

THE WORK AHEAD

Seizing the Digital Advantage in Banking and Financial Services

By Philippe Dintrans, Manish Bahl and Amit Anand

The Work Ahead is a research series providing insight and guidance on how business - and jobs - must evolve in an economy of algorithms, automation and AI.

Banking and financial services organizations are already using digital to rewrite their future. Our research shows these businesses are spending more - and gaining more - from digital than the cross-industry average. To unlock the full potential of the digital economy, these organizations must open their eyes to the cost-savings opportunities of digital, face up to their cybersecurity fears, and start tackling the talent gap.

THE WORK AHEAD IN BANKING AND FINANCIAL SERVICES

The accelerating age of digital is impacting every business, and the banking and financial services industry is not exempt. The very basis for competition among banking and financial services companies has expanded beyond its traditional arsenal of price, product features, service quality, new products and branding, to include a new category: “hyper-personalization.” With increased encroachment from digitally-enabled startups and existing players, coupled with rising expectations of digitally-empowered consumers, financial services institutions are set to undergo a massive transformation in how they conduct business over the next decade.

From banking to payments to wealth management, nearly every activity related to banking and financial services is being re-imagined by startups, some of which have attracted large amounts of interest and accompanying investment. The work ahead for financial services companies is to move beyond their traditional transactional relationship with customers, and embrace a new standard of providing highly personalized and integrated services.

To understand the changing nature of work, commerce and success in the dynamic digital economy, we surveyed more than 2,000 executives globally (333 in the banking and financial services industry). Our findings build on data collected for us by Roubini ThoughtLab, a leading independent macroeconomic research firm founded by renowned economist Nouriel Roubini. (For more on study methodology and demographics, please see page 22.)

This report offers a detailed view of the huge leaps digital has made in a short period of time and the value that financial services organizations have already generated from new thinking and emerging technologies that represent the future. The line between large vs. mid- or small-size institutions is blurring as digital technologies are embedded throughout the front, middle and back office. Key findings revealed by our research include:

- **Digital means money.** Going digital could propel revenue growth by more than 12% through 2018 for the banking and financial services companies surveyed, up from 5.3% today. Companies are digitizing every aspect of their business, such as business quote creation, loan application processing, bank reconciliation processes and auditing.
- **Back office is a wildly overlooked opportunity.** In spite of digital fueling significant revenue growth, companies have yet to unlock the real value of their back offices. Companies need to be digital at the core to super-charge profitability by eliminating process inefficiencies across the back office.
- **Smart investments = smart ROI.** Banking and financial services respondents are reaping the rewards of their wise digital investment decisions. While they are spending about the same amount on digital as the industry average, they expect higher ROI: 104% vs. the 86% average.
- **Digital leaders hold a 140% advantage over digital laggards.** Companies slow to invest in digital report an average economic impact (cost savings plus revenue growth) of about 3.1% per annum, while digital leaders report an impact of about 7.4% as a result of going digital. No company can escape the impact of new technologies on work and business.
- **Big data and artificial intelligence (AI) will shape the future of work.** Big data/analytics and AI will spur monumental change in value generation for companies. AI-led automation will accelerate the pace of middle- and back-office modernization.
- **New tools of commerce are on the horizon.** Between now and 2020, cybersecurity and big data are the digital technologies expected to generate the greatest business value. But financial services businesses need to prepare now for less familiar - but even higher value - technologies that will be in full force by 2025, such as blockchain, digital currency, sensors/ Internet of Things and AI.
- **Businesses fear cyber-based vulnerability.** Banking and financial services respondents strongly feel that customers will be more exposed to fraud and theft as digital business progresses. The loss of privacy and security are the undesired consequences of becoming digital. If unaddressed, a single error could irreparably destroy consumer trust. (For more on this topic, [read our white paper "The Business Value of Trust."](#))

Note: In this report, the insurance industry is not included in the banking and financial services sector.

MEASURING THE MAGNITUDE OF DIGITAL

According to Roubini, the banking and financial services industry generated over \$8.1 trillion in revenue in 2015 (roughly the scale of about 11% of the world's GDP). Digital transformation, by comparison, will generate \$2.6 trillion in new revenue opportunities for the industry leading up to 2018. Winning companies, according to our research, will dominate not by virtue of their strong industry experience but by their ability to meld consumer experience with the power of digital platforms in highly innovative ways. The industry has already moved from "product-centricity" to "customer-centricity," shifting the focus of its big data analytical strengths to the evolving relationship between customers and their money, and designing ways to serve them with more personalized experiences.

Digital Is Money

As Brian Hartzer, CEO of Australian bank and financial services provider Westpac, once pointed out, “Banks should try to act like startup companies if they are to thrive in an era of sweeping technological change. Westpac is trying to think and act like a 200-year-old startup company.”¹ Westpac is not alone; Goldman Sachs says it now thinks of itself primarily as a tech company,² and our study indicates the digital agenda is now a top priority for banking and financial services executives globally (see Figure 1). Respondents are looking to use digital to rewrite their industry and their future by applying what is emerging as the most profitable business path. Those who underestimate the power of digital are already on the way to self-destruction, our research suggests.

Revenue-wise, the economic impact of going digital is set to mushroom between now and 2018. Consider the following:

- Digital alone generated about 5.3% of revenue in 2015 (see Figure 2), which amounts to \$87.6 billion.
- Over the next year, executives believe they could generate an additional \$13.3 billion in revenue value if they took full advantage of digital.
- Revenue growth influenced by digital (as a percentage of total sales) is expected to more than double by 2018, from 5.3% to 12.1%, unlocking value of about \$180 billion per year. That’s a total economic impact of about \$542.4 billion projected by the end of 2018 across all financial institutions studied. This means if the digital opportunity existed as a stand-alone bank, it would be the world’s biggest banking institution, with assets of \$890 billion – nearly the size of the world’s nine largest banks in existence today.

From traditional conservative financial institutions to progressive enterprises, all are looking to leverage digital to remake themselves and their industry. Banking and financial services companies are adopting multi-pronged digital strategies, implementing a wide range of programs, such as funding fintech labs and accelerators, and establishing digital studios/factories to foster startup-like innovations.⁴ Cases in point:

- We worked with a large North American bank that created an omnichannel platform for customer acquisition. This led to an average of 5,200-plus lead captures across various banking products per week, over 740,000 website views and increased cross-sell opportunities through targeted digital marketing campaigns.
- By partnering with the auto marketplace company TrueCar, Inc., JP Morgan Chase used digital to expand its auto financing business and launch an online customer-facing platform. The partnership is not only helping the bank expedite car loans, but it also provides an end-to-end solution to customers seeking to check loan availability, as well as select and configure/customize automobiles.⁵
- BBVA is embracing a digital model built on open application program interfaces (APIs). This enables the bank to plug and play in an emerging innovation ecosystem designed to widen its customer reach, grow revenue and increase its brand recognition. Since 2006, BBVA has embarked on an aggressive digital journey by creating a dedicated digital banking division, launching a fintech-focused capital firm to tap innovations, acquiring startups such as Holvi and Madiva, and investing in digital banks, such as Atom Bank.⁶

² Clancy Yeates, “Banks Should Act Like Startups,” *The Sydney Morning Herald*, July 24, 2014, <http://www.smh.com.au/business/banks-should-act-like-startups-westpac-20140724-zwgrm.html>.

