

Bank Governance Leadership Network

May 2022

BGLN

VIEWPOINTS

Overseeing major technology upgrades and associated risks

Upgrading our core systems and managing those investments effectively is one of, if not the, key issue we are all faced with.

—Bank director

Banks have already begun the process of upgrading their legacy systems, and those transformations—moving more bank operations to cloud-based core banking platforms—are now gaining pace and scale. The COVID-19 pandemic accelerated banks’ digitalization efforts; according to one analysis, “Consumers significantly increased their digital channel usage in 2021 and the trend is only expected to persist. As banks continue to implement changes to keep up, they are hampered by challenges around talent, cybersecurity and sheer complexity.”¹ Banks also continue to expand partnerships with fintechs and others in the ecosystem. At the same time, bank leaders are beginning to grapple with their potential response to the growth of decentralized finance (DeFi).

Summarizing the changes under way, an industry adviser and commentator wrote in March 2022:

After years of inertia where the technology focus has been on enabling microservices and APIs [application programming interfaces] to create agility without touching the core systems, the last few months have seen a sea change. Far more banks are now willing to tackle the spaghetti and begin moving their core operations to the public cloud. This great migration will have setbacks and stumbles but, ultimately, will reshape banks’ business models and how they serve their clients. ... As mainframe systems age, the pool of technical talent that understands these systems is shrinking and aging as well. At the same time, cloud talent is multiplying and evolving to embrace innovations such as web3, a term for a new decentralized version of the internet based on blockchain.²

In the first half of 2022, including meetings on April 6 in London and April 14 in New York, Bank Governance Leadership Network (BGLN) participants

“These things can be a long time coming and then they tip pretty quickly.”

– Participant

discussed how boards, management, and regulators are overseeing major technology investments and the associated risks, and what the growth of DeFi could mean for the industry. This *ViewPoints* synthesizes the key themes emerging from these discussions:³

- **Moving on from legacy banking platforms**
- **Assessing the efficacy of technology investment**
- **Understanding the risks—and increased security and resiliency—of modern banking systems**
- **Anticipating how DeFi could further disrupt traditional banking**

Moving on from legacy banking platforms

Noting how many banks are now moving to upgrade core systems relative to even a few years ago, a participant said, *“These things can be a long time coming and then they tip pretty quickly.”* In an earnings call with analysts late last year, JPMorgan Chase CEO Jamie Dimon described the driver for some of the bank’s technology investments: “In the long game, we’re competing with some very large, talented, global players, who are not even in banking today ... So these are all different forms of competition, which we have to respond to. And so ... we will spend whatever we have to spend to compete with all these folks in our space.”⁴ On another analyst call, Mr. Dimon stated, “If we can spend \$2 billion more and get to the cloud tomorrow, I would do that in a second.”⁵

“Spend wisely—and more is probably wise in today’s world.”

– Regulator

A participant described technology investments at many large banks as rising to the level of *“massive transformation programs,”* in some cases equating to *“bet-the-bank”* investments. In fact, when asked whether their message to banks was to spend more on technology, a regulator said, *“Spend wisely—and more is probably wise in today’s world.”*

Bank boards and senior management teams are working to understand the possibilities and assess the pace, scope, and effectiveness of transformation efforts.

Adopting cloud-native core banking platforms offers new possibilities

A participant noted that many banks are still struggling with some fundamental issues around things like data management because of legacy infrastructure—*“the central spaghetti.”* Increasingly, a participant reported, bank leaders are asking, *“Do you get to a point where, for efficiency’s sake, you just have to bite the bullet and say, ‘Are we getting to that inflection point*

where we are going to have to invest and get rid of the spaghetti?’ And that means cloud native.”

“You remove the siloed nature of banks on the cloud; it all runs on a single platform.”

– Participant

Migrating core systems to the cloud involves a transformation in the way systems function, not just how data is stored and managed. A participant noted, *“There is a fundamental misunderstanding of what cloud native means in the industry. Many people think of replicating what they do and moving it into the cloud. Even some of the most senior tech professionals in banking don’t get the distinction.”* Moving core banking systems to the cloud can provide a real-time ledger for banking products including loans, deposits, mortgages, and credit cards. *“You remove the siloed nature of banks on the cloud; it all runs on a single platform,”* a participant said.

