



Realizing the digital promise

Call to action

A paper from the Institute of International Finance and Deloitte

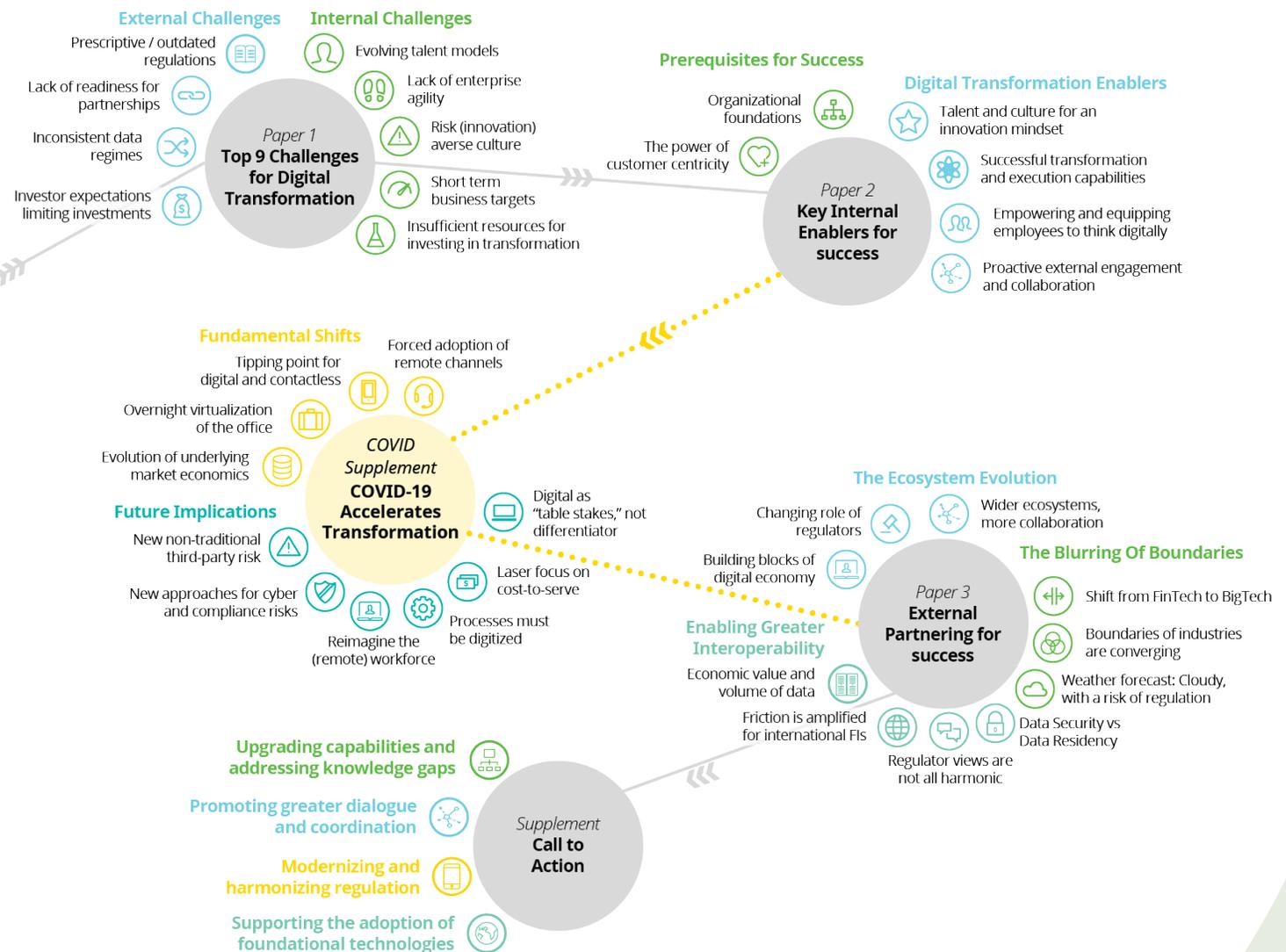
Contents

Setting the stage: Realizing the digital promise	3
Executive summary	4
Upgrading capabilities and addressing knowledge gaps	6
Promoting greater dialogue and cooperation	10
Modernizing and harmonizing regulation	13
Supporting the adoption of foundational technologies	17
Conclusion	20
Endnotes	21
Contacts	22

