who control data and capital; those who are able to innovate and monetize products and services that support positive outcomes; and those who have the ability to catalyze solutions in collaboration with governments and tech firms that have the ability to determine what *should* be done and what *can* be done.

If handled well, each of these can contribute to an environment of greater trust. We observed in our [previous report](#) that the industry can act as a catalyst to drive solutions to solve economic and societal challenges, and that one of the emerging roles for financial services is to “rebuild trust and confidence in institutions, societal systems, and their tacit contracts.”<sup>14</sup> The good news? Recent research shows that, “on average by a six-to-one margin, [consumers surveyed] want more involvement by Business on societal issues.”<sup>15</sup> The bad news? Financial services as an industry shows, at best, mixed results when it comes to a list of industries most trusted. Deloitte’s research shows that, among all industries, FSI was at the bottom in 2021.<sup>16</sup> Curiously, though, financial services rose to the top in 2022, and it is instructive to consider what happened and what the broader trend is. We define trust as the outcome of high competence and the right intent. At the core, there are Four Factors of Trust—capability, reliability, humanity, and transparency.

The FSI trust score improved chiefly because of an increased level of satisfaction with the industry’s two lowest-scoring attributes: humanity and transparency.<sup>17</sup> Different actions FSI institutions are taking may account for this increased trust. For example, greater transparency may be due to increased measures around disclosures related to annuity products and bank and investment fees, and an increased focus on financial inclusion may be driving higher humanity levels. Time will tell as to whether this is a momentary blip or representative of a larger sea change in the industry’s intent. On the flip side, the score for capability decreased the most. Two important elements that contribute to trust in an organization’s capability are in their ability to protect client data and develop and deliver high-quality products that are safe and accessible.<sup>18</sup>

Increasingly, though, this won’t happen in silos, as the development of new platforms and business models will likely depend on greater collaboration, especially with tech firms and governments.



## Those who control data will likely have the power

Looking again at the five “worlds,” the rapid development of technology will continue to create greater volume of data stocks and flows, providing essential intelligence in the creation of these futures. Whether it’s related to individuals’ health, their presence in virtual worlds, or the way they consume energy and resources, a positive future requires these data to be handled safely and securely. And while access to data flows is an important input to value creation, the application of artificial intelligence to the data should be accurate and trustworthy. For example, while generative AI may provide a means to make customer service and other processes more efficient while providing greater access, it may simultaneously reduce the need for some white-collar and other occupations, widening wealth inequality.

For these reasons and more, regulators are looking closely at how the industry currently manages data and artificial intelligence. While it’s true that regulatory developments have generally followed in the wake of innovation, recent establishment of innovation offices within regulatory bodies indicates the need to get more proactive in the face of more rapid development and use of technology.

For example, the Securities and Exchange Commission last year released proposed updates to the Advisers Act and the Investment Company Act that would require investment advisers to implement enhanced measures to, among other things, protect customer data and disclose risks and incidents.<sup>19</sup> And earlier this year, the UK government issued its approach to regulation of the use of artificial intelligence across all industries, including FSI.<sup>20</sup> Technology leaders have also recently lent their voices to the call for a pause on the development of AI.<sup>21</sup>

This could be important when one considers the potential implications of “War World,” where cyberattacks and data theft, distribution of misinformation, and other factors would require an enhanced response. And since FSI has long been associated with the ability to protect assets, data protection becomes a competitive advantage for the industry here.



## Product and service innovation

New products could emerge that not only incentivize positive outcomes for these future worlds but also create profitable opportunities for financial services companies. Some areas, like sustainability, will likely require large allocations of capital from the industry, as noted above. An article from our upcoming FSI Predictions series estimates the total amount of funding required by the financial services industry to bring climate technologies that are either at the proof-of-concept or prototyping stage of development to commercial viability at about \$2 trillion through 2030.<sup>22</sup>

Industry convergence is also providing opportunities for new product development. The intersection of financial and physical health could provide opportunities for firms in both FSI and life sciences and health care to combine forces for better outcomes. A recent study from the Consumer Finance Protection Bureau highlighted the challenges many people are having with medical payments, and fintechs like TempoPay and Synchrony have launched new products in this space.<sup>23</sup>

Embedded finance is another opportunity that will likely continue to develop in financial services. Auto insurance coverage has been one of the leaders; for example, InsurTech Root Insurance partnered with Carvana, an online used-car dealer, to integrate the sale of auto coverage into the purchase of a used car.<sup>24</sup> Payments, too, have been embedded in other products such as online shopping platforms, ride-sharing, and food delivery.