For now, most of these banking platforms remain focused on consumer and small-business banking. As one participant noted, *“This is where the need is greatest. Large investment banks are pretty good at developing technology platforms themselves; they have been at the forefront of developing and using technology for improving trading, etcetera, but retail banks are a bit forlorn.”*

Banks continue to experiment with three main approaches to adopting new platforms:

- Start with a single product or group of related products and run some on the new system while retaining most of the old core
- Launch a greenfield operation for a digital bank on a new platform
- Begin a process of migrating the entire core, sometimes referred to as a *“big bang”* or *“lift and shift”*

Participants suggested that most banks are pursuing a version of the first or second options, whereby they have two technology stacks running simultaneously. *“New products launch on the cloud-native stack and eventually the old stack doesn’t have any customers and products; it gradually fades away. For three or four years it might only have longer-term products like mortgages; meanwhile, you are earning money on the new stack from day one,”* a participant explained. This allows the bank to *“spin up a new digital stack alongside the existing core, then build a cloud-native digital ecosystem around that.”*

Banks need to be prepared for the transition

“If it’s going to happen, I think the board is going to have to grip it, because I just don’t see it in the CEO’s interest to do it.”

– Participant

“Banks operate in markets that seem stable until they are not.”

– Participant

While the benefits to modernizing banks’ technology infrastructure are apparent, participants cautioned that effective migration requires a long-term vision and investment, and financial returns may take time to materialize.

Referring to the scale of long-term technology upgrades, a participant said, *“Your average non-executive director is not going to have a clue about a lot of this stuff. And yet, if it’s going to happen, I think the board is going to have to grip it, because I just don’t see it in the CEO’s interest to do it; there’s just too long a time horizon and too much money.”*

Several participants said catching the right executives at the right stage of their tenure is often key to getting them to commit to these kinds of transformations: *“Getting an executive at the right spot in their career makes a lot of difference. For example, a new CIO [chief information officer] can’t arrive and say, ‘My goal is to do nothing.’”* Competitive pressures can be a powerful motivator as well. One participant said, *“Banks operate in markets that seem stable until they are not. What happens in markets drives behavior; for example, Hong Kong and Singapore started issuing digital banking licenses, so the incumbent banks had to react.”*

Participants said that successful major core system upgrades at large banks often share some common attributes:

- **Long-term vision.** A participant noted that banks that successfully modernize their systems have committed leadership: *“You need long-term visionary leadership, and that often starts with the CEO.”* Another participant observed, *“As an executive, you have a lot of downside to do anything large scale. If you wait, it can become someone else’s problem, so this needs to be solved at the board level. You need to get people to act as if you will own this problem for 10 years.”*
- **Advanced preparation.** To prepare for a migration to a modern banking platform, a participant suggested that *“a data mindset helps—building a data strategy and understanding how data can better enable customers.”* Another participant reported, *“The most challenging part is getting the data over, making sure it’s ready and clean, de-duped, etcetera. A lot of banks might see that as waste, but once in the cloud, you’ll see a dramatic difference.”* Banks that have some expertise and experience using the cloud will be well positioned, as a participant explained: *“Any bank migrating the core will be on a broader cloud journey before they move core to the cloud; that’s not the first thing they do. Some have been clear they don’t have the talent, but many have already started their cloud*

journey in some way, so they have teams who understand cloud architecture and agile, what the shift to cloud entails.”