Setting the stage: Realizing the digital promise

Over the past two years, the Institute of International Finance (IIF) and Deloitte have joined forces to produce [Realizing the Digital Promise](#), a collection of papers exploring the key success factors and challenges to digital transformation in financial services.*

Figure 1: Realizing the Digital Promise Series



* The series has been developed from secondary research, facilitated discussion workshops and interviews under Chatham House Rule with more than 200 senior and C-suite executives, transformation leaders, thought leaders, investors, regulators, and government officials to better understand the diverse experiences and points of view on digital. It is complemented by comments made in the public domain.

Executive summary

The emergence, evolution, and convergence of disruptive forces are continuing to shape the future of financial services. Ecosystems are disrupting traditional 'linear' value chains as greater interconnectivity and interoperability transform value chains into value webs. These trends have been further fueled by the emergence of COVID-19 which has led to a rapid acceleration of investment into emerging technology, ecosystem partnerships and alliances within financial services and beyond to meet the rapid shift in the business environment. Digital transformation is no longer only about efficiency but has morphed to encompass business model transformation as customer expectations are unlikely to ever return to pre-COVID dynamics.

Over the past two years, the IIF and Deloitte have joined forces to explore digital transformation in financial services, and how financial institutions (FIs) can realize the digital promise. Throughout this journey, we have interviewed more than 200 senior and C-suite executives, transformation leaders, thought leaders, investors, regulators, and government officials around the globe to better understand diverse experiences and points of view in the financial services ecosystem. The result is [Realizing the Digital Promise](#), a multi-report series exploring FIs' approaches to digital transformation (see Figure 1 on previous page).

Building on the inputs we've received from private and public sector leaders, this paper sets out a coherent "call to action" for financial ecosystem stakeholders—including policymakers, regulators/supervisors, FIs, and tech firms—on how they can each help ease or remove barriers to digital transformation.¹

We have identified four overarching actions for ecosystem participants across the private and public sector:

1. Upgrade the associated digital capabilities and address knowledge, talent, and infrastructure gaps

The current 'digital transformation' of the regulatory operating model is often seen as following a footstep behind FIs creating additional friction when FIs seek approval for more advanced digital efforts that authorities are unfamiliar with. Likewise, FIs do not always possess the right capabilities to be able to evaluate and control the inherent risk of some new technologies. Regulators, policymakers, FIs and other ecosystem participants need to work together to develop an integrated approach that not just modernizes regulatory policies, but also addresses the safe modernization of the relevant talent skillset, processes and technological infrastructure backed by long-term investment plays.

2. Promote greater dialogue, coordination and collaboration to enable an efficient ecosystem economy

Rapid developments in financial services, especially as it relates to FinTechs and BigTechs entering the market landscape, has shifted the nature of the industry from a value chain focus to a much more complex value web of activities. Participants from the public and private sector need to actively collaborate in this environment to ensure a cohesive and sustainable evolution of the system.

3. Modernize and harmonize regulation in line with the cross-border nature of digital and the need for faster, more agile regulation

There is a growing consensus that current regulatory frameworks often lack the regulatory agility that is needed to create an environment which spurs innovation and identifies regulatory challenges early while avoiding the risk of building costly compliance infrastructures for products that ultimately may be deemed unviable. The ecosystem needs to work together to find robust, workable approaches to cross-border interoperability of data regimes.

4. Support the adoption of foundational technologies across the ecosystem to reap their benefits

Ecosystem participants need to work together to promote the safe, responsible, and successful adoption of key emerging technologies—including cloud, AI, and digital identity—as they are vital to supporting the next version of business models and to unlocking the full potential of the digital economy.

We dive further into these calls to action in the pages that follow and provide actionable, but non-exhaustive, recommendations that ecosystem participants should consider taking to help the digital economy flourish and reach its full potential.²

These recommendations will support digital transformation, fostering a greater understanding between actors; deepening cooperation across sectors and jurisdictions; limiting regulatory arbitrage and fragmentation; and enabling businesses to operate more easily across borders and take advantage of data, data-based technologies, and economies of scale; all while minimizing and mitigating risks.

