DIGITAL OUTLOOK

BANKING INDUSTRY

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INTRODUCTION

Twelve months ago, our conversation with bankers about the most important strategic and technology trends for 2017 was dominated by the rise of the banking ecosystem, arrival of autonomous banking, employee empowerment for digital transformation, innovation driven by open application programming interfaces (API), mainstreaming of blockchain, and adoption of artificial intelligence (AI).

A year later, we conducted a survey of 1,000 senior decision makers from business and IT, from large organizations (with 1,000 employees or more and annual revenue of at least US$500 million) in nine industries, which included 113 respondents representing banks, to understand what the banking industry perceived as the trends that will have the most positive impact on their organization over the next three years.

While identifying the key trends was the most important objective of the study, it was not the only one. The survey also sought to understand which digital technologies were in use within banks and the broad purpose for which they had been deployed – improving existing operations, solving new problems, or creating new opportunities to uncover value.

It then reviewed these findings against current and immediate investments in digital technologies to paint an interesting picture of what the industry said was important versus what it was actually doing.

The research findings were supplemented with our own banking perspective and anecdotes about the happenings in the industry to produce this short but incisive report.

EXECUTIVE SUMMARY

- According to the banks surveyed, the use of data analytics for deep personalization (54 percent), open banking APIs to facilitate collaboration within the ecosystem (50 percent), and paperless trade finance driven by blockchain and IoT (42 percent) are among the top trends over the next three years which will make a positive impact on their organization.
- Big data analytics (73 percent), cyber security (72 percent), and enterprise cloud (65 percent) are the three digital technologies being utilized most commonly by banks today.
- Banks plan to invest in digital technologies in the coming 12 months. It appears that the money will go towards known priorities, such as preventing fraud, improving customer experience, and channel innovation, rather than the trends that will have the most positive impact on the business over the next three years.
- Respondents said that their organization could improve both existing skills and technologies in preparation for implementing the top trends of the coming three years.

TOP BANKING TRENDS FOR THE NEXT THREE YEARS

1 PERSONALIZATION

2 COLLABORATION

3 PAPERLESS TRADE

Given that digital is a universal theme in business today, the trends that entered the conversation with the 113 banking respondents in the survey come as no surprise. Digital technologies, singly or in combination, underlie each of these trends. At least 30 percent of the respondents expected the following trends to make a significant positive impact on the banking industry in the next three years:

a. Inspired by the customer experience offered by e-commerce and new age providers, banking channels will be made to offer additional services.

b. Banks will look to partner with fintech firms in the area of payments, which will see much innovation driven by blockchain technology.

c. Peer to peer lending will continue to put pressure on incumbents who will intensify focus on replacing legacy systems and adopting new technologies in origination, servicing, and delinquency management.

d. Banks will invest in digitizing, consolidating, and upgrading core banking platforms.

e. Algorithms will increasingly come into use for predicting and mitigating fraud.

f. Refreshing their focus on personal financial management (PFM), banks will enhance the features of solutions and put them up on more channels; consumer adoption of PFM is expected to increase.

On average, each respondent named five items in their list of trends that will make a significant positive impact on their organization in the next three years. But the three trends receiving the most number of mentions – cited by 54, 50, and 42 percent of the respondents, respectively, as making a positive impact on the business – show a leaning towards newer digital technologies as an overt preference for adopting a certain solution, or indirectly, a willingness to apply it to transform a legacy process or application.

The use of data analytics for deep personalization of (banking) products took first place by garnering a mention from 54 percent of the respondents. This was followed by the use of open banking APIs for allowing access to systems to facilitate collaboration with other players in the industry (50 percent) and the emergence of paperless trade finance leveraging blockchain and the Internet of Things (IoT) (42 percent).

Which of the following trends will have the most positive impact on your organization within the next three years?

Data analytics for deep personalization of products	54%
Open banking APIs – collaborating with other industry players by providing open application programming interface (API) access to systems	50%
Paperless trade finance through collaboration with technology providers to implement solutions using blockchain and Internet of Things	42%
Technology for innovations in channels – cardless payment services, customer onboarding through ATM, mobile wallets, etc.	42%
Payments innovations through blockchain technology	41%
Improving peer-to-peer lending through legacy systems modernization and adopting new technology	38%
Upgrading core banking systems to digitalize or consolidate disjointed systems	35%
Algorithms for predictive fraud detection	33%
Personal finance management (PFM) solutions – both enhancing features as well as enabling PFM on various channels	32%
Technology to drive efficient cash management for greater liquidity	29%
Predictive automation in backend application management	26%
Using opti-channel (forward from omnichannel) banking to improve customer experience	23%
Using digital advisors (Robo advisors)	19%
Don't know	1%
None of the above will have a positive impact	1%
Average number of trends that will have a positive impact on respondents' organizations within the next three years	5

Let us examine each of these one by one. While using analytics for personalization is not a new story, the operative word is "deep". In the past 12 to 18 months, AI technologies have made tremendous progress to exert a multiplier effect on the capabilities of other tech. One example is the creation of a more powerful form of analytics underpinned by machine and deep learning AI technologies in particular. This has totally changed the nature and scope of personalization, granularizing it not only to the level of the individual banking consumer, but also to the very context of each transaction made by the individual.

