Bridging the technology gap in financial services boardrooms

By Richard Lumb, Mauro Macchi and Juan Pedro Moreno
Do directors have the technology expertise they need?

Technology has moved to center stage in financial services. It is critical to competitive advantage and is a major concern for regulators. Technology also presents new risks that companies need to report to shareholders. Are boards doing enough to keep up?

Many of the biggest challenges now confronting banking and financial services are intimately connected with technology. Banks are facing critical decisions about strategy, cost reduction and implementing regulatory change—all of which have huge technology implications. BBVA's Chief Executive Officer (CEO), Francisco González, told a recent conference that BBVA will be a software company in the future. González is a former software engineer himself. But in most bank boardrooms, technology expertise is still in woefully short supply.

The combination of rapid technological innovation, outdated information technology (IT) infrastructures and new, post-crisis regulations has created an urgent need for increased technology expertise on boards.

The digital revolution has unleashed a wave of innovation that is profoundly transforming the financial services industry. Mobile applications, big data and cloud computing, to name a few, offer significant opportunities for banks to better serve their customers, but they require massive IT investment and changes to existing systems. Additionally, these innovations are equally available to big technology companies that are increasingly acting like competitors. That’s creating an immediate threat to financial institutions that fail to embrace technology.

Regulations are also driving technological changes. Complying with new regulations—whether around ring-fencing or money laundering—invariably requires extensive reprogramming or changes to IT systems.

Tougher capital requirements have also reduced the profitability of many products, forcing financial services companies to look for cost savings. With IT accounting for a significant slice of the cost base, financial institutions have to rebuild IT infrastructure, sometimes extensively.

The IT challenge is all the more acute because of problems many big banks already have with their antiquated “core banking” systems. The big U.K. banks have core systems dating back to the 1970s or even 1960s that are inflexible, vulnerable to outages and ill-suited to the heavy demands of digital and mobile banking.

Finally, there are the regulators. As the financial services industry has become increasingly reliant on technology, regulators have signaled concerns about the industry’s ability to handle technological challenges. The capacity of financial institutions to manage their existing IT infrastructures, cope with the changes taking place and address growing cybersecurity risks is being closely scrutinized by regulators. They now regard technology as a potentially systemic issue with implications for the overall stability of the financial system.

Despite the centrality of technology, many existing boards of financial services companies are singularly ill-equipped to assess and make critical decisions about strategy, investment and allocation of IT resources.
How technology is affecting boards

Technological innovation: The business strategy challenge

Digital technology is transforming the financial services industry and new disruptors—from big technology companies to small digital startups—are challenging the dominance of incumbents and attacking parts of the value chain.

The financial services industry has long been the biggest spender on IT. Banks will spend more than $360 billion worldwide in 2016, more than any other sector, according to Gartner.1

However, the role of technology in the financial sector is fundamentally changing. In the past, technology was largely an enabler. It made back-office processing more efficient as machines replaced clerks. It had little bearing on the relationship with the customer.

Digital has changed that. Technology has become an intrinsic part of the business strategy at financial services firms. Digital not only means new banking channels, it also offers a unique opportunity for banks to drive growth and profitability. According to Urs Rohner, Chairman of the Board of Directors at Credit Suisse, “Technology competence on Board level is not only a necessity, it will soon become indispensable for financial institutions.”

Digital technologies open up new revenue streams by enabling banks to serve customers they could not cost-effectively serve before. Mobile banking allows banks to expand their reach to populations living in areas where it would not be profitable to build branches. Cognitive computing can let banks offer cost-efficient personalized financial advice to customers who want special treatment but are not wealthy enough to afford high-end private banking services. Digital can also help banks improve customer engagement by offering new services, including non-financial services. For instance, Commonwealth Bank has launched a mobile application to help customers buy homes. The app covers all homes in Australia and allows house hunters to find out the last sale price and what the property is likely to cost now.

Finally, by further automating manual, paper-based processes, and increasing self-service options for customers, digital can drive significant cost reductions while improving customer service. JPMorgan Chase estimates that the cost of servicing fully digital bank accounts is 70 percent lower per household than traditional accounts.

However, while offering new business opportunities, digital is also posing a threat to banks. Financial services companies are no longer competing just with their traditional peers in the industry but also with digital disruptors. Many of these companies are the same technology firms that have already disrupted other industries like retail and music.