Throughout this report we denote the relevant stakeholders using colored icons:



policymakers



regulators/supervisors



financial institutions



tech firms

Upgrading capabilities and addressing knowledge gaps

Given the dizzying pace of digital advances in the market, the complexity of emerging technologies, and the interconnectedness of the digital economy, all stakeholders should consider developing a transformation roadmap; hiring talent with the right skillsets; investing in upskilling, foresight, and horizon scanning; and improving internal culture, structures, and systems.

Developing a transformation roadmap



Stakeholders should develop a clear digital transformation roadmap for their organization, outlining the proposed journey, not just the desired destination.

Stakeholders should also look at peers—both regionally and globally—to see what they are doing, including how they are balancing short- and long-term objectives, and to keep up to date on best practices.

Securing and upskilling talent



Regulators/supervisors and FIs should hire experts with interdisciplinary skills and a deep understanding of the intersection of finance and emerging technologies, such as cloud and AI—key building blocks of the future economy. They should focus on recruiting talent that has an open and innovative mindset.

Hiring new talent would particularly help regulators and supervisors, working hard to catch up with the private sector in understanding digitalization. There isn't only a need for IT experts; generalist regulators and supervisors need to feel more comfortable with technology to better oversee the rapidly evolving industry. This is also key for FIs as they understand emerging technologies and business models in the future digital economy. An executive we spoke to at a multi-national bank highlighted how building technical expertise across various departments, including risk, compliance, government affairs, legal, etc., will become increasingly important moving forward.

Given the speed at which job requirements are changing in the industry, organizations need to hire talent that have an open and innovative mindset. This helps the organization experiment, be flexible, stay ahead of the curve, and adapt.



Regulators/supervisors and FIs should make a concerted effort to continually invest in the training of their employees, focusing on the intersection of finance, technology, and regulation.

Training should vary based upon an employee's position, with different roles receiving different types of education. Providing opportunities for multiple roles across the organization as a "tour of duty" to gain insights and to promote cross fertilization of skills and experiences is a good way to nurture staff and promote interdisciplinary skills.



Tech firms should recruit and develop employees that can understand the intricacies of the financial environment and be more sensitive to specific requirements of operating in the industry.

To help improve relations with FIs and authorities, new entrants need talent that have a good understanding of financial regulation and how incumbents and regulators are structured and operate. This is increasingly understood among new market players. Google Cloud's Zac Maufe noted "There is an effort on our side to be more sensitive to specific requirements of the financial industry."³

Modernizing the tech stack



Regulators/supervisors and FIs should leverage emerging technologies to improve their IT systems and drive operational efficiencies.

Digital transformation often runs up against an organization's legacy IT systems. It is frequently necessary to replace or modernize archaic infrastructure with emerging technologies such as cloud and AI. Embracing such technologies can help FIs pursue viable business models and remain competitive. It can also help authorities carry out more efficient and cost-effective regulation and supervision of market actors.

With plans to automate supervisory procedures and use data science and network analytics applications to help spot trends and risks in a more forward-looking fashion, the Hong Kong Monetary Authority provides a useful illustration of an agency working toward improving its capabilities through regulatory technology and supervisory technology.⁴

Transforming organizational culture, strategy, and structure

Transforming internal cultures, strategies, and structures to help enable new, innovative, and collaborative ways of thinking and operating should be a priority for all stakeholders.



Regulators/supervisors should strive to move from policing to also acting as enablers to digital transformation.

Several regulators now view themselves as catalysts to change and have adopted new ways of thinking and operating. In Asia, some regulators noted the industry's stagnation and embraced a new mindset of experimentation and collaboration to challenge the status quo, taking on some risk to spur innovation. A regional tech leader observed, "There is a paradigm shift from 'move fast or stay secure' to 'move fast and stay secure.'" Several regulators are working to find the right balance of pushing for innovation while maintaining stability. Nevertheless, there are laggards, and a gap is growing across countries and regions. Some regulators have been criticized for being overly cautious, limiting market innovation.



FIs should balance risk culture with more agile approaches that encourage smart risk-taking and innovation in the interest of long-term growth.

Leaders need to modify their risk-conscious mindset to allow for experimentation that can showcase the value data and data-based technologies can deliver. Experimentation need not be expensive nor labor-intensive. Each employee can think of ways to innovate; it does not require hundreds of people or millions of dollars to conduct an experiment. FIs should also establish a culture that encourages self-evaluation, asking hard questions, and a test-and-learn mindset where employees can walk away from a pilot project if it isn't working. This implies a willingness to sacrifice short-term profit or productivity for success and innovation over the longer term. This type of innovative culture needs to permeate throughout the organization, especially at the board and senior management level.