³ Jonathan Marino, “Goldman Sachs Is a Tech Company,” *Business Insider UK*, April 12, 2015, <http://uk.businessinsider.com/goldman-sachs-has-more-engineers-than-facebook-2015-4?r=US&IR=T>.

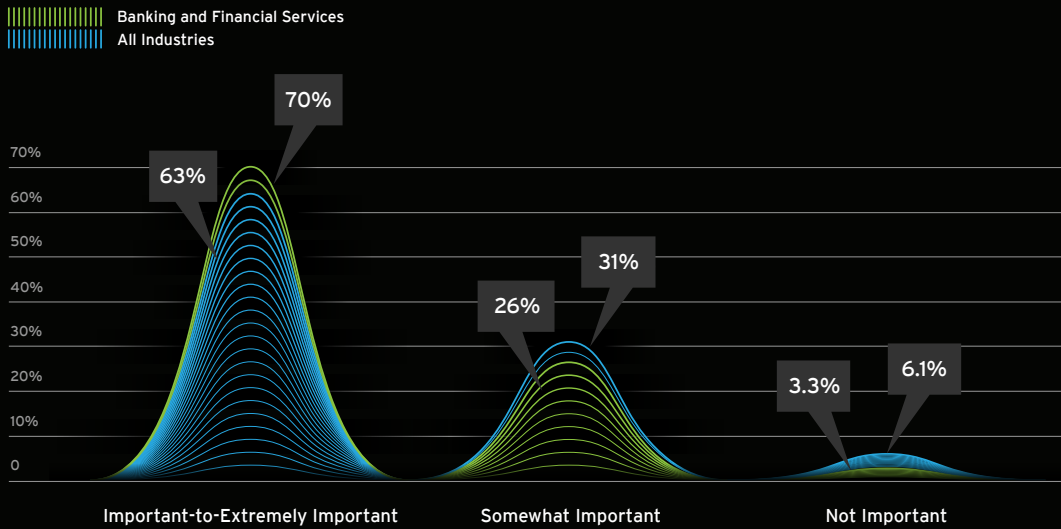
⁴ “Banks Have a Secret New Weapon: Design Studios,” *LTP*, Dec. 17, 2015, <https://letstalkpayments.com/banks-have-a-new-secret-weapon-design-studios/>.

⁵ “JPMorgan Chase Getting Into the Car Buying Business,” *PYMNTS.com*, Aug. 26, 2016, <http://www.pymnts.com/news/partnerships-acquisitions/2016/jpmorgan-chase-truecar-car-buying-online/>.

⁶ “BBVA Acquires Finnish Banking Startup Holvi,” *BBVA*, March 7, 2016, <https://www.bbva.com/en/news/general/bbva-acquires-finnish-banking-start-holvi/>.

“Digital First” Is the New Norm!

Respondents were asked to rate the importance of digital transformation to the future of their business.

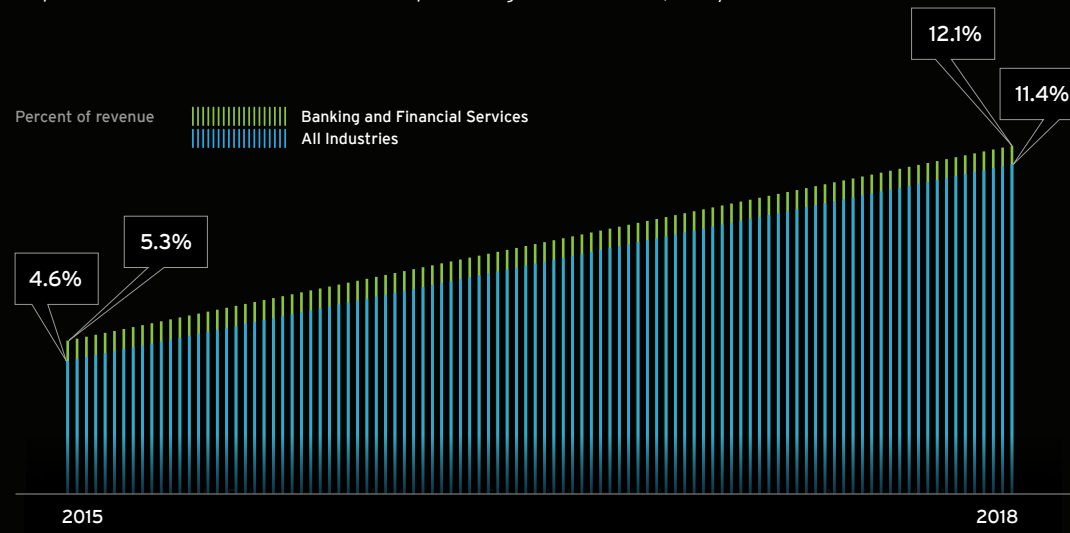


Response base: Banking and financial services: 333 IT/business decision-makers. All industries: 2,000 IT/business decision-makers.

Figure 1 Source: Cognizant Center for the Future of Work, 2016

Digital = Revenue

Respondents were asked to estimate the impact of digital on revenues, today and in 2018.



Response base: Banking and financial services: 333 IT/business decision-makers. All industries: 2,000 IT/business decision-makers.

Figure 2 Source: Cognizant Center for the Future of Work, 2016

Your Back Office Is a Wildly Overlooked Opportunity

In spite of digital's significant revenue-generating opportunity, its impact on the expense side of the ledger has thus far been meager. Financial industry executives told us that digital is costing their firms about 1.3% of revenue, which is slightly lower than the average for all industries studied (see Figure 3).

