Banking in transition: overseeing non-financial risk in the midst of technological and business model transformation

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ViewPoints

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"We are going through one of the most transitional periods in banking's history. The speed and unprecedented scale of change and the risks inherent make it very difficult to stay one step ahead."

– Director

Immediately following the financial crisis, regulators and banks focused on addressing the risks that could bring down a bank or trigger another systemic crisis: credit risk, liquidity risk, and market risk. But other risks – conduct and compliance failures and systems issues among them – have had the biggest economic impact on the industry in the years since 2008. One participant coined the term "transition risk" to encompass the many hazards (conduct, compliance, systems, cyber, reputational, etc.) associated with the transformation of banks systems, operations, and structures. *"It is really about your approach to conduct, financial crime, strategic risk, and transformation risk. It is about, given the strategy we've chosen, what happens to the risk profile along the way, as we transition,"* a participant said. Many changes, particularly those related to the technological transformation of large banks, are helping financial institutions to address sources of non-financial risk. But they also introduce new risks.

Over the course of several months at the end of 2016 and the beginning of 2017, culminating with meetings on February 23 in New York and March 16 in London, Bank Governance Leadership Network (BGLN) participants discussed the practical challenges that boards and risk management teams face in overseeing non-financial risks in the midst of an accelerating change agenda. This *ViewPoints*[1] synthesizes the perspectives and ideas raised in the meetings, as well as in nearly 30 additional conversations with directors, executives, supervisors, and banking professionals. A list of individuals who participated in discussions can be found in Appendix 1. A companion *ViewPoints* entitled Cyber risk management: the focus shifts to governance captures content relating specifically to oversight of cybersecurity. These discussions yielded some themes and insights of note, summarized in the following sections:

- **The pace and scale of change in large banks heightens execution risk**
- **Balancing innovation and control complicates transformation initiatives**
- **Oversight of non-financial risks must continue to evolve**

The pace and scale of change in large banks heightens execution risk

Most banks are embracing change – reducing head count, integrating new technologies, and revamping their business models, structures, and infrastructure – but each stage of transformation brings new risks. One director summarized the situation: *"We are trying in a short period of time to transform to a completely different business model. This includes people, skills, and processes. Few organizations in the world have experienced change of that scale in such a short time, and in a risk environment where you can't afford to make any mistakes."* Many leaders worry that the pressure to do more, and to do it faster, is going to result in something slipping through the cracks. One executive cautioned, *"I can do a handful of things well, but I can't do thousands of things well at one time. The sheer amount of non-negotiables, things we simply need to do, is very large."*

"Few organizations in the world have experienced change of that scale in such a short time, and in a risk environment where you can't afford to make any mistakes."

– Director

Technology is upending the risk landscape

Banks are moving to fully digitized, increasingly automated operations with the goal of improving analytics, customer service, and operational efficiency. However, technological changes often bring risks, some of which participants highlighted:

- **Increased exposure to third parties.** More and more, regulated financial institutions are outsourcing operations to third-party providers and partnering directly with financial technology (fintech) firms. Across Europe and the United Kingdom, new regulations are forcing banks to allow third parties to interact with their delivery systems as part of what is often referred to as "open banking." These developments are making financial institutions vulnerable in new ways. A systems glitch from a third-party provider can bring a large bank's business to a halt. One participant had questions about ultimate accountability: *"Banks have increasingly partnered with IT firms and other banks. It is a world of alliances with an increased use of industry utilities. Fintech and emerging players will get plugged in. But where does that risk then go? Who takes accountability for those entities in their value chain?"* One particular concern is the potential for fraud stemming from third-party access. A director said, *"The presumption is the customer can instruct the bank to give access to their accounts to third parties. But the bank has no contractual relationship with the third party. I know it is a risk on the regulatory agenda, but what I'm worried about is the reputation risk."* Regulators are still working out how best to respond and acknowledge that *"the regulatory perimeter is crudely drawn at the moment."* They know new approaches are necessary to deal with a much more dispersed set of players involved in banking activities.
- **Systems transitions that could disrupt service.** Many firms are burdened by complex and increasingly outdated legacy IT systems. As they make changes to their core technology infrastructure, they need to guard against disruptions to service, or worse. Chris Skinner, a prominent writer on financial technology and banking, summarized the challenge: "How do you transform a business where the customer expects no risk and minimal change? … Change implies risk, and general banking should avoid risk in the eyes of both the bank and its customers … Any

"I can do a handful of things well, but I can't do thousands of things well at one time. The sheer amount of non-negotiables, things we simply need to do, is very large."