They are now turning their sights on financial services. Ana Botín, Executive Chairman of Santander, said in an interview in February 2015: “If you think about the big guys now, it is not the banks, it is these four large tech companies (Apple, Facebook, Google and Amazon) that are worth more than us.”

Digital disruptors are rapidly making their way into banking territory. Already newcomers are making inroads in markets that were once the exclusive purview of financial services firms. Established technology companies, such as Apple and eBay, and upstarts like Square, are encroaching on the payment space. Elsewhere, robo-advisors are fighting for retail asset management customers while peer-to-peer lending companies are offering consumer loans.

According to our estimates, such competition could put about one-third of bank revenues at risk by 2020.

The digital revolution has unleashed a growing wave of change, of which we have only seen the beginning. Cloud computing, big data, advanced analytics—such as data storage technology that enables high-speed analysis of massive data volumes—blockchain, artificial intelligence and quantum computing are just a few examples of new technologies that have the potential to transform the financial services industry.

Overseeing strategy is one of the main responsibilities of the board of directors, and new technologies are now at the heart of banks’ strategies. This means the board needs a full understanding of the implications, opportunities and threats around technology in order to set strategies.
Core banking systems: Facing up to big decisions

The antiquated state of many banks' core IT infrastructures is another technology issue boards must deal with.

At the heart of a retail bank’s IT infrastructure is its so-called “core banking system”, which credits and debits money to accounts and calculates fees and interest. Most of the big banks still have systems that date back to the 1970s or even 1960s. Like a house built on ancient foundations with new additions over the centuries, the banks have patched on new IT systems around the core over the years to provide new functions and services. But the antiquated core systems—developed at a time when banking was largely done through branches and transactions were processed overnight in batches—are increasingly vulnerable to outages.

Skyrocketing online and mobile banking activity is placing huge demands on bank IT systems. Over the past decade, customer balance inquiries have increased tenfold as a result of new digital channels such as mobile.

Banks are spending the lion’s share of their huge IT budgets just to maintain their creaking infrastructures, leaving little left to develop the new digital products and services they need to stay competitive. According to Celent, in 2014, three-quarters of all IT spending globally went to maintaining aging systems, leaving only a quarter to spend on innovation.

As IT demands increase and it becomes more and more difficult to patch up ancient systems, boards of directors will be faced with critical decisions to make about modernizing IT infrastructures. It will be essential to strengthen core systems if banks are to make the most of technological innovations. But should they do so in stages? Or should they opt for an entirely new core banking system—an IT replatforming, in the jargon—which experts liken to the banking equivalent of open-heart surgery?
Regulation: The impact of post-crisis reforms

Post-crisis regulatory reforms pose significant IT challenges for the financial services sector.

Structural reforms meant to make the banking system safer—such as the Volcker Rule in the U.S., ring-fencing of core activities in the U.K. and the Liikanen proposals for the European Union—have far-reaching implications for bank operations and IT systems. Creating regulatory firewalls between retail and investment banking activities requires either setting up two duplicate IT infrastructures or creating service–operating companies that contract their services to the different parts of the group.

A host of other new compliance field regulations are changing the way banks interact with clients, monitor staff and report to regulators. Virtually all of these regulations require time-consuming and expensive reprogramming and changes to IT systems.

According to IDC, worldwide risk IT spending will grow from $77.8 billion in 2015 to $101.5 billion by 2019, mainly driven by investments in compliance and controls.

Tough new capital and liquidity requirements—such as Basel III in banking and the Federal Reserve’s decision in 2014 to create a standardized minimum liquidity requirement for large banks in the U.S.—have all increased the cost of doing business, making many product lines unprofitable. This is forcing the industry to drive down costs through operations and IT savings because these two areas account for a significant portion of the cost base.

National regulators are also pressuring global banks to separate their local operations and IT systems so they can be regulated on a country-by-country basis.

These reforms are already at the top of boardrooms’ agendas, but given their technology implications, boards will need technology expertise to make informed decisions.
The regulator's perspective: Heightened scrutiny of technology issues

Regulators now view technology as a systemic issue with direct implications for the viability of both financial services companies and the financial system as a whole.

This was brought home during the financial crisis by the run on Northern Rock in 2007. The immediate cause of the run was not the bank running out of cash but inadequate server capacity as desperate customers tried, and were unable, to withdraw money online.

Successive outages at leading banks have heightened regulatory concerns. Regulators are also worried about cybersecurity and the risk of data breaches.