FIs should rethink performance metrics to incentivize the right behavior necessary for transformation.

Leaders are often evaluated (and rewarded) on short-term deliverables, but transformational breakthroughs may take five to ten years to realize benefits. Thus, there may be conflicts of interest if the incentive structure for executives in charge of transformation prioritizes short-term goals. FIs need to be aware of this and work toward minimizing this as best as possible.



FIs need to understand and evaluate more innovative business models as opposed to just the technologies associated with them.

Simply investing in emerging technologies is not enough to be a key differentiator—rather, one multi-national bank executive noted, “If you don’t do it, you become irrelevant even quicker.” To achieve sustainable and long-term success, FIs need to go beyond digitization and explore new customer-centric business models enabled by technology. This, according to one Singapore-based banker, includes integrating financial services into the online economy and e-commerce, catering to the needs of small and medium-sized enterprises around the world in a different way, and building the infrastructure for the future of finance.

There is an important distinction between upgrading technology and exploring new business models, each needing different execution approaches. The former mainly involves transferring investment money to existing business units. The latter involves thinking and operating differently, which can be difficult because you are competing against the status quo and entrenched interests, and you might even be setting up the cannibalization of existing businesses within the FI. Buy-in and conviction at the senior leadership level is essential.



FIs and tech firms should improve their abilities to successfully partner with one another to drive additional capabilities.

Mutually beneficial collaboration can enable both parties to improve efficiencies, bring products to market quicker, and bolster competitive positions. One of the most important prerequisites for collaboration is having an open mind and learning how the other side operates. A European digital challenger bank CEO observed, “Before you are technically open, you need to be mentally open-minded ... You need to be industry-wise open-minded, you need to understand what the customer’s pain-points are because it helps you select the right ecosystem partners.”

FIs can establish teams that focus exclusively on external partnerships, identify an internal stakeholder who can help tech firms navigate a big FI, provide more transparency during the partnership, and find ways to become more agile. Tech firms, meanwhile, need to develop an understanding of the intricacies of the financial environment (e.g., regulation) and how they can best work within the complex operating processes of more established and regulated FIs.

Promoting greater dialogue and cooperation

With the global and increasingly cross-sectoral nature of financial services, greater coordination is needed. All stakeholders should embrace engagement with their peers and other stakeholders—both domestically and internationally.



Policyholders should implement initiatives that facilitate dialogue and collaboration between various domestic stakeholders around digital issues.

Policyholders should actively engage a diverse range of domestic stakeholders to collectively address the best way to drive digital transformation while minimizing risks. One UK banker highlighted the blurring of industries, citing the need for many bodies to work together on regulations that affect different areas of the economy. This would facilitate greater dialogue, understanding, and cooperation amongst stakeholders, and improve the understanding of where existing official bodies mesh and where it may be appropriate to streamline overlaps.



Policyholders should help establish global fora where international coordination, consensus, and governance can be discussed and strengthened.

National policymakers have a very important role in launching global fora for policymakers around the world to discuss, enhance, and coordinate policy across a variety of tech issues, and where possible, ease overlapping or conflicting rules.

A proposal for a Financial Stability Board-like body focusing on digital issues has been floated by a group of global companies, including Mastercard, Citi, and IBM, perhaps under G7 leadership.⁵ A more ambitious aspiration might be a modernized World Trade Organization or “Digital Bretton Woods.”⁶ In the interim, incremental steps can be made in bilateral and regional agreements around data governance and cross-border regulation. These could act as potential blueprints or steppingstones toward larger arrangements. Good examples of such agreements include Singapore’s Digital Economy Agreements with Australia, Chile, and New Zealand.⁷



Financial regulators should proactively engage with their domestic industry peers, as well as regulators in other industries, to foster greater coordination and learn and share best practices around emerging tech.