– Executive

fault, glitch or failure gains headlines of gloom. Any downtime, lost transaction or missed payment results in regulatory review."[2] A director agreed, noting, *"If there is an outage, I reckon we have 30 minutes before the national regulator is on us and an hour before we're on the cover of the newspaper. Regulators expect 24-hour service without disruption, as do customers."* Another director raised the issue of reputational risk: *"There are costs if something goes wrong, not only to fix it, but also the potential for reputational damage or issues that could lead to fines or penalties … The cost of error is huge."* Participants also cautioned that there are limits to banks' ability to make major systems changes quickly: a director noted, *"There is a limit to the number of people you can have under the bonnet at any one time."* Automation has clear benefits, including reducing the risk of error from manual interventions, but it also creates operational risks: *"You can automate all these processes, but they rely on underlying applications. If the applications change, it breaks the robots, then that shuts down your whole system,"* said one participant.

> *"If there is an outage, I reckon we have 30 minutes before the national regulator is on us and an hour before we're on the cover of the newspaper."*
>
> - Director

- **Heightened personnel risk stemming from streamlining platforms and operations.** An executive observed, *"We want to transform, but the legacy is a heavy burden. Your own people are the only ones who understand both the legacy systems and your business, so it has to be your people who transform the bank into this new thing. It is a massive challenge for leaders because you have to convince your people to move to a new world where you will need fewer of them."* Another noted, *"It is not just a change in business operations, but a change of skill sets"* that is needed to get people to think differently about how the business operates. The changes could also upend traditional hierarchies and structures: *"The people developing the transformation projects were usually hidden away, and the people running the business expected change to be delivered with a ribbon. That is not how it will work now,"* warned an executive.

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> - Executive

- **Regulatory and structural drivers of change persist.** Participants noted that other factors, including a relentless regulatory agenda, are also continuing to drive change initiatives across their institutions. One director said, *"I would personally say the regulatory-driven agenda has not abated at all and has probably gone up largely because of structural reforms and the increased regulatory focus on a range of conduct-related activities."* The regulatory landscape may change again given the geopolitical shifts in major markets, particularly in the United States, where the Trump administration and other political leaders are calling for major changes to regulations, and in the United Kingdom as it leaves the European Union. Speaking to the complexity of the situation, one director said, *"When you overlay business model changes and new operational capabilities, it is a deep hole, a very complex agenda to manage."* As a result, this director cautioned against over-simplifying the response or underestimating the risks: *"You need to be a little careful in saying there is a magic bullet, like technology. The only way to mitigate the risk is to reduce complexity by product or geography."*

- **Limited resources are being stretched.** Many of the change initiatives banks are undertaking draw upon the same resources and scarce subject matter experts. A participant observed, *"We have a number of things going on – regulatory driven and tech driven – and all of it must be funneled through a relatively small number of people."* Another said, *"My worry relates to scale. There are all these interrelated projects and activities falling on the same shoulders, not just subject matter experts, but management, and I worry about what gets dropped in the process."* The risk of too much falling on too few shoulders extends beyond the banks' own personnel as well: *"We rely on a few critical vendors. It is the same people doing everything, which is frightening,"* a director remarked, suggesting concentration risk is also a concern.

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Given these resources limitations, banks find it hard to move beyond reactive mode to proactive transformation. A director observed, *"The regulatory agenda requires about 80% of your skilled resources, so your capability to focus on improving your business model is strained. That is the big difference with other industries that don't have that regulatory overlay."* Nor can banks simply hire their way out of the problem, as newcomers will lack current employees' intimate knowledge of the institution's systems, processes, business model, and organization. Nevertheless, a participant suggested a shift is needed, saying, *"We are focusing on having the right people who are knowledgeable about what is happening today rather than yesterday. It is about connecting yourself with the proper resources, internally and externally. We tend to rely on the people we have, rather than challenge whether we have what we need."*