- **Dedication to simplification.** *“New technology presents a real opportunity to simplify products, to rethink your product set and the customer communication around products,”* a participant said. *“If you have 49 different products and 80 different combinations, how do you move clients to simpler, better, fairer products? How do you have your organization prepared to handle the new products? You would never want to recreate those products in the new architecture.”*
- **Maintaining momentum throughout the implementation life cycle.** Bank leaders must be prepared for a relatively long implementation process, as one participant described: *“Implementation is a year to get a new core live, another year to get volume onto the new core, and then another year to deprecate. It’s a long life cycle.”* Getting started can also be easier than completing the transition. *“The easy early phase is like a new romance, but when you get deeper into the migration it becomes more like the hard work of marriage,”* a participant observed. *“It makes sense that the first thing you migrate is a product, but how do you do the last thing? Getting off the legacy core, the last 10%, is the hardest. What happens as you get to the end? I’m not sure anyone has yet gone through that full journey yet.”*

“New technology presents a real opportunity to simplify products.”

– Participant

Assessing the efficacy of technology investment

Assessing whether these extensive investments are effective and benchmarking against peers present challenges for management teams and boards, who are often reliant on technologists and consultants. A director said, *“What interests me is how non-executive directors can actually evaluate the risks of the ever-increasing tech that banks have to rely on. How do we assess those investments, how does management give us a lead on that? Some of the largest banks in the world have spent a lot of money, and it seems that investors are wondering if that was the right thing to have done.”*

Upgrades create efficiencies but are primarily about improving capabilities

A participant said they often struggle to clarify *“what the investment return is on this or whether it’s defensive. In some cases, I just don’t think banks even make the calculation; I think they are much more interested in doing something and backing that in than they are determining the return upfront.”* Many of these large-scale investments are about meeting customer

“Banks ... have spent a lot of money, and it seems that investors are wondering if that was the right thing to have done.”

– Director

expectations and creating new capabilities, and costs will increase but returns may be slow to materialize.

Technology costs will continue to increase

“For big, traditional banks, it should be about generating revenues, not savings.”

– Participant

Participants noted that boards need to temper expectations for returns on investments in core systems and cloud migration. A participant said, *“Investments in platforms don’t result in cost savings for quite a long time. Legacy technology costs remain for a while, so there is disappointment for directors because you’re not saving any money. But you have to accept that sunk cost is going to be there for quite a long time. As you make incremental investments, IT costs keep going up. For big, traditional banks, it should be about generating revenues, not savings.”* According to an executive, *“Any institution with a lot of data in the cloud does not end up with lower data costs but will have more usage of data.”*

Investing in talent will also add costs initially. A participant said, *“There tends to be a small group in a bank with engineers with proficiencies in cloud-based, native technologies. There is a limited universe of talent with those capabilities, so you have to recruit new talent.”*

Benchmarking remains challenging

“A lot of what we are doing is table stakes; we have no choice, so we cannot think about ROI.”

– Participant

“I think every bank is looking at these numbers with some degree of fear and apprehension just because of how big they are,” admitted one director. Those numbers can also be difficult to parse, particularly given the lack of shared taxonomy around tech spending across the industry. A bank executive asked, *“Do people have a really good way to understand the apples-to-apples comparison, whatever I’m spending on tech, because I don’t think they do.”* An EY expert said they had tried to do some analysis across banks, *“but there are all sorts of complexities defining the state. It looks like the US sector is spending three to four times more than European banks on tech investment even relative to revenues, and particularly over the last couple of years. But it is very difficult to compare apples to apples.”*

Leaders can identify ways to measure returns

The challenges around determining returns on investment (ROI) led one participant to propose, *“Don’t go in with the ROI argument.”* Another agreed, noting, *“A lot of what we are doing is table stakes; we have no choice, so we cannot think about ROI.”*

However, there are ways to assess the benefits beyond direct cost reduction or returns. A participant asserted, *“There are clear benefits. We reduced the number of manual work-arounds as we simplified products. Productivity is*

measurable; you invest in technology in the hope that you are getting more productive.” Improved data management capabilities offer a range of measurable benefits too: “It also improves risk management; it gives you insight where you have concentrations of risk you would otherwise find difficult to identify and manage. You can see how it enhances the client experience; you can see customer needs more clearly because you understand data better.”

“You can see how it enhances the client experience; you can see customer needs more clearly because you understand data better.”