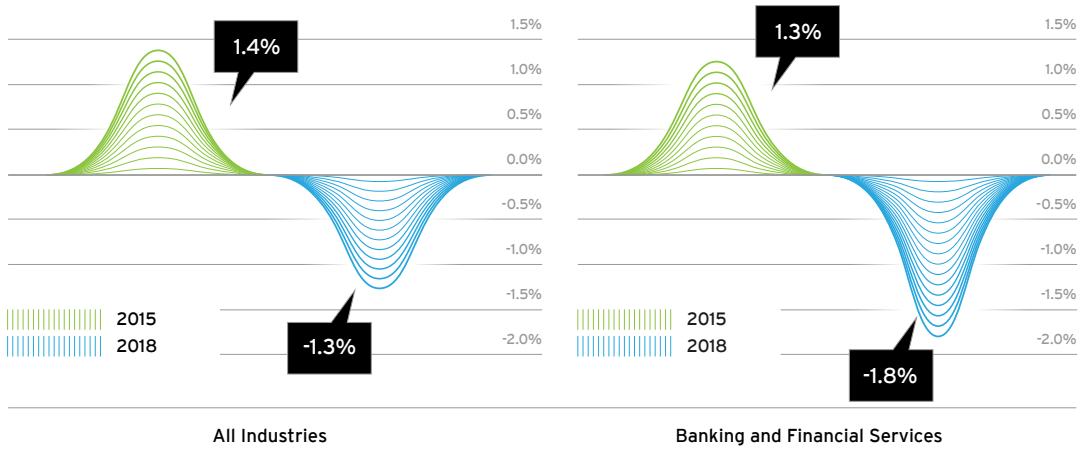
The outlook is expected to improve only marginally by the end of 2018, with costs projected to decrease by an average of 1.8% across the industry. This indicates a tendency for banking and financial services decision-makers to first think of the front office - where customer interactions happen or products and services are offered - when executing digital programs. Such a limited view, however, puts them at risk of missing something significant: the hidden treasure of their back office. Digital has as much to do with streamlining back-office operations and improving processes as it does with defining the face of the company. In truth, very few banks have modernized or replaced their legacy systems to meet the speed of change that defines today's digital era.

To remain profitable, banks and financial services organizations must unlock the cost savings opportunities of digital. With an estimated 70% to 80% of their IT budgets spent on infrastructure maintenance - or keeping the lights on - organizations must shift their IT budgets to meet today's reality. For example, we helped a large global wealth management company restructure its middle- and back-office operations to focus less on products and more on customers and processes. The program helped build strong foundational capabilities around workflow management, robotics and automation, resulting in a 20% to 25% time-to-market improvement due to process automation and enhanced resource utilization. The organization can now reinvest the savings into the business to improve customer acquisition and retention activities, and to build and strengthen its technology platforms.

In particular, we believe banking and financial services companies must focus on the notion of channel integration to unify all their offerings to establish a "one-company" model that delivers enhanced consumer experiences, seamless sharing of data across channels, and valuable consumer insights and opportunities.

Hidden Treasure in the Back Office

Respondents were asked to estimate their cost savings as a result of digital, now and in 2018.



Response base: Banking and financial services: 333 IT/business decision-makers. All industries: 2,000 IT/business decision-makers.

Figure 3 Source: Cognizant Center for the Future of Work, 2016

Smart Investments = Smart ROI

Let's face it: In large organizations, transformation poses many challenges. The wealth of customer data spread across different systems and geographies, the technology infrastructure mismatch resulting from years of bolting on new piece parts, the gaps between internal users and customers, and the push to beat the skyrocketing competition - all of these factors require a huge investment of money and time. In short, as the global digital transformation intensifies, financial institutions must invest heavily in more advanced and real-time banking technology to proactively address radically different market conditions.

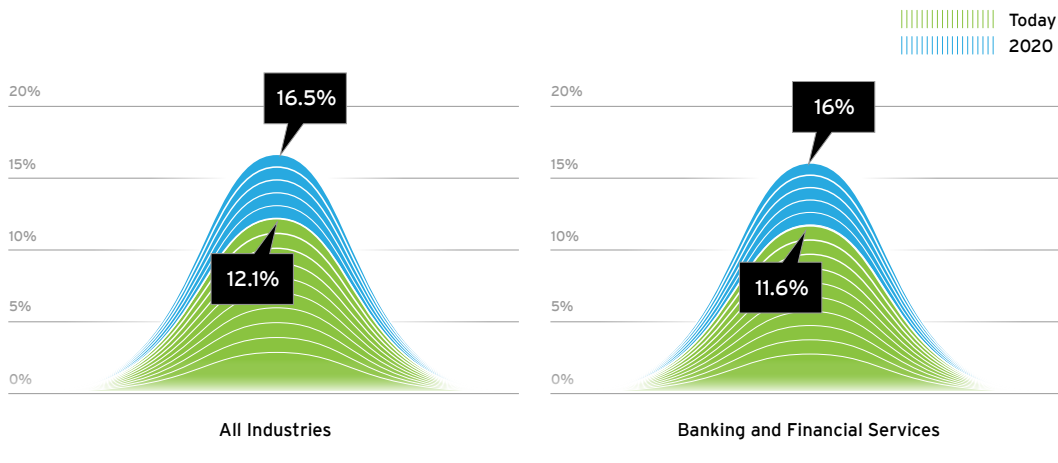
The good news is that banking and financial services firms are already investing billions of dollars into high-priority digital initiatives, and the evidence increasingly suggests that taking a digital-first approach pays off. On average, respondents said their organizations are investing 11.6% of their revenues into becoming digital each year (see Figure 4). This means that the 333 firms in this report will spend almost \$215 billion on digital in 2016.

By 2020, this figure will increase to 16% of total revenue annually. From the \$310.5 billion they will spend on digital in 2020, financial services respondents expect much higher return on investment (ROI) than the cross-industry average - a total of 104.3% through 2020 compared with 86.1% for all other industries. Other ROI factors are more difficult to measure. Based on our experience, a comprehensive ROI framework takes into consideration proportional digital spending and tracks the causal benefits (time-to-market, cost reduction, quality improvement, etc.).

Case in point: We recently completed a transformation project for a leading global bank in which we helped to modernize its desktop banking platform by making it mobile-first. Since its inception, the platform has generated \$1 trillion in transaction value and has seen 200% growth in active users in just 12 months.

Invest Wisely to Get Wise Returns

Respondents were asked to estimate their digital investments, as a percentage of their total annual revenue.



Response base: Banking and financial services: 333 IT/business decision-makers. All industries: 2,000 IT/business decision-makers.