> *"We tend to rely on the people we have, rather than challenge whether we have what we need."*
>
> – Participant

Reputation risk remains a concern

One participant commented, *"My biggest concern is that any one institution can create reputation risk for the whole industry."* Banks continue to deal with negative public opinion thanks to the fallout from the financial crisis and subsequent scandals. A participant observed, *"The industry is taking on the sins of society – we are being held responsible for anything that any of our clients do. We are in a more activist environment, and banks are at the center."* This risk is amplified in the current political environment, where banks face attack from both sides of the political spectrum. *"If you take a stand, you pay the price. I don't see any way around it,"* said one participant. Social media and the rapid spread of information drive public opinion to greater extremes, and a negative story on social media can bring significant consequences. *"It can even turn into a liquidity risk. It can be life and death,"* said one director.

Reputation risk remains a concern *contd.*

Fintech players and technology companies such as Google and Apple are entering the banking market with brands that are often stronger and more trusted than the banks they are challenging. Many younger customers feel greater loyalty and allegiance to large technology firms than to incumbent banks. *"The risk framework used to be that as long as you had a reputable name, people were still coming to you. But there is a whole generation that views Amazon in the same way,"* said a director. One director went further, observing, *"Customers pay a lot of money because they attribute value to perceived quality. To my mind, few brands in financial services have done enough to distinguish themselves such that they can demand that higher price."* In the extreme, one participant went so far as to question whether it was worth keeping many businesses across countries under a legacy bank brand now that banks are no longer viewed as one-stop shops and are increasingly competing with a different mix of players in different businesses.

"We have to make big bets because the risk of not taking them is greater."

– Director

Balancing innovation and control complicates transformation initiatives

The challenge facing banks is to improve the agility of their organizations – so they can innovate and take advantage of rapid advances in technology – without compromising controls or running afoul of regulators. One participant suggested that banks have been overly focused on the latter: *"The financial crisis revealed that bank systems were not fit-for-purpose. The industry realized it couldn't aggregate the data it needed to, and risk oversight wasn't efficient. Since then, we simply built more layers on top to do things like recovery and resolution planning and stress tests. We need different thinking and different skill sets."* While banks are rightly focused on "keeping things safe," a 2017 EY survey suggests that firms are increasingly shifting strategically to "making things better," via innovation.[3]

One director said that past shortfalls and market and competitive pressures mean that banks can no longer afford merely incremental responses; now they must make major investments to improve their technology infrastructure: *"We have to make big bets because the risk of not taking them is greater."* But another participant warned that regulatory constraints will hamper banks' ability to foster an innovation culture: *"The reality is there is no room for fail fast at a big bank. It is just not possible today."* Boards and management teams, therefore, must ensure that the risks inherent in innovation and major transformation projects are controlled and the trade-offs understood. As a result of these constraints, banks will always approach innovation differently than technology firms or start-ups. Banks must have a longer-term, incremental perspective: *"We look at different technologies to try and determine what the expectations of customers will be and what the appropriate product set will be three to five years out. We work backwards and then consider what we can acquire and how we can prepare. Wholesale change for a large bank won't work,"* said one director.

"The reality is there is no room for fail fast at a big bank. It is just not possible today."

– Participant

Because of a number of recent high-profile scandals, banks are continuing to experience pressure to manage misconduct. Firms remain focused on conduct risk: they see product misselling, money laundering, and market abuse as the areas of greatest danger.[4] A director stated, *"We spend more time on conduct and culture risk because it is still the operational risk that could bring down a bank in today's environment. It is the number one risk to stability."* Yet, participants expressed concern that this focus on compliance gets in the way of improving customer service. In the extreme, one director suggested compliance with financial crime regulations and laws mean that *"our language makes it sound like the customer is the enemy."* Another director pointed out that *"customer due diligence [in financial services] requires a very different relationship with the customer than in most industries."*

One participant suggested that banks should consider new approaches to conducting business as they implement new technologies: *"When something happens, your first reaction is to defend what you did, and then it becomes a question of how you overlay some corrective action. You keep overlaying solutions onto the way we do things, when the way we do things may need to be different. Maybe it is not about trying to do what we did better, but a totally different way of doing it."*

"Maybe it is not about trying to do what we did better, but a totally different way of doing it."