– Participant

Boards and management teams need to think differently about how to assess the returns, according to one participant, who asked, “Are you building those kinds of measurements to answer this ROI question?” Another suggested a very simple metric: “To measure this at the board, look at the number of cores. It is going up with M&A [mergers and acquisitions]? Is it ever going down?”

Building an ecosystem to complement internal upgrades

In addition to investing in upgrades of core systems, banks continue to assess when it is best to build something, buy it, or partner with a range of potential collaborators in the ecosystem. One participant said banks need to use “all of the tools in our tool kit—investing, acquiring, and partnering.”

A participant described the landscape of fintechs by naming three categories: “(1) Those that do what banks do and compete, either head on or in slightly adjacent spaces, and banks often fund them; (2) fintechs that do things banks don’t want to do, like subprime, blockchain, credit risk, regulatory risk, distribution risk; and (3) those that provide services to banks.” A fintech investor said, “Banks are not going to get into that second category. The first category is where banks should be buying companies. Fintechs are suffering, growth investors are pulling out; 2022 will be the year of M&A. And the third category is where banks should partner.”

While large banks have the scale to build a lot of applications and capabilities themselves, one participant questioned the efficacy: “Why are you doing that yourself? Initially, it might have been a decent idea, but now you have to ask, Is that the right way to spend money? Does it create any new revenue? Usually, no. Maybe you save a little bit of money here and there, but it’s pretty hard.” For example, participants suggested, banks would be better served by partnering with a provider like Plaid than trying to build a competitor, like Akoya, or to acquire it. Where partnering with fintechs is the best approach, a participant said the question is then, “How do you partner effectively, manage the risks of partnering, and manage risks of investing in tech?”

Understanding the risks—and increased security and resiliency—of modern banking systems

“The number of people within regulators who really understand this stuff is in the dozens.”

– Participant

Major technology transformations are not only costly but also have the potential to bring new risks. A participant noted, however, *“There is always a risk of doing nothing. Physically, the hardware decays, talent decays. We have to ask, Are we on a platform that has got a future? If not, we have to do something sometime, so bear that in mind when there is concern about the risk of moving.”* Legacy systems represent *“an anchor weight creating constraints on revenue and regulatory risk, making it harder to keep talent, and increasing cyber risk.”* Participants discussed the potential risks modern banking systems present as well as some of the benefits these systems bring to security and resiliency.

Regulators are overcoming hesitancy about cloud

“The regulators are stuck,” a participant reported. *“The data is clear: 60% of the issues regulators deal with are the result of system upgrades. So they are cautious, but they recognize that we’ve got code in there that’s as old as 1971. Something has to give. They tried an approach of allowing certain things to go on the cloud, but not the precious, essential things. They tried to draw a red line, but they could not hold that line; they didn’t want to impose unnecessary limits.”* Another participant noted, *“Some regulators have realized that this is a reason to dust off principle-based regulation. Any audit style of regulation wasn’t going to fly. Some of the banks will struggle to bring regulators along with them because the regulators will be cautious and don’t have the skill set. The number of people within regulators who really understand this stuff is in the dozens.”*

“It all comes down to execution and who owns it.”

– Regulator

To get comfortable, regulators expect accountability for effective execution. *“It all comes down to execution and who owns it,”* stated a regulator, continuing, *“Boards should ask, How are you managing this? Who owns it? These take time; you can’t be overly agile at the beginning. Are you moving too fast, not thinking everything through? Are you getting adequate, accurate reporting from management?”* Another regulator said, *“Regulators have always been technology agnostic; you just have to show that you know how to use it, have the talent, and can make it safe and sound, manage the risks. We will ask whether you are exposing yourself or your customers.”*

Cloud resiliency is still not well understood

Operational resiliency has been a focus for regulators in recent years. That focus continues as banks advance cloud migration. *“There has been a lot of*

“We are not moving from a world of perfect resiliency; we are instead often moving from a world of really bad resiliency.”

– Participant

“I cannot see a world where examiners go into AWS [Amazon Web Services] or Google and say, ‘You passed.’”