Figure 4 Source: Cognizant Center for the Future of Work, 2016

Digital Leaders Hold a 140% Advantage Over Digital Laggards

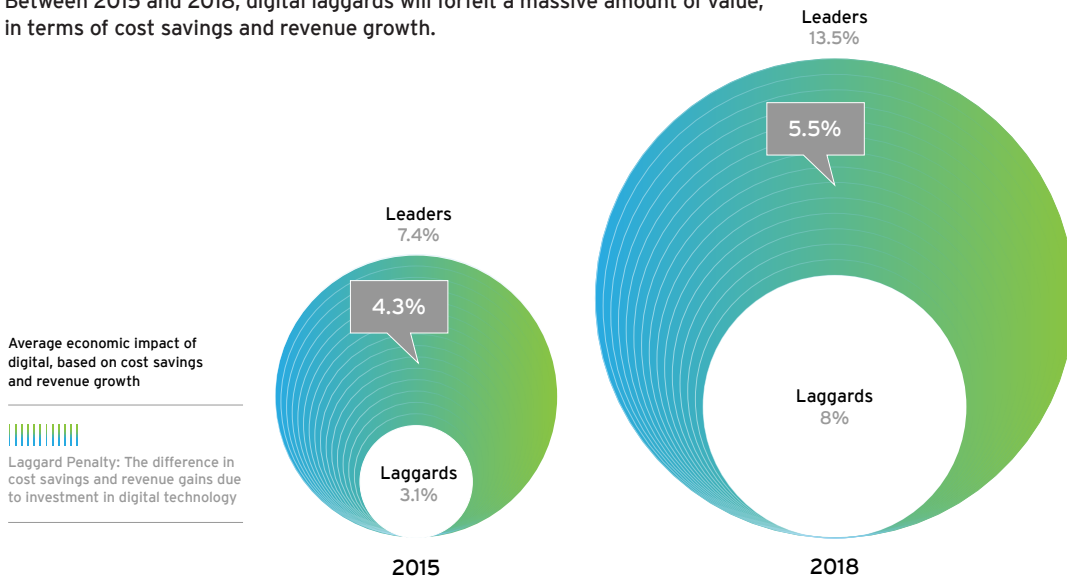
Banks and financial services companies that fail to act swiftly in leveraging digital will leave large portions of their businesses vulnerable to ever increasing competition. Already, companies behind the curve are paying a large annual “laggard penalty” – the difference in cost and revenue performance compared with technologically superior companies. (See page 22, for how we defined and identified leaders and laggards.) The laggard penalty is like paying a late charge for not making timely payments, and the costs grow on a daily basis. Digital laggards in the banking and financial services industry today are seeing an economic impact (cost savings plus revenue gains) of about 3.1% vs. 7.4% for leaders – a 139% advantage of leaders over laggards simply for being digital.

So what does that mean in dollar terms? In 2015, the laggard penalty for the average financial services organization was about \$192 million per company; across all financial services respondents, the aggregate laggard penalty was \$49.8 billion. By 2018, the laggard penalty for the average financial services business will total a massive \$951 million, and across all respondents, the total will be \$224.4 billion. Ultimately, companies cannot avoid digital transformation, but if they pursue their programs with half-baked initiatives, it’s unlikely they will survive over the next 10 to 15 years.

Digital leaders and early adopters include online banks (e.g., Ally Bank, Nationwide Bank, Discover Financial Services, Capital One 360, etc.), whose business models hinged on technology out of the gate. These pioneers used digital from the get-go to establish competitive pricing, rapid customer acquisition, improved responsiveness and significant operational cost takeout. Large commercial banks responded by making significant investments in digital. Although their plans were strong on clarity and vision, these organizations were less adept on execution, which resulted in moderately success digital deployments. Regional banks were slower to implement digital compared with other banks, in our observation, and they continue to rely on legacy-based monolithic processes and systems and are conservative in their digital spending.

Invest or Suffer the Digital Consequences

Between 2015 and 2018, digital laggards will forfeit a massive amount of value, in terms of cost savings and revenue growth.



Response base: 333 banking and financial services IT/business decision-makers

Figure 5 Source: Cognizant Center for the Future of Work, 2016

ASSEMBLING THE FUTURE

The projected changes in the work ahead are, to a large extent, the result of the growing ubiquity and power of the new machines that drive modern businesses forward. Building a banking and financial services firm of the future requires envisioning, assembling and reassembling various elements of work.

Next, we'll examine how to survive and thrive in this new machine age – an age of co-existence with robots and advanced artificial intelligence.

Big Data and AI Will Shape the Future of Work

Data is among the intangible assets constituting as much as 84% of the market value of companies listed on the S&P 500 index.⁷ Banks and financial institutions, however, are often better at setting up channels to deliver services than using the data they acquire through those channels. For instance, collecting the information, aggregating it and managing it over multiple channels are still the biggest challenges. But before data becomes an asset, it is a liability. Too much data and not enough insight can cause digital overload for many companies. With the advent of new technologies, this is set to change.

We asked banking and financial services executives to name the forces that would be most influential in transforming the way work gets done by 2020. With the well-known implications of business analytics, it's no surprise that 63% of financial services executives see this technology (and its companion, big data) as the biggest game-changer (see Figure 6). In a recent study, we found organizations generating billions in total economic profit from their initiatives in just one fiscal year by leveraging the power of analytics.⁸ Robotics and new-age technologies have improved standardization 19%, reduced error rates 21% and cut time-to-market 21%.⁹

What may be more surprising is that respondents forecast that AI would be the second most impactful digital trend, closely behind big data. In fact, 58% of respondents said the rise of the new machine will have a significant impact on work, compared with the cross-industry average of 51%. We believe AI-led automation will accelerate the pace of modernization in middle- and back-office operations, thereby truly digitizing the fundamental operational blocks. In addition to their channel integration efforts, banks are looking to reduce human error rates and replace the complexity of legacy technology and operations. That's where AI is finding its significance as it seeks to empower a singular, seamless and synchronous interaction with customers. In fact, Google estimates that AI will overtake human intelligence by 2019.¹⁰

Big data is an enabler for AI because it provides the necessary capacity for learning algorithms to consume data and use it to make strategic decisions (where to open a branch office or whether to approve a loan). Although we're still in the early days of AI, consider the following examples:

- Royal Bank of Scotland is using advanced AI to help support staff answer business customer queries more quickly and easily.¹¹
- Swedbank Group is using Nina, an intelligent virtual assistant that delivers a human-like, conversational customer service experience, to enable self-service capabilities and provide quick, easy access to information for customers and service agents.¹²
- Deutsche Bank has launched its maxblue robo advisor, which uses algorithms to compile individualized portfolios for investors looking to make decisions without using advisory services.¹³

A discussion on the importance of digital technologies would be incomplete without considering the legal implications and regulatory frameworks that impact digital business. Certain regulations and frameworks usher in innovation, while others are more restrictive and compliance oriented. For instance, European Union's Payment Services Directive (PSDII) - which is aimed at reducing barriers to entry for non-bank card and Internet payment providers - is scheduled to become law in 2018; the directive will require banks to reveal pertinent financial data to third parties through APIs.¹⁴ But let's face it: Regulations are always behind the curve compared with technological advancements. While digital regulations will evolve at their own pace across geographies, they should not be considered as the only resort for doing business.

⁷ Annual Study of Intangible Market Value from Ocean Tomo LLC," Ocean Tomo, March 4, 2015, <http://www.oceantomo.com/2015/03/04/2015-intangible-asset-market-value-study/>.

⁸ Return from digital, analytics investments <http://uk.businessinsider.com/goldman-sachs-has-more-engineers-than-facebook-2015-4?r=US&IR=T>.