Creativity in new product design should be built on the back of data and analytics. This can come in many forms: using new data sources in investment decisioning to drive alpha; creating digital twins—perhaps based on the metaverse—to inform property owners about the performance of their assets; or developing new underwriting models to serve previously ignored client cohorts. These should be developed with cyber and other risk management capabilities designed in from the start.



## Catalyzing industry convergence

The emergence of new business networks and platforms will likely drive new ways of working. As a result, each of these developing scenarios could require some amount of collaboration between government, technology, and financial services to act as a catalyst to drive positive outcomes and enable broader value creation.

We mentioned earlier how individuals are looking for businesses to step up to current and future challenges. Perhaps surprisingly, that same research suggests that many individuals—both customers and employees—are looking for businesses and government to work collaboratively to rebuild trust and address societal challenges, at 41%, rather than each pursuing individual efforts, which was supported by only 21% of respondents.<sup>25</sup>

How could this play out? A recent announcement from the White House claims that funding from recent bills, including the Inflation Reduction Act, has already generated a multiplier effect in terms of private funding to address infrastructure, climate, and other issues.<sup>26</sup> Government has a role to play, through regulation, in determining what organizations are allowed to do. Witness the recent interagency guidance on third-party risk management, seeking to set forth rules by which banks can manage risks that could potentially arise from partnerships with cloud service providers and fintechs.<sup>27</sup>



# The way forward

As firms prepare to take on these brave new worlds, where should leaders begin? What are some moves they can make now in anticipation of what's to come? Given recent events noted above, agility should be considered as a requisite to future strategy and operations to ensure that, should the landscape continue to be unpredictable, leaders are ready to respond as quickly as possible—to customers, to competitors, to regulators, or to outside forces never seen or contemplated before. Optionality should be designed in.<sup>28</sup>

Business and technology leaders in tandem should continue on the progress made to optimize data stores and flows, by exploring emerging technologies related to the sourcing, storage, and analysis of alternative data. This could include not only ongoing work around cloud—for data and analytics as well as emerging industry-specific cloud solutions—but also emerging techs like quantum computing and generative AI. Of course, firms should determine the skills necessary to help take advantage of these developments through the intentional recruitment and scaling of talent with technical and engineering skills. With regard to data and analytics, Deloitte research has found that leading organizations tend to have an overall AI strategy and have developed specific use cases for AI implementation that can allow them to test and learn. Embrace prototyping to understand how the solution will fit into the overall technology architecture and, with cyber, ensure that regulatory compliance is not an afterthought; that it is designed in.<sup>28</sup>

Speaking of cyber, those who are cyber mature demonstrate double the level of customer and employee trust compared to those who have low maturity. Financial services, though, has some work to do. While the industry is slightly ahead of the pack in terms of activities such as the analysis of cyber plans, the use of risk quantification to measure return on investment, and incident response scenario planning, those plans were not widely updated and tested annually. Nor are there plans to protect data as it's stored, moved, and analyzed, or plans to monitor third parties' security abilities.<sup>29</sup> Implementing an operational and strategic cyber risk management plan that includes actions to continuously improve information security and monitor partners' and suppliers' information security capabilities should be considered.

Finally, efforts should continue to break down product and business silos, where appropriate, to help allow for greater agility and creativity in product and service development. Recent research shows that only about one-third of companies across all industries are what could be called “digitally mature.” But those who are, are not only better able to innovate but also tend to consider external relationships and more loosely coupled internal structures as essential building blocks to developing breakthrough ideas.<sup>30</sup>

Creating new platforms and business models will likely require new operating model design capabilities to more efficiently and effectively catalyze or create new products and services that better take advantage of network effects, as well as a redesign of third-party governance and risk management programs. Collaboration with government, as previously noted, continues to have a place in firm strategy, to determine if these new networks are trustworthy and compliant. Therefore, leaders should prepare for greater governmental and regulatory engagement through an evaluation of engagement management, policy, and regulatory change functions. These can help the organization understand developing regulatory risks and help ensure that management and the board align ongoing strategic initiatives with regulatory expectations.<sup>31</sup>



# What's past is prologue

In 2019, an identity verification solution called Verified.Me was introduced to help allow consumers to more safely open bank accounts. Created by Canadian fintech SecureKey Technologies along with five major Canadian banks, the solution was based on blockchain technology and used a developing “open banking” strategy where customers could conceptually own their data and choose which data to share and with whom to share it.<sup>32</sup> By 2021, the solution was adopted by the Canadian Ministry of Families, Children and Social Development and helped allow citizens easier access to unemployment and disability insurance along with retirement social security and other services.<sup>33</sup> This solution was then acquired by Canadian payment processor Interac later in 2021, which plans to expand its reach to provide similar benefits across industries to enable digital commerce.<sup>34</sup>

Almost 70 years after ERMA, the benefits of expanded technology capabilities along with partnerships and new business models arising from the innovative drive of the financial services industry have evolved to play an important role in the economy and society. In whatever worlds that may emerge in the future, financial services can—and should—continue to lead through these changes, combining purpose with profit along the way.