Ecosystem participants must deal with a complex labyrinth of agencies that cover different areas and often intersect (e.g., competition regulator vs. privacy regulator). Navigating local, national, and sometimes regional regulations drives cost and complexity for market players and slows innovation. Tech commentator Benedict Evans cited a large European competition regulator as saying, “We tell a tech company to do x, and then that afternoon the privacy regulator tells them not to.”⁸

Greater coordination and consistency between domestic financial agencies would help regulators identify gaps and minimize fragmented, duplicative, or inconsistent rules that can overwhelm compliance efforts. Financial regulators should consider how various regulatory initiatives interact and evaluate the suitability of prevailing requirements before considering additional ones.

Financial regulators should also engage with regulators in other industries to learn and share best practices. One UK banking executive observed, “AI has been around since the 1950s, but only recently has it moved into financial services. How it is used in healthcare and aviation is more advanced. We could be learning a lot from (a.) other industries and (b.) the regulators that have been regulating those industries.”



Regulators should collaborate with their international counterparts to coordinate policy approaches and share best practices in a peer network.

Global channels and fora where regulators can discuss digital issues and coordinate policy approaches are vitally important. These need to be strengthened and expanded, to help enable exchanges of views and promote knowledge-sharing. Forward-leaning regulators that have invested heavily in enabling innovation, such as the Monetary Authority of Singapore (MAS) and the UK’s Financial Conduct Authority, leading founders of the Global Financial Innovation Network, can share their experiences, lessons learned, and best practices with others who could then emulate select strategies and approaches themselves.



Regulators and FIs should embrace direct collaboration and establish public-private partnerships (PPPs) where everyone is an equal partner.

PPPs can enable constant communication and direct collaboration between regulators and FIs, helping agencies to keep pace with change and draft recommendations and rules that are well-informed and in sync with the landscape. In addition, PPPs can help FIs influence policy.

Prominent examples include MAS's APIX platform and Veritas initiative.* The latter promotes the responsible adoption of AI and data analytics. A tech executive from one of the Veritas consortium's 25 private sector members explained that while the initiative isn't meant to drive regulation now—rather it provides guidelines and best practices—it could one day form a key foundation for future regulation. The close collaboration between the private and public sector helps establish trust and guidelines that have been jointly shaped.

There is also a need for informal “safe spaces” where stakeholders from both sides can talk openly and off-the-record about issues facing the industry. Several executives at regulated entities indicated an apprehensiveness to talk to regulators, fearing that their comments will prompt an additional regulatory response. This limits useful dialogue, trust, and cooperation between stakeholders. Having an informal and “safe” channel to communicate in an unofficial capacity could help address these concerns.



FIs and tech firms should have their technology experts directly involved in interactions with authorities to help share knowledge, communicate their positions and business models more effectively, and inform policy decisions.

FIs and tech firms have a vested interest in sharing knowledge and upskilling officials, who in many instances do not share the same technical expertise. FIs and tech firms should make a concerted effort to spend time with authorities to help them gain a more comprehensive understanding of emerging technologies and new business models. To help do this, they should directly involve their technical experts. According to the chief innovation officer at a major European bank, “We really need to take our subject matter experts to see the regulator directly. Those are the people that can help the regulator to understand, in a way that our compliance or policy people can't.” Adopting such practices can help the private sector influence policy that is more optimal for their business objectives and the realities of the digital economy.

* The APIX platform was launched by the MAS, the World Bank's IFC and the ASEAN Bankers Association. It is the world's first cross-border, open-architecture API marketplace and sandbox platform for FinTech and FI collaboration.

Modernizing and harmonizing regulation

Authorities can support by creating frameworks and environments that reflect the realities of the digital economy and address the diverging regulatory trends and excessive data restrictions limiting digital ecosystems and emerging technologies from reaching their full potential. One African chief risk officer put it succinctly, “Rules need to change as we shift from an industrial economy to a digital economy.”

Tackling cross-border issues



Policymakers and regulators should focus on consistent global standards for emerging technologies that take into consideration the realities and cross-border nature of the digital economy.

With each territory and each regulator defining their own requirements, operating across jurisdictions is difficult and costly for multi-nationals. A British banker explained, “We [multi-nationals] don’t want to have fragmentation and all these regulations that don’t actually fit with each other. It is more of a challenge with digital because everything is borderless.”