– Participant

focus on asking whether the cloud is resilient enough. But we are not moving from a world of perfect resiliency; we are instead often moving from a world of really bad resiliency,” noted a participant. In fact, another asserted, *“Cloud is orders of magnitude more resilient. Mainframes are extremely risky, 100 or even 1000 times less resilient than cloud applications. We have the data.”*

Nevertheless, some questions remain about whether resiliency has been sufficiently tested. Indeed, some participants worried about the risk of one of the major cloud providers to the large banks going down: *“What is the answer if a certain cloud provider with 30–40 institutions on it goes down? What are the arrangements? How do you replicate them in a cloud-based world? Third-party providers say, ‘I can do this in the flick of a switch.’ It doesn’t always work like that.”* The question then becomes, *“What is a reasonable failover?”* Some participants were sure that rapid recovery was possible. One said, *“If one of the main cloud providers went dark completely, within an hour or two we could be up on another cloud provider. Banks ask, Can we be up in seconds? That is much harder. But we’re up to the challenge; it can be done.”*

Some directors do not yet feel as comfortable with their banks’ cloud resiliency and failover plans. One said, *“At a board level, this is not well understood. Even within a single cloud, what are the failovers? Have we tested it? Do we feel comfortable that we have a single provider or a single country?”*

Concentration risk remains a concern

Banking professionals continue to debate the relative risk from a concentration of large cloud providers across three levels:

- **Systemic risk.** Even if the cloud is more resilient than traditional mainframes, a participant pointed out the potential risk: *“If you’ve got 40 banks on the same cloud, that’s a different risk than 40 banks running on 40 different mainframes.”* Regulators are considering how to respond: *“Right now, you either ignore that the cloud provider is there and you talk only to the banks, or it gets to a point where we start to bring cloud providers into the regulatory framework. It is a big deal to bring them in. Then, is it just the financial regulators who do that? I cannot see a world where examiners go into AWS [Amazon Web Services] or Google and say, ‘You passed.’ So we are into a zero-trust type of world.”*
- **Strategic risk.** Some expressed concerns about vendor lock-in, whereby banks become dependent on a single cloud provider and switching becomes difficult. *“If you embed fully in one of them, you can’t get out,”* warned one participant. But another noted, *“We are not beholden to a*

“What does the map of cloud suppliers look like across the organization?”

– Participant

single provider; all banks have more than one provider. Switching is certainly not as easy as flicking a switch, but that was true if you were using IBM computers and mainframes or relying on Oracle in the old days.” Banks may need to be more strategic in their approach to cloud providers, said a participant who suggested that bank boards consider, *“What does the map of cloud suppliers look like across the organization? Different bits of the organization may be working with different providers, so you may have concentration in segments, but overall, you might not have organizational concentration risk. Have decisions about that been made based on any strategy or just because certain people fancied certain pieces of software?”*

- **Geopolitical risk.** A participant remarked, *“The biggest problem is not that there are three main cloud providers; the biggest problem is they are all American.”* While one participant said, *“Europeans want a European cloud,”* another said the real question is, *“Is this going to be a world that’s powered by US tech and cloud or Chinese tech and cloud?”*

Cyber risk is elevated, but systems are becoming more secure

“The biggest problem is not that there are three main cloud providers; the biggest problem is they are all American.”

– Participant

Cyber risk is ever present and seemingly ever increasing. More employees are working remotely, increasing the attack surface. Banks are working with more partners and sharing access to systems and data via APIs. The war in Ukraine and accompanying sanctions risk retaliatory actions toward global financial institutions as well. Yet BGLN participants have not seen a significant increase in successful attacks.

In surveying the current cyber environment, a participant reported, *“Levels of cyber activity are up partly because we call this the Microsoft super cycle. As soon as there is a vulnerability there, you have a global problem because it is so widely used.”* At the same time, the participant said, *“We have seen no increase in levels of sophistication of attackers.”* This participant identified third-party vulnerability and ransomware as the areas of greatest risk.