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# Endnotes

1. SRI International, "[Electronic Recording Machine Accounting](#)," 2013.
2. Julie Ferguson, "[The senior living sector is poised for growth](#)," Development, Fall 2021.
3. International Monetary Fund (IMF), "Changing global financial structures: Can they improve economic outcomes?," Global Financial Stability Report: Restoring confidence and progressing on reforms, October 2012.
4. MIT Technology Review Insights, "[Identity protection is key to metaverse innovation](#)," September 12, 2022.
5. Akash Jain et al., [Metaverse – The next e-commerce revolution](#), Deutsche Bank, October 2022.
6. Theresa Hitchens, "[LeoLabs debuts collision risk assessment software for space insurers](#)," Breaking Defense, September 27, 2022.
7. Rachael Zisk, "[The space insurance landscape](#)," Payload, October 31, 2022.
8. FS-ISAC, [Navigating cyber 2023](#), March 2023.
9. Michele Della Vigna et al., [Carbonomics: Introducing the GS net zero carbon models and sector frameworks](#), Goldman Sachs, June 23, 2021.
10. Paul Bodnar, Jean Boivin, and Isabelle Mateos y Lago, [The big emerging question](#), BlackRock Investment Institute, October 2021.
11. Eamonn Kelly and Jason Girzadas, [Leading through an age of discontinuity](#), Deloitte, 2022.
12. Monica O'Reilly et al., [A higher bottom line: The future of financial services](#), Deloitte, 2021.
13. Candice Choi, "[The banking crisis: A timeline of key events](#)," Wall Street Journal, updated May 11, 2023.
14. O'Reilly et al., [A higher bottom line: The future of financial services](#).
15. Richard Edelman, "[Navigating a polarized world](#)," Edelman, updated January 19, 2023.
16. Deloitte FSI TrustID Research, June 2021, n=20,370
17. Deloitte FSI TrustID Research, August 2022, n=34,540
18. Deloitte FSI TrustID Research, August 2022, n=34,540
19. Deloitte, "[SEC issues cyber rule proposal for advisers and funds](#)," 2022.
20. Valeria Gallo et al., "[Regulating AI: Can the UK's proposed approach achieve both flexibility and clarity?](#)," Deloitte, May 3, 2023.
21. Laurie Clarke, "[Alarmed tech leaders call for AI research pause](#)," Science, April 11, 2023.
22. Margaret Doyle, Samia Hazuria, Dilip Krishna, and Duncan Stewart, "Could technology innovations reverse the climate change trajectory? Not without a lot more money." Deloitte Center for Financial Services, August 2023.
23. PYMNTS, "[CFPB's medical credit card report underscores greenfield opportunity for healthcare refinancing](#)," May 5, 2023.
24. Michelle Canaan, Kelly Cusick, Val Srinivas, "Embedded insurance is poised for exponential growth," Deloitte Center for Financial Services, August 2023.
25. Edelman, "[Navigating a polarized world](#)."
26. White House, "[Fact Sheet: White House launches Invest.gov, highlights public and private investment in communities under President Biden's Investing in America agenda](#)," June 6, 2023.
27. Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, "[Agencies issue final guidance on third-party risk management](#)," joint press release, June 6, 2023.
28. Omer Sohail et al., [Artificial intelligence: Transforming the future of banking](#), Deloitte, 2021.
29. Deloitte, 2023 [Global Future of Cyber Survey](#), 2022.
30. Gerald C. Kane et al., "[Accelerating digital innovation inside and out](#)," Deloitte, June 4, 2019.
31. Deloitte, "[Prepare for more stringent regulation and agile supervision after bank failures](#)," May 1, 2023.
32. Adrian Zmudzinski, "[Five Canadian banks employ SecureKey blockchain system to identify users](#)," Cointelegraph, May 1, 2019.
33. Douglas Blakey, "[Employment and Social Development Canada adopts Verified.Me from SecureKey Technologies](#)," Retail Bank International, May 20, 2021.
34. Interac, "[Interac enables secure digital transactions with the launch of Interac Verified](#)," press release, May 9, 2023.





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