Authorities should seek to avoid the development of digital islands, and instead work toward international standards around emerging technologies to facilitate interoperability. While completely uniform global standards are unlikely, at least in the short term, agreeing on minimum standards would be valuable. To make progress in this area, there needs to be a global perspective and a shift away from looking at issues narrowly. Officials should be aware of initiatives internationally and strive to achieve a basic level of convergence to reduce friction and fragmentation.

Yasmeen Al Sharaf, Director for FinTech and Innovation at the Central Bank of Bahrain, noted, “It’s very essential ... to try to harmonize our regulations to reduce friction for innovators operating amongst different jurisdictions ... We need to understand how other regulators are overseeing the whole ecosystem. ... We need to consider things like how other regulators perceive AI, cloud, and other emerging technologies, and how those emerging technologies can also satisfy the different regulatory requirements.”⁹



Policymakers and regulators should understand the impact of growing restrictions for cloud and entities sharing data across borders.

Data localization requires significant attention. An Asia-based regulator foreshadowed: “I think that even the tech companies are going to be in for a bit of a surprise on data localization. I think it will become a much more entrenched trend and I don’t think we should hope for the opposite.”

This is a concerning forecast as data localization measures can undermine many of the efficiencies and economic opportunities of the digital economy. Policymakers and regulators should evolve their mindset to focus on the security of data as it moves through the economy, rather than local data residency rules. This would help deliver the objectives political leaders seek without hampering the full potential of cloud and the regulated flow of data across borders, which will drive digital economic trade and growth (see page 17 for more on cloud). The Osaka track “Data Free Flow with Trust” during the Japanese G20 presidency illustrates the nascent evolution in focus from data residency to data security and some are starting to see advantages to this approach.¹⁰

Focusing on cross-sector regulation: Promoting competition across the digital economy



Policymakers should address regulatory asymmetries that create market distortions.

With the interconnections of activities and services traditionally associated to different sectors, ensuring a level playing field generally requires an integrated, cross-sector approach. We need to move beyond asymmetrical, sector-specific regimes such as “open banking” toward a more holistic, economy-wide “open data” ecosystem.¹¹ This would support the original objectives of competition and consumer empowerment, while addressing a market distortion between FIs and new players, especially BigTechs. Concurrently, authorities need to identify the right balance between tech-enabled customization, innovation, growth, and consumer protection.



Regulators should rethink their oversight of BigTechs with a combination of entity- and activity-based regulation.

BigTechs are driving industry convergence, raising important issues in how to protect consumers and promote fair, healthy competition across the globe. Their competitive advantages—including scale, technological capabilities, and balance sheet—could lead to a few players dominating the market and becoming “too big to fail,” introducing systemic risks and threats to financial stability.

There is a broad consensus among both private and public sector leaders across various regions that a hybrid approach is needed for BigTechs given their systemic importance. Pablo Urbiola, BBVA’s Head of Digital Regulation, remarked, “We really need to have a discussion on how to implement this principle in a practice which is not moving to a pure activity-based approach to regulation; it is a combination of activity and entity based, but it is very important that any difference in supervision and regulation is based on different risks and not just on the type of institution.”¹²

ING Chief Innovation Officer Annerie Vreugdenhil has stressed the need for proportionality in regulatory treatments, citing where activities run in a bank’s innovation enterprise can be subjected to punitive regulatory treatments because they sit within a bank, thereby hindering experimentation and innovation.¹³ This contrasts with the treatment of new market players, not subject to the same oversight.

Executing agile and dynamic regulation



Regulators should embrace a degree of agility and dynamism to keep up with rapid market developments and adapt to further innovations.

Market applications of emerging technologies such as cloud and AI are still nascent, and there is a risk that regulations can become outdated or obsolete quickly, especially given what are typically multi-year gestation cycles for public policy, legislation, and rulemaking in most major markets.

Regulation requires constant monitoring and periodic adaptations, and it is vital to conduct frequent retrospective assessments of the effects from regulations of emerging technologies, fine-tuning policies when unanticipated and unfavorable outcomes occur. Regulatory initiatives should remain technology neutral and dynamic, and regulators should not impose excessively prescriptive obligations, instead offering a degree of strategic tolerance as FIs incorporate emerging technologies.

Connecting technical expertise and knowledge to new policy decisions



FIs and tech firms should focus on offering more practical policy recommendations.

FIs and tech firms have an important role to play in helping modernize and harmonize regulation. Both need to share knowledge and offer better ideas and recommendations to officials around good practices.