– Participant

Oversight of non-financial risks must continue to evolve

Improving non-financial risk metrics, indicators, and reporting has been a focus for risk managers and boards as they have designed and implemented risk appetite frameworks. Boards are looking for better ways to know whether an institution's aggregate risk profile is within its stated risk appetite, although they also understand that perfect quantification and aggregation of some risks is impossible. One director summarized the challenge: *"When I look at most risk stripes, like liquidity, market risk, [and] credit risk, they are very mature. I can get ready-to-go reports. People have been doing that very well for 20 years. But that is not the case with operational risk."* Another director said, *"I'll give you a contrast. If I have a concern about what's happening in the energy sector, it is very easy for us to see our exposures and know what we need to do to hedge the market. At the risk committee, we can have that discussion in 30 minutes. Some of these other issues are so huge, and yet we don't have the same kind of data available."*

Some banks are currently experimenting with new approaches to risk, and one director asserted that this is required if there is to be real progress: *"We are so wedded to old ways of doing operational risk assessments. There is a real culture clash between the tech world and the traditional banking world, which seems to be thinking about risk in the way we did 20 years ago."*

The challenges posed by non-financial risk management

Participants highlighted some of the aspects of non-financial risk oversight that make improving it so difficult:

- **Setting tolerances.** A director asked, *"Can anyone say, 'Across my 10 buckets of operational risk, I know I am within my risk appetite'?"* As boards consider how

best to set tolerances for non-financial risks, one director suggested there may be lessons to be learned from industries such as pharmaceutical manufacturing, where zero tolerance for mistakes truly means zero tolerance. But another participant asked, *"Can banks afford to get to zero tolerance and still have sustainable business models? Banks need to deal with keeping pace to meet customer needs. How do you do that more efficiently and also deal with protection? Both cost a lot of money. At some point, you will run out of money."*

"Our teams are still focused on metrics used in the past, but they don't reflect the risks inherent today."

– Director

- **Measuring and aggregating.** *"For non-financial risk, even measuring where you are is very difficult because everything is in the details. It is very difficult to get a grasp on this. So we all agree on the risks and actions, but the risk itself is very difficult to quantify. It is a huge challenge for oversight,"* said one participant. Because non-financial risk covers such a broad range of issues and cuts across traditional categories, there can be confusion about what it encompasses and how to aggregate it. *"The hardest thing is to get a holistic view,"* said one participant. *"You have all the information, but it is scattered among different units. It is not put together."* Participants suggested that a critical first step would be the creation of a *"common taxonomy across the firm."* Others stressed the importance of making operational risk measurement *"more scientific and rigorous."* A director observed, *"There is a tendency to be anecdotal, to solve yesterday's issue … Our teams are still focused on metrics used in the past, but they don't reflect the risks inherent today."* Another participant said it was worth persevering through the difficulties to improve measurement because *"what gets measured does get attention."*

- **Increasing monitoring.** Directors described their progress on monitoring. *"There are some elements we are doing differently. We are better at monitoring what is going on in real time, due to technology. For example, we get insight into near misses,"* said one. Among the tools that firms are now using are enhanced surveillance and advanced scenario analysis. They are also making better use of data from staff engagement surveys, which is allowing them to be more predictive. These methods are not without their own trade-offs, however: constant monitoring and surveillance may not be conducive to an innovation culture and could scare away some employees.

"The second line also has a larger role, but you need much more engagement from the first line."

– Participant

- **Reconsidering the roles of the three lines of defense.** A participant stated, *"Operational risk needs much more emphasis on the first line self-assessment … The second line also has a larger role, but you need much more engagement from the first line."* A director agreed, saying, *"A lot of it is about better managing processes from the bottom up. We have engaged the first-line business much more effectively. We are being comprehensive in making progress in identifying different issues to rise to the board's attention."* The second and third lines are also experimenting with new approaches. One participant noted the increasing use of internal audit in assessing culture, describing it as *"quite promising,"* while acknowledging *"it is still early days."*

- **Improving the speed and effectiveness of responses to incidents.** Some participants suggested that banks should focus on ensuring that responses to incidents will limit the impact. One said, *"There is nothing wrong with saying you have a low tolerance. It is about how you respond to situations that are clearly out of your tolerance … Are you investing in skillsets to respond to incidents, whether it is cyber or operational incidents? When something big happens, do you have the skillsets to protect your reputation? Do you have the right response mechanisms in place?"*