⁹ "The Robot and I: How New Digital Technologies Are Making Smart People and Businesses Smarter by Automating Rote Work," Cognizant Technology Solutions, January 2015, <https://www.cognizant.com/whitepapers/the-robot-and-i-how-new-digital-technologies-are-making-smart-people-and-businesses-smarter-codex1193.pdf>.

¹⁰ Luz Fernandez and Jorge Aguado Sanchez, "Artificial Intelligence Is Driving the Definitive Automation of Financial Services," BBVA, Aug. 26, 2016, <https://www.bbva.com/en/news/disciplines/technologies/artificial-intelligence-driving-definitive-automation-financial-services/>.

¹¹ "BBVA Acquires Finnish Banking Startup Holvi," BBVA, March 7, 2016, <https://www.bbva.com/en/news/general/bbva-acquires-finnish-banking-start-holvi/>.

¹² "Nina Virtual Assistant from Nuance Brings Human Touch to Swedbank Customer Service," BusinessWire, April 25, 2016, <http://www.businesswire.com/news/home/20160425005123/en/Nina-Virtual-Assistant-Nuance-Brings-Human-Touch>.

¹³ "Deutsche Bank Launches maxblue Robo-advisor," Deutsche Bank, Dec. 7, 2015, https://www.db.com/newsroom_news/2015/medien/deutsche-bank-launches-maxblue-robo-advisor-en-11366.htm.

¹⁴ "How Banking as a Service Will Keep Banks Digitally Relevant and Growing," Cognizant Technology Solutions, June 2016, <https://www.cognizant.com/whitepapers/how-banking-as-a-service-will-keep-banks-digitally-relevant-and-growing-codex2047.pdf>.

Big Data, AI Set to Transform Work

Respondents were asked to rate the impact of the following forces on work by 2020.
(Percent of respondents indicating high impact.)



Response base: 333 banking and financial services IT/business decision-makers

Figure 6 Source: Cognizant Center for the Future of Work, 2016

The New Tools of Commerce

Cybersecurity, analytics, mobile, collaboration and cloud will be the technologies generating the greatest value for businesses between now and 2020 (see Figure 7). It's notable, though, that - given the low percentage of respondents who believe these technologies are already generating significant value - there's lots of room for improvement. Between today and 2020, the picture is consistent, with cybersecurity and big data ranking near the top.

Respondents' concern about cybersecurity is warranted; as more of our lives move online, security threats become more pronounced, and it only takes one data breach to break consumers' trust with the institution. Big data and cybersecurity technologies will complement each other and become a new face of consumer trust for banking and financial services organizations. The eight largest banks in the U.S. (Bank of America, Bank of New York Mellon, Citibank, Goldman Sachs, Morgan Stanley, State Street, Wells Fargo and JPMorgan Chase) have formed a coalition to combat the growing threats from cybercriminals.¹⁵ Banks are, in our view, adopting a three-pronged approach to an analytics-driven cybersecurity strategy:

- Extensive coverage of security data sources and strong data modeling, such as analysis, deriving inferences and accelerating the investigation process dramatically.
- A wide-angle data lens that enables data linkage and visualization to follow the chain of evidence related to an attack and conduct rapid investigations.
- A quantum improvement in data usability through easily queried data to create dashboards and reports to streamline security operation

¹⁵ Robin Sidel, "Big Banks Team Up to Fight Cyber Crime," The Wall Street Journal, Aug. 9, 2016, <http://www.wsj.com/articles/big-banks-team-up-to-fight-cyber-crime-1470758719>.

By 2025, however, other technologies – such as blockchain, digital currency, sensors/Internet of Things (IoT) and AI – register the greatest growth in value generation among all technologies (see Figure 8). Blockchain-based services are poised to soon emerge from the research labs of the major financial services companies. Though still in the early days, banks, credit card companies and other financial institutions are developing blockchain solutions to deliver more efficient and cheaper ways of transacting business. Blockchain has the potential to drive billions of dollars in savings for the banking and financial services industry mainly due to its transformative nature powered by an emerging technology stack that blends existing technologies, such as smart contracts, distributed ledgers and public key infrastructure (PKI) cryptography.¹⁶

Inter-bank consortia such as R3 and Hyperledger are working on creating platforms for enterprise blockchain applications for the financial industry, while technology companies such as Digital Asset Holdings (DAH) are developing distributed ledger software to enable faster, cheaper financial asset trade settlement and reduce counter-party risk.¹⁷ Other groups like Post-Trade Distributed Ledger Group and Chamber of Digital Commerce are connecting practitioners, policymakers and regulators to drive industry-wide initiatives and implementation.^{18,19} These efforts are complemented by internal initiatives led by Fidor Bank, BBVA, Citibank and other large banks that are working on proofs of concept and solutions for faster clearing and settlement of cross-border payments, reduced transaction costs for micropayments, inter-bank know your customer (KYC) solutions, and improved data visibility for trade finance transactions.²⁰

¹⁶ "Blockchain: Instead of Why, Ask Why Not?" Cognizant Technology Solutions, April 2016, <https://www.cognizant.com/whitepapers/Blockchain-Instead-of-Why-Ask-Why-Not-codex1973.pdf>.

¹⁷ "Linux Foundation's Hyperledger Project Announces 30 Founding Members and Code Proposals to Advance Blockchain Technology," The Linux Foundation, Feb. 9, 2016, <https://www.linuxfoundation.org/news-media/announcements/2016/02/linux-foundation-s-hyperledger-project-announces-30-founding>.

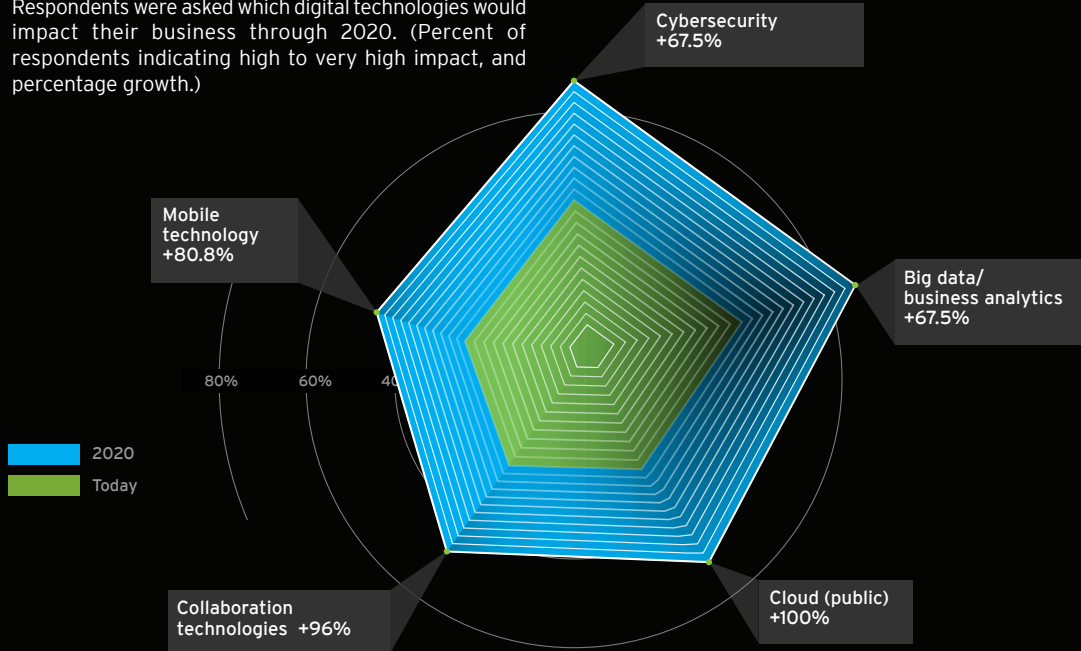
¹⁸ PTDL Group website, <http://www.ptdlgroup.org/about-us.html>.