While regulation certainly needs modernizing, it is important to note that the written regulation itself is not always to blame for impediments to tech adoption by industry. Oftentimes it is a skills-building bottleneck—either within the regulator or the FIs themselves. One Asian-based banking executive explained, “The blockage that is perceived to be a regulatory blockage is sometimes the bank itself [lack of understanding] and the regulator is quite right to push back.”

Supporting the adoption of foundational technologies

Stakeholders need to work together to promote the safe, responsible, and successful adoption of key emerging technologies—including cloud, AI, and digital identity—as they are vital to supporting the next version of business models and to unlocking the full potential of the digital economy.

Cloud helps improve efficiency, scalability, flexibility, resilience, risk mitigation, and cyber security—and crucially enables FIs to offer more personalized and instant services to their customers. Cloud also empowers other emerging technologies to reach their full potential. A leading US executive observed, “To run any kind of artificial intelligence or machine learning within a closed archaic system will take weeks versus AI/ML in the cloud can take minutes.”



AI plays an integral role in the digital economy and its importance will only grow across credit analytics, client onboarding, product design, fraud prevention, and more. This supports the extension of service offerings to traditionally excluded or poorly served market segments.

Digital identity is a crucial enabler for integration into the digital economy and consumers’ lives, to the areas where customers want banking to take place. The technology holds great promise in contributing to financial inclusion, financial crime prevention, and improved customer experience at onboarding.

Cloud



Regulators should not dictate cloud models for FIs but should instead share the risk considerations they see and set risk standards for making deployment decisions.

Banking and tech executives see mandating a multi-cloud strategy as inappropriate, as it can force complications and expenses that may outweigh benefits. Multi-cloud models may make sense for some activities at larger FIs, but it is not a silver bullet for resiliency. Further dialogue and articulation of the particular goals and objectives of a multi-cloud model will be important.



Regulators should work with cloud service providers and other vendors to ensure data portability and interoperability around the cloud.

Vendor lock-in—where a cloud user becomes dependent on a single provider and cannot move easily to a different provider without complications, considerable costs, and legal constraints—is a risk of migrating to the cloud. Regulators can play a positive role by working with industry and tech firms to alleviate those risks and keep data in the cloud accessible and portable.¹⁴ Allowing FIs to hold encryption keys is one promising example of approaches that could balance the power dynamic in a more efficient way.



Stakeholders should carefully consider the implications of establishing certifications of cloud service providers with direct supervisory oversight by financial service authorities.

Direct supervision and certification of major cloud service providers could enable authorities to gain a better understanding of the risks posed and address the inefficiency of having each FI duplicating assessments, monitoring, and evaluation. However, removing FIs from an active role in understanding and managing their core systems and future interfaces could, over time, relegate them to a weaker third-party role. Configuration of cloud services is an important differentiating tool and the principle of having different FIs maintaining different risk profiles should be preserved. Additionally, the potential for certification could further concentrate the cloud service provider (CSP) market in those firms that could achieve it early would be significant. Other solutions to overcome cloud adoption barriers and duplicative processes should be pursued by CSPs, FIs, regulators and supervisors, including information sharing and common contract clause sharing.



The risks of not adopting cloud are greater than the risks posed by cloud. FIs and regulators need to adopt approaches that help smooth the transition to the technology.

Many FIs are paralyzed in cloud migration because of mixed regulatory signals, risk concerns, and the initial costs. While these are risks to understand and mitigate, the transformational benefits of shifting from a closed archaic IT system to cloud have become essential. FIs should focus on developing an adoption plan based on their institution's strategic goals and objectives with risk management strategies. Regulators, meanwhile, need to work closely with FIs to enable safe and successful migration.

Artificial intelligence



Stakeholders should work together to ensure that AI frameworks converge around common principles on ethics, fairness, transparency, accountability, and reliability.

Given its growing importance and likely future ubiquity across the digital economy, establishing rules for AI is essential to minimize biases and other risks. Stakeholders need to work with their peers and other ecosystem participants—both domestically and internationally—to ensure that clear, appropriate, and consistent rules are in place. The 2019 Organisation for Economic Co-operation and Development [Principles on Artificial Intelligence](#) provides an example of global collaboration in the space.¹⁵

Digital identity



FIs and officials must conalesce around digital identity standards that support interoperability across sectors and borders.