As a result, regulators have made it clear that they regard the resilience and stability of IT systems as an important boardroom responsibility:

• Following a series of IT outages in 2012, the Financial Conduct Authority (FCA) wrote to the chairmen of the major U.K. retail banks asking boards to identify steps to assess how vulnerable their banks were to technology failures that would affect retail banking services. They asked boards to work toward mitigating exposure to these IT risks.

• The FCA has identified technology as one of the most pressing issues for banks. This year the authority added concerns about cybercrime to its list of areas where banks need to be focused.5

• U.S. Securities and Exchange Commissioner Luis A. Aguilar told a recent conference that: “Boards of directors are already responsible for overseeing the management of all types of risk, including credit risk, liquidity risk and operational risk and there can be little doubt that cyber-risk also must be considered as part of boards’ overall risk oversight.”

• In a report published in February 2015, the Financial Industry Regulatory Authority (FINRA) suggested that “the board of directors should take an active role addressing cybersecurity issues, as firms with an actively engaged board had a strong positive impact in focusing attention on, and making resources available for, cybersecurity.”

• EU regulators are demanding that Internet transactions be made more secure. Boards will have to help banks figure out how to ensure greater safety online.

In addition to responsibilities being imposed by financial regulators, boards of publicly traded companies also have a duty to assess and report on the key risks in their business. Technology now falls squarely into that category.
Boardroom technology expertise is in short supply

Despite the critical importance of technology in financial services, the level of technology expertise in boardrooms is very low. Accenture research, analysing technology professional experience in boardrooms of more than 100 of the largest banks around the world, shows that:

Banks have limited technology expertise representation on their boards.

- Only 6 percent of board members of the banks analyzed have technology professional backgrounds (Fig. 1).
- Only 3 percent of CEOs of these banks have technology professional backgrounds (Fig. 2).
- Of the 109 banks, 43 percent (47 banks) don’t have any board members with professional technology backgrounds (Fig. 3).
- One-third (30 percent–33 banks) have only one board member with a professional technology background (Fig. 3).

While boards of U.S. and U.K. banks have the most directors with professional technology backgrounds, numbers are still low.

- In North American banks (U.S. and Canada), 12.1 percent of board members have professional technology experience, compared with 5.1 percent for European banks and 5 percent for Asian banks (Fig. 4).
- Boards of banks in the U.S. and the U.K. have higher percentages of directors with professional technology experience than those in any other countries. But the numbers are still low, at 16 percent of directors in the US and 14 percent in the UK. (Fig. 5).
- Boards of Chinese, Brazilian, Greek, Italian and Russian banks have the lowest technological experience representation. Less than 1 percent of directors at Chinese banks—and none of the directors at Brazilian, Greek, Italian and Russian banks—have professional technology experience. (Fig. 5).

According to global research conducted by Russell Reynolds Associates, the financial services industry has one of the lowest percentages of boardroom digital expertise (13 percent), behind the health care (39 percent), consumer (42 percent) and technology (48 percent) industries.
Fig. 1: Professional technology experience of board members at the world’s largest banks

Fig. 2: Professional technology experience of CEOs at the world’s largest banks

Source: Accenture

Fig. 3: Banks according to the number of board members with professional technology experience

Source: Accenture

Fig. 4: Percentage of board members with professional technology experience by region

Source: Accenture
Notable examples of technology representation on financial services boards

<table>
<thead>
<tr>
<th>Company</th>
<th>Board members with technology experience</th>
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<tbody>
<tr>
<td>BBVA</td>
<td>Mr. Carlos Torres Vila is the President and COO of BBVA and formerly was head of digital banking at BBVA.</td>
</tr>
<tr>
<td>China Construction Bank</td>
<td>Mr. Panshi Jin has been General Manager of the IT Management Department at China Construction Bank since 2010.</td>
</tr>
<tr>
<td>Goldman Sachs</td>
<td>Mr. David A. Viniar was the head of the Operations, Technology, Finance and Services Division at Goldman Sachs from 2002 to 2013.</td>
</tr>
<tr>
<td>HSBC</td>
<td>Ms. Safra Ada Catz is the CEO of Oracle.</td>
</tr>
<tr>
<td>Nationwide Building Society</td>
<td>Mr. Mitchel Lenson was the group CIO of Deutsche Bank from 2000 to 2004 and has previously served as managing director, global head of operations and operations IT at UBS Warburg.</td>
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Source: Accenture
Historically, boards have dealt with issues like executive compensation and succession planning, financial results, legal risks, potential acquisitions and business development. For many companies, technology has not been on the agenda aside from the occasional CIO briefing. But technology is now a key issue, and the reality is that boards are ill-equipped to assess and make decisions about the issues confronting financial services companies.