As for the war in Ukraine, one participant described the conflict as *“the dog that hasn’t barked,”* noting, *“We haven’t seen the activity that we anticipated.”* Participants have observed an increase in reconnaissance, with hackers monitoring systems for vulnerabilities that could be targeted for attacks later.

As a result of the investment in technology upgrades, bank systems are becoming more secure. A participant said, *“There are fundamentally unsecurable systems; these are legacy. It is just hard to secure those mainframes. I would never say you should move to cloud solely for the*

“There are fundamentally unsecurable systems; these are legacy.”

– Participant

purpose of security, but I would say you should manage legacy for the purpose of security.”

To date, according to one participant, there is no evidence that cloud providers are being targeted themselves. Cloud providers invest heavily in security, and despite the concerns about concentration risk, one participant even suggested that the fewer cloud relationships a bank has, the more secure it is: *“You are unquestionably increasing your cyber risk with multiple cloud providers; you can be attacked in multiple clouds. Google and AWS require differently trained populations. You are dramatically increasing complexity if something goes on.”*

Anticipating how DeFi could further disrupt traditional banking

“You are unquestionably increasing your cyber risk with multiple cloud providers.”

– Participant

Even as banks invest in upgrading their technology, DeFi threatens further disruption. DeFi and web3 are attracting significant attention, investment, and talent as financial services for crypto assets expand and users seek ways to exchange value on the internet. Though most participants continue to express skepticism about the more utopian visions for the future of DeFi, some expect DeFi to have a significant effect on traditional banking. As one participant remarked, *“Anything built in regular financial markets can be reinvented in a decentralized way.”*

Put simply, *“DeFi is banking for crypto.”* According to one participant, estimates suggest that anywhere from \$100 billion to \$2 trillion are tied up in crypto assets. An executive described the novelty of crypto assets and the implications for DeFi: *“This the first time that we’ve seen things that have no defined issuer or control; they are censorship resistant, they are confiscation resistant. No other asset works that way; they exist beyond the control of any individual or institution.”*

“Anything built in regular financial markets can be reinvented in a decentralized way.”

– Participant

DeFi also relates to the vision for web3, whereby users can exchange money on the rails used to exchange information. A participant described web3 as the next chapter in a *“story about the evolution of the web”*:

In this narrative, the web started as inherently decentralized and egalitarian. And over time, it became centralized, controlled by large companies like Google. Now you don’t own your own data or control it. The web3 and DeFi community says, ‘What if you could get back to a more decentralized web, where you own your own data and are no longer subject to large domineering companies? In web1, we consume information; in web2, we

create, consume, and share information; and in web3 we exchange value, not just information. This is another galaxy.

“In web1, we consume information; in web2, we create, consume, and share information; and in web3 we exchange value, not just information.”

– Participant

Participants expressed concerns about DeFi’s lack of transparency and traditional risk management and governance, and skepticism about its sustainability. And yet, as an executive said, *“you need to know a lot about it”* in order to understand its potential implications. *“The fact that the people around this table are talking about it, and kind of understand it, is a sign,”* noted another.

Participants shared perspectives regarding the implications of the growth of DeFi and the direction of travel for banks:

- **DeFi infrastructure will be more widely used.** *“Whatever you may think today, your kids are going to use this highway of value,”* contended one participant. *“We are still in the development phase, the investment phase of building the highways, which are only really just beginning to be used. It’s like Venmo: the banks were waiting for the Fed to build a better payments highway, and in the meantime, two kids at Penn built one.”*
- **DeFi is unlikely to be regulated soon, but continued growth may depend on it.** A participant posited, *“If DeFi is regulated, there would be clearer expectations for regulated entities getting into it, but that is not going to happen anytime soon.”* Regulators do see potential risks as DeFi expands crypto from being treated as tradable assets to currencies for payments; one said, *“Once you start talking about payment systems, it is a whole other question regarding regulation and systemic risk and stability of the payments system.”* Ultimately, a participant concluded, *“If this is going to scale, it will have to be part of the regulated system.”*
- **Distributed ledger technology (DLT) has some promising use cases in traditional banking.** While banks have experimented with blockchain and DLT for years, some still see potential for broader adoption. *“Look at DLT technology: an automated process to achieve consensus. It is tech to manage intercompany workflow, which currently doesn’t work well, so you can use tech to bring consistency, bring the two companies’ data into sync, putting data in code to automate. It is a way to improve interfirm business process management,”* said a participant.
- **Stablecoins and central bank digital currencies (CBDCs) are not DeFi but face their own obstacles to adoption.** A participant said, *“Once we start talking about stablecoins and CBDCs, we are no longer talking about DeFi.”* Others noted that the hype about CBDCs has gotten ahead of the