Reliable and trustworthy digital identity services are essential for the digital economy, and this presents a significant and urgent opportunity for FIs to leverage their existing positions as trusted data custodians and their very large KYC investments. This requires extensive collaboration across the industry and with other sectors—no single FI reaches enough of the population on their own, and users will demand solutions that can work across all of their various walks of life.

This makes it critical to have standards and principles that all participants can operate with, such as the Open ID Foundation and IIF's Open Digital Trust initiative.¹⁶ The chief innovation officer at a major conglomerate observed, "What we call 'identity' is going to evolve dramatically over time... I don't think you want to be locked into some top-down industry-driven utility type model that doesn't change for 25 years and becomes irrelevant; it becomes a constraint. It would be much better to have something that is living, that's competitive and where it is standards driven rather than entity driven."

Conclusion

The financial services ecosystem continues to evolve, industry and regulatory boundaries continue to blur, and data regimes continue to face questions around interoperability and portability. Without robust and coordinated action, the implications for ecosystem participants will increase exponentially. This is the time for all ecosystem participants to come together to jointly overcome the biggest barriers to digital transformation and unlock the true value of digital for financial services.



Endnotes

1. The scope of this paper prevents us from elaborating on the digital transformation environment within financial services. For a detailed overview of the challenges and success factors, see the series' previous reports published by the Institute of International Finance and Deloitte, "[Realizing the digital promise: Top nine challenges to digital transformation for financial institutions](#)," February 19, 2020; "[Realizing the digital promise: Key enablers for digital transformation in financial services](#)," June 4, 2020; "[Realizing the digital promise: COVID-19 catalyzes and accelerates transformation in financial services](#)," June 24, 2020; "[Realizing the digital promise: Transformation in an ecosystem of regulators, BigTech, FinTech and more](#)," April 26, 2021.
2. For additional information on actions FIs can take to drive digital transformation, see the report by the Institute of International Finance and Deloitte, "[Realizing the digital promise: Key enablers for digital transformation in financial services](#)," June 4, 2020.
3. The Institute of International Finance, "[Realizing the Digital Promise: The Ecosystem of Regulators, BigTech, FinTech and More](#)," June 3, 2021.
4. Hong Kong Monetary Authority, "[2019 Annual Report](#)," April 24, 2020.
5. Mastercard, "[Setting principles for the digital economy: Establishing a G7 Data and Technology Forum](#)," March 22, 2021.
6. For additional information on this topic, see the report by the Institute of International Finance and Deloitte, "[Realizing the digital promise: Transformation in an Ecosystem of Regulators, BigTech, FinTech and More](#)," April 26, 2021. It will also be the main focus of an upcoming paper to be published in Q4 2021 by the Institute of International Finance.
7. Ministry of Trade and Industry Singapore, Digital Economy Partnership Agreement, <https://www.mti.gov.sg/Improving-Trade/Digital-Economy-Agreements/The-Digital-Economy-Partnership-Agreement>.
8. Ben Evans, "[Newsletter #373](#)," February 2, 2021.
9. The Institute of International Finance, "[Realizing the Digital Promise: The Ecosystem of Regulators, BigTech, FinTech and More](#)," June 3, 2021.
10. The Institute of International Finance, "[Data Localization: Costs, Tradeoffs, and Impacts Across the Economy](#)," December 22, 2020.
11. The Institute of International Finance, "[From Open Banking to Open Data and Beyond](#)," March 10, 2021.
12. The Institute of International Finance, "[Realizing the Digital Promise: The Ecosystem of Regulators, BigTech, FinTech and More](#)," June 3, 2021.
13. The Institute of International Finance, "[Fintech Regulation, with FSI Chairman Fernando Restoy](#)," March 23, 2021.
14. The Institute of International Finance, "[Cloud Computing in the Financial Sector: Part 1: An Essential Enabler](#)," August 2018.
15. For more information on AI-related recommendations, see two previous papers by the Institute of International Finance, "[IIF Machine Learning Recommendations for Policymakers](#)," September 25, 2019; "[IIF Data Ethics Charter](#)," June 7, 2021.
16. The International Institute of Finance and Open ID Foundation, "[How Financial Institutions Can Bring Trust to the Digital Economy](#)," 2021.

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