¹⁹ JChamber of Digital Commerce website, <http://www.digitalchamber.org/about.html>.

²⁰ "Know More About Blockchain: Overview, Technology, Application Areas, Use Cases," LTP, <https://letstalkpayments.com/an-overview-of-blockchain-technology/>.

Technologies That Drive Change In Value Generation

Respondents were asked which digital technologies would impact their business through 2020. (Percent of respondents indicating high to very high impact, and percentage growth.)

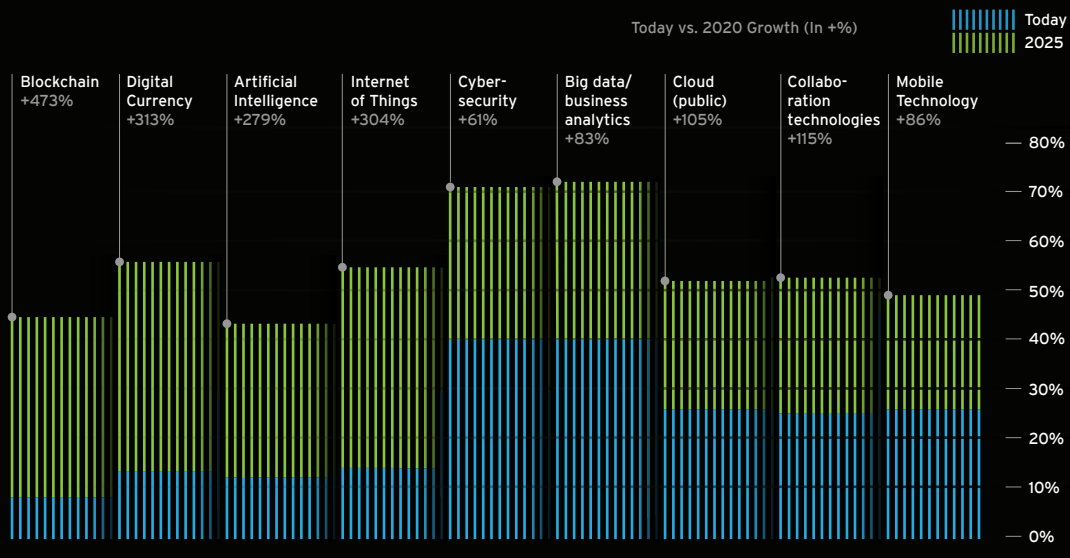


Response base: 333 banking and financial services IT/business decision-makers

Figure 7 Source: Cognizant Center for the Future of Work, 2016

Longer Term Drivers of Value to Embrace Now

Respondents were asked to rate the impact of digital technologies on the business today through 2025. (Percent of respondents indicating high or very high impact.)



Response base: 333 banking and financial services IT/business decision-makers

Figure 8 Source: Cognizant Center for the Future of Work, 2016

DIGITAL'S UNSPOKEN DARK SIDE

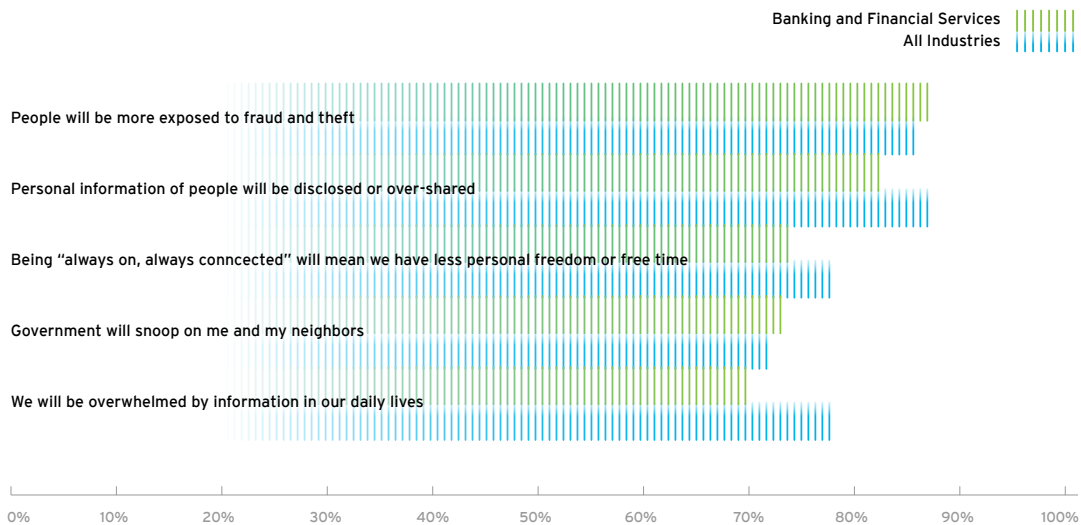
There is a dark side to the digital shift that raises important technological, social and ethical considerations. For example, will the current wave of digital make us less human? Will it disconnect us from the natural world? And what will happen to our personal data online? While these are difficult questions, they will impact our future, our work and our society. In this final section, we uncover the "dark side" of digital and the ways leaders are - fortunately - remaining aware of the obstacles and potential negative effects of technology on our lives and work.

Businesses Fear Cyber-based Vulnerability

At the heart of the personalized and hyper-personalized experiences that we've all flocked to in recent years is our personal data, or Code Halo™, generated by our online behaviors and actions. In an age when personal data is the key to honing a competitive edge, we're more vulnerable than ever to online fraud or theft (see Figure 9). According to Gartner research, half of business ethics violations by 2018 will occur through improper use of big data analytics.²¹ Having minimal control over personal data is among the main sources of growing concern for consumers. The biggest threat to companies is not from the competition but the ability to win and maintain consumer trust. This concern, which is echoed by banking and financial services respondents, is in sync with our earlier research, in which consumers voiced only a moderate level of trust in banks in terms of their use of personal data, with one-third saying they would likely switch banks if their personal data was compromised.²² In the coming years, we will certainly hear of more abuses of security, privacy and ultimately trust as the virtual economy continues its rapid expansion. The increasing value and quality of the data that companies gather has changed not only the way products and services are delivered but also the way consumers make decisions. It will be more important than ever for companies to win and keep consumer trust in the digital-first world.