“Once you start talking about payment systems, it is a whole other question regarding regulation and systemic risk.”

– Regulator

“You separate money creation from credit for the first time in history.”

– Participant

reality, as the United States has sent *“a clear signal they do not want to pursue a CBDC despite the executive order from the Biden White House.”* Another participant suggested that CBDCs are inevitable: *“There is a sense that you have to have it because physical money is going away.”* But one participant cautioned, *“The macroprudential risk is that you can now have a CBDC account in a central bank and that will have a huge effect on the central banking system. If asset portfolios become dominated by CBDCs, you separate money creation from credit for the first time in history.”*

Looking ahead, a participant observed, *“Often things that start out decentralized end up centralized. One possible end state in this is that a new, large financial institution, built on DeFi, emerges.”* Another argued, *“The technology behind DeFi is proven. There is a bunch of dumb stuff happening, but it will work itself out. The cost of intermediaries will go away for things like securitization. It is highly efficient. It’s not blowing up; it’s not going away.”* As a result, an executive advised bank leaders to find out *“Who owns this in your institution? Who is working on it? Who knows about it and what are they doing and why? Because someone in every large bank is working on it—even if it is not part of their job.”*

As boards and management teams consider how best to allocate capital to technology investments, a participant recommended they ask, *“How quickly can we innovate for customers—spin up and roll out a new product with existing systems? How can we anticipate customer needs, and what’s our data strategy around that? How can we anticipate the needs of Zoomers?”* Improving these capabilities while managing execution risks and ensuring resiliency and security will remain a priority for banks over the coming years.

Appendix

The following individuals participated in these discussions:

Participants

- Homaira Akbari, Non-Executive Director, Santander
- Giles Andrews, Non-Executive Director, Bank of Ireland
- Nora Aufreiter, Corporate Governance Committee Chair, Scotiabank
- Win Bischoff, Chair of the Board, JPMorgan Securities
- Richard Brown, Chief Technology Officer, R3
- Bill Coen, Non-Executive Director, China Construction Bank
- Martha Cummings, Non-Executive Director, Marqeta
- Alisa DiCaprio, Chief Economist, R3
- Beth Dugan, Deputy Comptroller for Large Bank Supervision, OCC
- Dan Higgins, Chief Product Officer, Quantexa
- Christine Larsen, Non-Executive Director, CIBC
- Vishal Marria, Chief Executive Officer, Quantexa
- Jason Mills, Vice President, Sales Engineering, Snowflake
- Lyndon Nelson, Senior Technical Expert and Assessor, International Monetary Fund
- Edward Ocampo, Risk Committee Chair, JPMorgan Securities
- Yusuf Özdalga, Partner, Head of UK, QED Investors
- Andy Ozment, Chief Technology Risk Officer and Executive Vice President, Capital One
- Bill Parker, Non-Executive Director, Synchrony Financial
- Marty Pfinsgraff, Risk Committee Chair, PNC Financial
- Peter Raskind, Risk Committee Chair, Capital One
- Phil Rivett, Audit Committee Chair, Standard Chartered; Non-Executive Director, Nationwide Building Society
- David Roberts, Former Chair of the Board, Nationwide Building Society
- Manolo Sanchez, Non-Executive Director, Fannie Mae; Adjunct Professor in Management, Jones Graduate School of Business, Rice University
- Brad Steele, General Manager of the Americas and Managing Director of Global Partnerships and Alliances, Thought Machine
- John Sutherland, Audit, Risk, and Supervision Committee, European Investment Bank
- Paul Taylor, Founder and Chief Executive Officer, Thought Machine
- Radhika Venkatraman, Managing Director and Chief Data, Digital, Information, and Technology Officer, Credit Suisse