> *"I think [risk awareness] is more like an impressionist painting than a portrait. There is a range of items, so you need to have your eyes wide open, but understand the limitations."*
>
> – Participant

While acknowledging the need to improve the rigor and precision of non-financial risk management, some participants cautioned against *"spending an inordinate amount of time and resources perfecting the measurement of apparent risks,"* instead of focusing on the difficult-to-predict risks that could cause real harm. A director said, *"We need to be realistic on the end point. We have all made considerable progress in understanding the lists of risks that we need to worry about. We have a scorecard to give us indications. But if we ever think we have something to tell the whole story, then we are misguided."* Most agreed with another participant who commented, *"I think [risk awareness] is more like an impressionist painting than a portrait. There is a range of items, so you need to have your eyes wide open, but understand the limitations."*

The importance of constant learning

Because technological advances are both sources of evolving non-financial risk and a means of addressing those risks, there is an ongoing debate about whether boards need directors with greater technical expertise and focus. One participant commented, *"We have had 30 years' practice regarding IT as an operational matter best delegated well below the board. But now the world is different – technology is driving social change as well as introducing new classes of risks … Do we have the right board composition and structure for the digital age?"*

> *"If you don't understand the technology, you need to learn."*
>
> – Director

Some boards have instituted technology committees, while others rely on advisers, either through external advisory boards, or by adding advisers as permanent members of board committees. However, participants continued to express differing views regarding just how much emphasis to place on technology expertise when selecting board members. One director asserted, *"You really need to understand how things work – a sense, a gut for this stuff – why this won't work if that doesn't happen. If you don't understand the technology, you need to learn. Technologists who came onto boards needed to learn banking; why can't bankers learn technology?"* Another said, *"Just because [we haven't] been in the technology business doesn't mean we are not aware of how technology issues impact our business. There is nothing wrong with tech expertise, but it is not either/or – we need people who have been in the C-suite and have overseen areas impacted by technology."* Participants emphasized that while some changes in board composition may be needed, more critical is that boards engage in constant learning to keep up with the pace of change. They also cautioned against a board relying too heavily on a specialist member: *"It is great to have tech literacy, but the worst thing is to have a board with one tech director and rely solely on him …. The tech and operations committee has allowed*

us to spend more time going deeper, but it is not a substitute for a full-board discussion," said one director. Participants generally agreed that access to expertise, and ongoing education and exposure to technological advances, is more effective than adding specialist directors to the board.

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Directors, executives, and regulators acknowledged that tensions inevitably exist between risk management, cost control and the speed of business model transformation. Oversight of non-financial risk therefore continues to be a work in progress. As the nature of these risks evolves, so too will oversight. We can expect to see risk management leverage technologies similar to those being applied in the businesses to improve monitoring and aggregation. One chairman noted that the agenda for the board continues to expand with the breadth and pace of change: *"It is both that expectations for boards have increased and that there are so many activities to focus on at the same time."* Boards need access to technical expertise to ensure they understand how these risks are evolving, and management needs to provide new and different kinds of reporting and information to ensure the board knows how exposed the bank is to the full range of non-financial risks and how the risk profile is changing.

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, members of 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.

Appendix: discussion participants

In February and March of this year, Tapestry and EY hosted two BGLN meetings on the challenges in overseeing non-financial risk in a period of rapid technological, business model, and operating model change, and had over 50 conversations with directors, executives, regulators, supervisors, and other thought leaders. Insights from these discussions informed this *ViewPoints* and unattributed quotes from these discussions appear throughout.