The Use of Personal Data By Companies Will Make or Break Consumer Trust

Respondents were asked to rate their biggest concerns about the impact of digital.
(Percent of respondents indicating significant or moderate concern.)



Response base: Banking and financial services: 333 IT/business decision-makers. All industries: 2,000 IT/business decision-makers.

Figure 9 Source: Cognizant Center for the Future of Work, 2016

²¹"Gartner Says by 2018 Half of Business Ethics Violations Will Occur through Improper Use of Big Data Analytics," Gartner, Oct. 7, 2015, <http://www.gartner.com/newsroom/id/3144217>.

²²"The Business Value of Trust," Cognizant Technology Solutions, May 2016, <https://www.cognizant.com/whitepapers/the-business-value-of-trust-codex1951.pdf>.

Underestimating Digital Obstacles

Most C-level leaders see only speed bumps on the road to digital. In fact, 28% said budget constraints were a real problem, while 26% named security (see Figure 10).

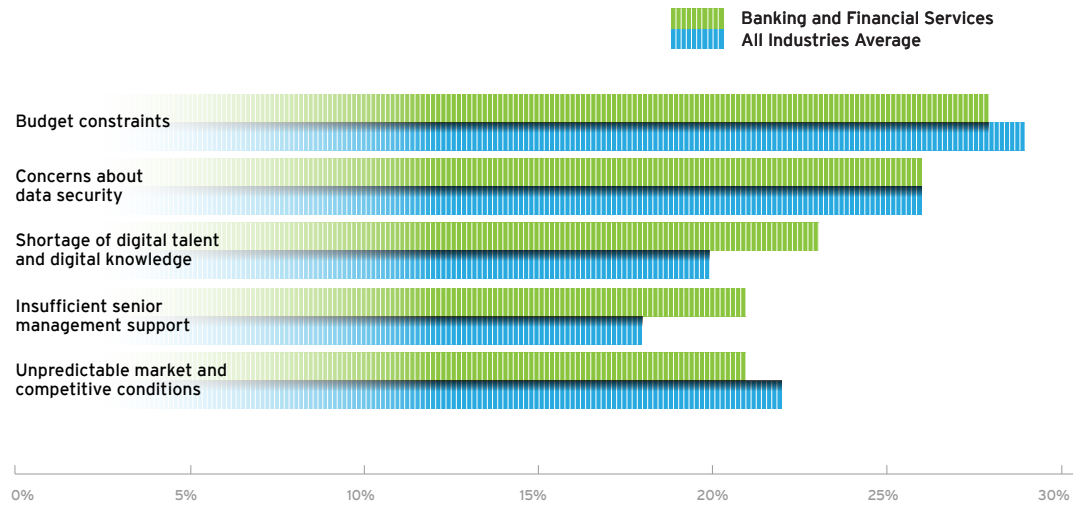
Strikingly, only 23% of respondents view digital talent as an obstacle to transformation. This finding is incongruent with our recent study, in which a large majority of organizations admitted to an acute digital skills gap.²³ Either the current study's respondents are underestimating the challenge of attracting competent digital talent, or they are over-confident about their hiring approaches. To transition to the new digital economy, companies need to find, recruit and retain the hybrid skill sets that are at the core of out-performing competitors. This new-age workforce will have a dual mandate: to run digitized banking operations in an efficient way while industrializing the next set of digital technologies into banking operations.

Based on our engagement experience, large banks have attracted digital talent by establishing digital innovation labs, incubation agencies with dedicated funds to nurture in-house digital skills. DBS in Singapore has taken a different route to developing future-ready digital leaders. As part of its MegaHackathon initiative, the bank's employees are encouraged to create new apps, processes and organizational prototypes by collaborating with relevant startups to tackle business and societal challenges. The organization has already changed the mindset of hundreds of business leaders throughout the bank, which aims to impart digital thinking to every DBS employee before the end of 2016.²⁴

The true way forward on digital cannot be realized by a single initiative, product or channel. To navigate the speed bumps on budgeting constraints and management support, banking and financial services executives must commit to developing and nurturing a true "digital culture" across their organizations. This involves establishing a channel-focused approach toward digital investments, prioritizing quick wins, communicating the wins across the organization, engaging leadership along the transformation journey, and instituting a structured ecosystem to sustain the digital vision.

Security, Budgets Are Top Digital Obstacles

Respondents were asked to name the obstacles standing in the way of digital transformation. (Percent of respondents indicating large to very large obstacles.)




Response base: Banking and financial services: 333 IT/business decision-makers. All industries: 2,000 IT/business decision-makers.

Figure 10 Source: Cognizant Center for the Future of Work, 2016

²³ "People - Not Just Machines - Will Power Digital Innovation," Cognizant Technology Solutions, April 2016, <https://www.cognizant.com/whitepapers/People-Not-Just-Machines-Will-Power-Digital-Innovation-codex1850.pdf>.

²⁴ "How DBS Develops Future-Ready Digital Leaders," HumanResources, June 17, 2015, <http://www.humanresourcesonline.net/dbs-develops-future-ready-digital-leaders/>.



To navigate the speed bumps on budgeting constraints and management support, banking and financial services executives must commit to developing and nurturing a true “digital culture” across their organizations.

THE FUTURE IS HARDLY IN THE FUTURE - IT IS ALREADY HERE

Digital represents today's most significant business opportunity (and threat), and is a source of innovative ideas for executives across the globe. Thoughtful observers of this shift already know they cannot ignore this next wave of multibillion-dollar digital transformation opportunities. The winners in this new digital world will challenge conventional thinking on product innovation, customer engagement, organizational structure, strategy and business models. While every company will follow a different path, consistent nuts-and-bolts lessons can be learned and applied from established digital winners. As banking and financial services executives pursue their digital transformation agenda, they should consider additional actions in order to contend with a business future filled with both uncertainty and remarkable opportunities.