- Uzma Wahhab, Associate Director, Policy Planning, Division of Supervision and Regulation, Federal Reserve Board
- Barbara Wastle, Ring Fenced Bank Risk Officer, Lloyds Banking Group

EY

- Jan Bellens, Global Banking and Capital Markets Sector Leader, EY
- Peter Davis, Americas Financial Services Markets and Solutions Leader, EY
- Nigel Moden, EMEIA Financial Services Banking and Capital Markets Leader
- Chris Woolard, Partner, EMEIA Financial Services Consulting and Chair, EY Global Regulatory Network

Tapestry Networks

- Dennis Andrade, Partner
- Eric Baldwin, Principal
- Tucker Nielsen, Principal

About the Bank Governance Leadership Network (BGLN)

The BGLN addresses key issues facing complex global banks. Its primary focus is the non-executive director, but it also engages members of senior management, regulators, and other key stakeholders committed to outstanding governance and supervision in support of building strong, enduring, and trustworthy banking institutions. The BGLN is organized and led by Tapestry Networks, with the support of EY. *ViewPoints* is produced by Tapestry Networks and aims to capture the essence of the BGLN discussion and associated research. Those who receive *ViewPoints* are encouraged to share it with others in their own networks. The more board members, senior management, advisers, and stakeholders who become engaged in this leading-edge dialogue, the more value will be created for all.

About Tapestry Networks

Tapestry Networks is a privately held professional services firm. Its mission is to advance society's ability to govern and lead across the borders of sector, geography, and constituency. To do this, Tapestry forms multistakeholder collaborations that embrace the public and private sector, as well as civil society. The participants in these initiatives are leaders drawn from key stakeholder organizations who realize the status quo is neither desirable nor sustainable and are seeking a goal that transcends their own interests and benefits everyone. Tapestry has used this approach to address critical and complex challenges in corporate governance, financial services, and healthcare.

About EY

EY is a global leader in assurance, tax, transaction, and advisory services to the banking industry. The insights and quality services it delivers help build trust and confidence in the capital markets and in economies the world over. EY develops outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, EY plays a critical role in building a better working world for its people, for its clients and for its communities. EY supports the BGLN as part of its continuing commitment to board effectiveness and good governance in the financial services sector.

The perspectives presented in this document are the sole responsibility of Tapestry Networks and do not necessarily reflect the views of any individual bank, its directors or executives, regulators or supervisors, or EY. Please consult your counselors for specific advice. EY refers to the global organization and may refer to one or more of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. This material is prepared and copyrighted by Tapestry Networks with all rights reserved. It may be reproduced and redistributed, but only in its entirety, including all copyright and trademark legends. Tapestry Networks and the associated logos are trademarks of Tapestry Networks, Inc., and EY and the associated logos are trademarks of EYGM Ltd.

Endnotes

- ¹ Craig Guillot, "[Banks Spend Billions on Digital Transformation, but What's the Payoff?](#)" *Financial Brand*, February 2, 2022.
- ² Alan McIntyre, "[Banks' Great 'Core To The Cloud' Migration Is Finally Under Way,](#)" *Forbes*, March 22, 2022.
- ³ *ViewPoints* reflects the network's use of a modified version of the Chatham House Rule whereby comments are not attributed to individuals, corporations, or institutions. Network participants' comments appear in italics.
- ⁴ "[JPMorgan Chase & Co. \(JPM\) CEO Jamie Dimon on Q3 2021 Results—Earnings Call Transcript,](#)" Seeking Alpha, October 13, 2021.
- ⁵ "[JPMorgan Chase & Co. \(JPM\) CEO Jamie Dimon on Q4 2021 Results—Earnings Call Transcript,](#)" Seeking Alpha, January 14, 2022.