The following individuals participated in BGLN discussions on the changing nature of non-financial risk:

Bank directors and executives

- Clare Beale, Global Head of Independent Model Review, HSBC
- Bill Bennett, Risk Committee Chair, TD Bank
- Win Bischoff, Chairman, JP Morgan Securities
- Lord Norman Blackwell, Chairman of the Board and Nomination & Governance Committee Chair, Lloyds Banking Group
- Jonathan Bloomer, Non-Executive Director, Morgan Stanley International
- Chantal Bray, Global Head of Pension Risk, HSBC
- Juan Colombás, Executive Director and Chief Risk Officer, Lloyds Banking Group
- David Conner, Risk Committee Chair, Standard Chartered
- Sir Sandy Crombie, Senior Independent Director and Performance and Remuneration Committee Chair, RBS
- Sir Howard Davies, Chair of the Board and Nominations and Governance Committee Chair, RBS
- Nick Donofrio, Non-Executive Director, BNY Mellon
- Noreen Doyle, Vice-Chair of the Board and Lead Independent Director, Credit Suisse
- Dina Dublon, Risk Committee Chair, Deutsche Bank
- Betsy Duke, Independent Vice Chair, Wells Fargo
- Douglas Flint, Chair of the Board, HSBC
- Tom Glocer, Operations and Technology Committee Chair, Morgan Stanley
- Nick Godfrey, Managing Director and Co-Chief Information Security Officer, Goldman Sachs
- Byron Grote, Non-Executive Director, Standard Chartered
- Mike Hawker, Remuneration Committee Chair, Macquarie
- Bob Herz, Audit Committee Chair, Morgan Stanley
- Olivia Kirtley, Risk Management Committee Chair, US Bancorp
- Axel P. Lehmann, Group Chief Operating Officer, UBS
- John Lipsky, Non-Executive Director, HSBC
- Rachel Lomax, Senior Independent Director and Conduct & Values Committee Chair, HSBC
- Douglas Lyons, Chief Credit Officer, Nomura International
- Deborah McWhinney, Non-Executive Director, Lloyds Banking Group
- Scott Moeller, Risk Committee Chair, JPMorgan Securities

- Andy Ozment, Co-Chief Information Security Officer, Goldman Sachs
- Bill Parker, Vice Chair and Chief Risk Officer, US Bancorp
- Kevin Parry, Audit Committee Chair, Nationwide Building Society
- Nathalie Rachou, Risk Committee Chair, Société Générale
- Susan Segal, Corporate Governance Committee Chair, Scotiabank
- Alexandra Schaapveld, Audit and Internal Control Committee Chair, Société Générale
- David Sidwell, Senior Independent Director and Risk Committee Chair, UBS
- Tim Tookey, Risk Committee Chair, Nationwide Building Society
- Jasmine Whitbread, Brand, Values & Conduct Committee Chair, Standard Chartered

Regulators, supervisors, and others

- Jonathan Davidson, Director of Supervision, Retail & Authorizations Division, UK Financial Conduct Authority
- Harald Heide, Head of Section in DG-MS1/6a, European Central Bank
- Lyndon Nelson, Deputy CEO & Executive Director, Regulatory Operations and Supervisory Risk Specialists, Bank of England Prudential Regulation Authority
- Stephen Page, Non-Executive Director, BSI Group and the National Crime Agency
- Bruce Richards, Senior Vice President and Head of the Complex Financial Institutions, Federal Reserve Bank of New York
- Molly Scherf, Deputy Comptroller, Large Bank Supervision, Office of the Comptroller of the Currency
- Todd Vermilyea, Senior Associate Director, Division of Supervision and Regulation, Federal Reserve System

EY

- Omar Ali, Managing Partner, UK Financial Services
- Peter Davis, Americas Financial Services Advisory Leader
- Marie-Laure Delarue, EMEIA Banking and Capital Markets Leader
- John Doherty, Partner, Governance Risk and Compliance
- Steve Holt, Partner, FS Advisory
- Ertem Osmanoglu, Americas Deputy Cybersecurity Leader
- Isabelle Santenac, EMEIA FSO Assurance Managing Partner
- Bill Schlich, Global Banking and Capital Markets Leader

Tapestry Networks

- Dennis Andrade, Partner
- Jonathan Day, Vice Chairman
- Colin Erhardt, Associate

Endnotes

[1] *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.
[2] Chris Skinner, "Is It Fintech or Techfin (Part Two)," Chris Skinner's Blog, February 8, 2016.
[3] EY, *Uncertainty Is No Excuse for Inaction,* Global Banking Outlook 2017 (London: EYGM Limited, 2017), 5.
[4] EY, Rethinking Risk Management: Banks Focus on Non-Financial Risks and Accountability (London: EYGM Limited, 2015), 30.