Recommended Next Steps

We recommend that banks and financial services organizations take the following steps to be ready for the digital age:

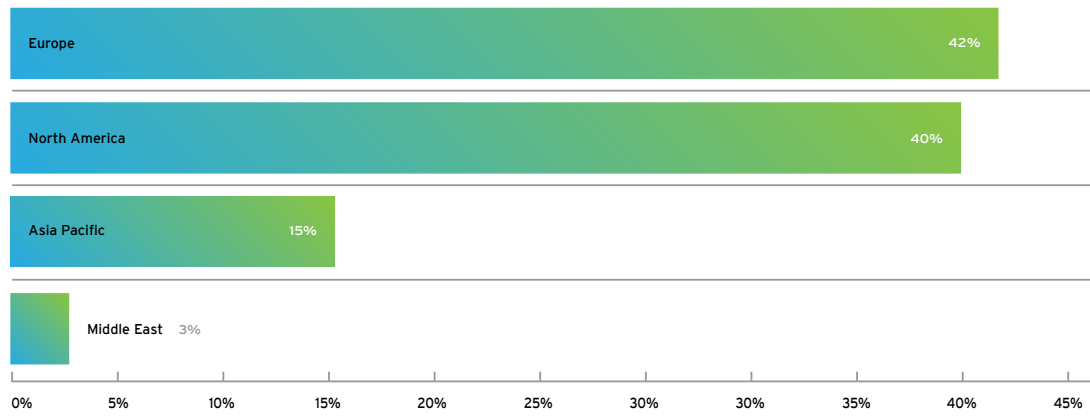
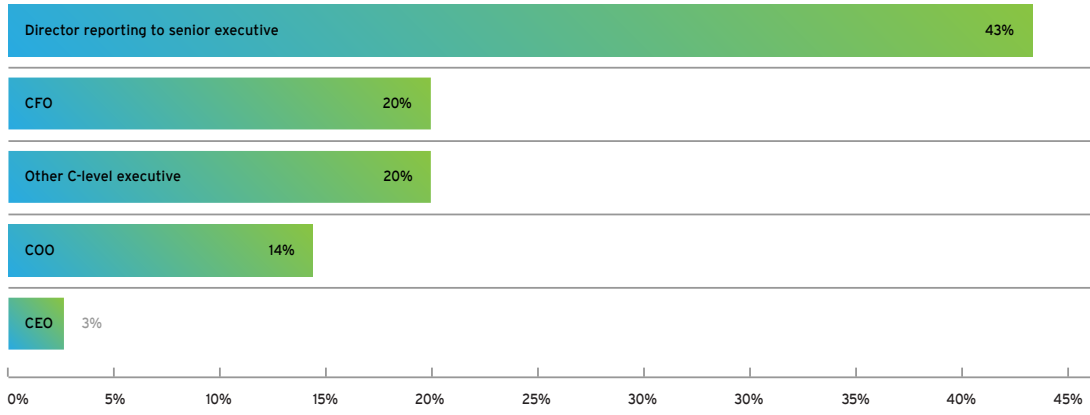
- **Challenge the status-quo principles of your business to imagine a future business model.** Why wait for digital entrants and the competition to bypass you? Instead, ask why business needs to be conducted as it has for the past several decades. What if the physical infrastructure were to become entirely virtual? Some banks have invested in a modern banking IT infrastructure, which they recognize as a highly valuable asset. For instance, SolarisBank offers a banking platform for digital business through a modular API-accessible platform of financial services. The company calls itself “a technology company with a banking license.”²⁵ Additionally, third-party payment platforms have disrupted the payments business. Alipay - the largest online payment processor in the world - recently hit the \$100 billion in transactions mark. That achievement took less than a year, with zero branches, compared with DBS Bank in Singapore, which took 50 years to reach this milestone.²⁶
- **Establish data ethics as a key competitive differentiator.** As companies grow increasingly reliant on algorithmically-driven decisions and machine learning to find the next business opportunity, the gradual reduction of human oversight over many automated processes raises pressing issues of responsibility and respect for human feelings. The future of analytics will lie in the intelligent ability to differentiate between appropriate and inappropriate use of data, which will require companies to develop an ethics framework. The use of an embedded ethics monitoring mechanism, either via pre-built frameworks or use of a tool, would assist, guide or notify users if their machine/mining algorithms crossed the ethical line, and automatically take necessary steps to avoid unwanted situations.
- **Simplify, simplify, simplify.** Digital transformation has only one agenda: Simplify the business. The core purpose of retail banks is to help customers manage their financial lives easily, but they still need to adhere to regulatory rules. Knowingly or unknowingly, most companies tend to make things overly complex for customers, and then blame business growth, regulations, market dynamics and other factors for that very complexity. To realize the full potential of digital transformation, companies need to reduce complexity in their legacy IT systems, business processes, organizational structure and overall customer engagement. Hardware and software work for humans, not the other way around.
- **Don't just assemble; reassemble frequently.** Reassessing and refining your initiatives is crucial for any company hoping to compete in the modern digital age – in fact, it's where the game is won or lost. No digital initiative is created perfectly. Look back at what went wrong with your initial digital initiatives (change management issues, too many people involved, the initiatives made things complex, failure to articulate the transformation journey, the need for a much bigger budget than planned, lack of true collaboration or precision measurement, etc.). Reassembly doesn't mean scrapping your past initiatives and starting with new ones but rather reshaping and tightening your digital initiatives and refining the execution. With every small refinement, you'll come closer to achieving the company's vision. And when you finally arrive, you'll know it was the reassembling, not the initial assembling, that won the digital game.
- **Recognize that digital disruptors are your best friends.** The biggest mistake that companies make is ignoring digital disruptors until they become too entrenched to contend with. Banking and financial services executives should aim to do the opposite: Turn threats into opportunities. Rather than competing with digital startups, leaders should collaborate with them. A number of U.S. banks are already partnering with fintech companies to develop future solutions. An approach like this makes a lot of sense, especially in fast-rising technological areas such as AI, blockchain and IoT, among others.

²⁵ SolarisBank website, <https://www.solarisbank.de/>.

²⁶ Joji Thomas Philip, “Fintech Threat! Alipay Hit \$100B in Less than a Year with Zero Branches; DBS Took 50 Years to Get There,” Deal Street Asia, July 27, 2016, <http://www.dealstreetasia.com/stories/dbs-48606/>.

Methodology and Demographics

We conducted a worldwide survey between December 15, 2015, and January 28, 2016, with 333 executives across the banking and financial services organizations. The executive survey was run in 18 countries in English, Arabic, French, German, Japanese and Chinese. We used telephone interviews for executives. The study was conducted with research and economic support from Roubini ThoughtLab, an independent thought leadership consultancy.



Leader vs. Laggard Calculation

Digital leaders were identified based on the responses to three questions:

- What percentage of your company's revenues today is invested in all technologies - including your central IT budget as well as spend by business units throughout your firm?
- Please estimate the percentage impact of using digital technologies on revenue and costs over the last financial year for your organization.
- How does your company compare with other firms in your industry in applying digital technologies to transform business strategies, processes, and services?
- Leaders account for 27% of the banking and financial services sample and achieved scores of 35 or more; Laggards account for 17% of the sample and achieved scores up to 15. The average group accounted for 56% of the sample.

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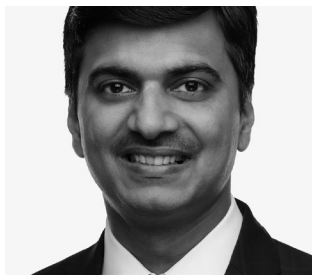
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