That must change. Companies need to prioritize digital transformation to keep up with regulations and delve into new profitable businesses.

The boards of financial services companies are taking notice, but there are hurdles to overcome, as finding directors with the appropriate technology experience may be challenging. Sir Philip Hampton, former chairman of Royal Bank of Scotland, said in an interview that RBS was keen to hire a technology expert to join its board but that they were not easy to find.

However, banks should also realize that having one or two technology experts on their boards is not a panacea. The challenge is to bring about more fundamental change in boardroom culture by ensuring that the opportunities and risks posed by technology take a much higher priority on the boardroom agenda. What is required is a combination of technology experts with deep expertise and also much improved knowledge and insight into the impact of technology among the other members of the board.

Boards need regular technology coaching

In order to help improve the technology capability of all directors, which will help them make informed decisions, boards need to embark on a regular program of personalized coaching. This should take the form of six-month coaching programs that will help provide insights into the technology landscape and its business implications in the financial services industry but also in other sectors. During these programs, for instance, board members will work on scenario-based case studies to help them learn to make the right decisions around technology and investing challenges.

These coaching programs will be designed to improve board members’ technology acumen so they are in a position to:

- Evaluate and decide upon strategies and investments where digital technology is central.
- Decide on major technology investments, including which technologies and what budgets are needed and whether the firm should invest in technology startups.
- Evaluate and approve partnerships. For example, can the firm identify ways to share costs with other peer banks on high-cost, non-differentiating IT assets such as back-office trade processing?
- Assess and make judgements about the state of technology in the business in order to meet the increasing demands of regulators.
- Judge technology risk and report regularly to shareholders on everything from cyber threats to the risk of technology obsolescence.
Forming technology committees should be the new norm

These committees should report to and advise the board just like audit and risk committees. They should include independent technology experts to help boards oversee regulatory compliance (around things like the FCA’s IT resilience request) and monitor progress. Technology committees should also consider partnering with outside experts to help hone their discussions about technology challenges.

Having the right person on the right committee asking the right questions can be a catalyst for change and positive innovation. Some things the committee will need to think about:

- What is our strategy for managing continuous technology innovation?
- With digital advances blurring the boundaries of banking, what can we learn from technology best practices in other industries and how can we apply these in our firm?
- When it comes to technological disruption, do we want to be an early adopter or a fast follower? Is this reflected in our investment plans?
- How should we evolve our core systems, and should we consider replacing our technology or undertaking a gradual transformation?
- Should we embrace artificial intelligence technologies such as blockchain, robotics and cognitive computing?

Asking these questions and others like them will go a long way toward identifying the gaps in banks’ organization where help is needed most, and working with the right experts will help board members strategize about the best solutions to technology problems.

According to our analysis, only 11 percent of the leading banks currently have technology board committees in place (Fig. 6).

It is not sufficient for financial institutions to just realize that their businesses are under threat and that innovation is critical to prevent them from being disrupted. They also need a clear innovation agenda with measurable objectives, investment plans and execution strategy. Board directors have a key role to play in helping set the trajectory and monitor progress, but to do so, they will need to fill the current technology expertise gap in boardrooms. Otherwise, it will be challenging for them to fulfill their role.

One thing is certain—change is coming. How boards deal with that change caused by the challenges and opportunities of technology will go a long way to determining who become the winners and losers of the coming transformation.

Fig. 6: Board-level technology committees at the world’s largest banks

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<tr>
<th>Banks without board-level technology committees</th>
<th>Banks that have established board-level technology committees</th>
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<tr>
<td>89%</td>
<td>11%</td>
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Total = 109 banks

Source: Accenture
About Accenture

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions—underpinned by the world’s largest delivery network—Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With approximately 373,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at www.accenture.com.

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Accenture research methodology

Accenture analyzed the professional backgrounds of all board members (1,925 inside and non-executive directors) of 109 of the largest banks in the world. For the purpose of this analysis, Accenture defines board members who have technology experience as those who meet at least one of the following criteria:

- They have senior technology responsibilities (e.g., CIOs, CTOs, CDOs) at their current company or had such responsibilities in previous companies.
- They have or had senior responsibilities at a technology firm.

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