This is emphasized in the qualitative results, with organizations already investing in software that will enable them to track consumer behavior and life cycle management as well. By knowing what is of interest, when it is of interest, what the habits are, and potentially being able to predict what the consumer is going to do next, organizations can tailor products.

Some of the banking domain experts we talked to observed that banks were already trying to fundamentally re-engineer customer experience by using data analytics to personalize it. In fact, several banking organizations are even testing AI technologies such as chatbots to improve customer service and machine learning to increase personalization and decrease fraud.

The second trend, namely, the focus on open banking APIs, is more than expected given that the New Year has opened with Europe's Payment Services Directive 2, mandating open banking and payment standards, coming into force.

By opening up access to bank systems, these APIs will facilitate a variety of collaborations within the banking ecosystem – bank and bank, bank and fintech, bank and third party payment providers – laying the groundwork for banking to evolve from its current pipeline model to a platform business, and for banks to go from universal financial institutions that produce and own assets to financial services marketplace operators that aggregate the best financial and non-financial products and solutions in the market under a single platform. A great example of this is Bud, a plug-and-play financial services platform based in the United Kingdom, which integrates more than 60 financial/financial technology services on a single platform using APIs. Several tier one banks around the world have deployed Bud, which is also expected to branch out into a version targeting small and medium enterprises soon.

Although the industry as a whole would advance if organizations would collaborate with other industry players, in the qualitative research one respondent emphasized that "there is that level of trepidation around being fully transparent on that, just in case someone gets the upper hand". This may be a barrier to organizations implementing this trend.

Almost half of the 113 banking respondents named paperless trade finance as one of the most impactful trends in their business over the next three years. This is a great example of what disruptive digital technologies – blockchain and IoT in this case – can do to legacy processes that have held over time. A number of banks have already tested the waters by digitizing bulky letters of credit on blockchain. The results of these pilot projects have invoked wider interest in the industry. Besides blockchain, the IoT is tipped to further automate the trade finance landscape by enabling seamless connectivity between its various ecosystem members – suppliers, buyers, banks, shipping and logistics providers, etc.

DIGITAL TECHNOLOGIES THAT BANKS USE – ANALYTICS, CYBER SECURITY, AND CLOUD

Banks utilize six digital technologies on average. The most popular technologies are big data analytics, cyber security, and enterprise cloud, in use at 73, 72, and 65 percent of banks, respectively. Following at some distance are business process management solutions (49 percent) and AI (48 percent).

Which of the following digital technologies does your organization currently utilize?

Big data analytics	73%
Cyber security	72%
Enterprise cloud	65%
Business process management solutions	49%
AI (machine learning, deep learning, natural language processing, natural language generation, and visual recognition)	48%
ERP and enterprise application implementation/modernization	43%
Enterprise service management solutions	42%
Blockchain	42%
Dev-ops and agile	40%
APIs	39%
3D printing	32%
Internet of Things	29%
Mainframe modernization	27%

When asked about the purpose of implementing these technologies, the respondents slightly favored improvement of existing business operations over solving new business problems and somewhat more over creating new opportunities. The only two cases where more banks said the deployment was to solve a new business problem were, unsurprisingly, blockchain and IoT – both new, disruptive technologies with the potential to not only reimagine solutions to old problems, but also resolve hitherto unsolved known problems. For the sake of illustration, consider the clearing and settlement process. Like many technologies preceding it, blockchain improved transaction efficiency (further) by streamlining the process, reducing turnaround time and cost, etc. But it also did something unprecedented by eliminating the central supervisory authority – a known source of delay and cost that had not been addressed by any other technology in the past.

When the following areas of digital technologies and solutions were implemented within your organization, was it to improve existing business operations, solve new kinds of business problems, or create new opportunities?

	Improve existing business operations	Solve new business problems	Create new opportunities
3D printing	67%	50%	25%
AI (machine learning, deep learning, natural language processing, natural language generation, and visual recognition)	63%	48%	52%
APIs	70%	59%	36%
Big data analytics	63%	59%	50%
Blockchain	50%	56%	48%
Business process management solutions	67%	60%	36%
Cyber security	64%	53%	32%
Dev-ops and agile	69%	58%	51%
Enterprise cloud	68%	48%	41%
Enterprise service management solutions	71%	58%	58%
ERP and enterprise application implementation/ modernization	71%	53%	53%
Internet of Things	61%	70%	55%
Mainframe modernization	74%	52%	35%

WHERE BANKS ARE INVESTING – FRAUD PREVENTION, CUSTOMER EXPERIENCE, CHANNEL INNOVATION

The banking industry is among the top spenders on digital technology. The banks in the survey said they plan to invest in digital technologies in the next 12 months.

To understand if banks were actually putting their money into what they said was important, the survey asked the respondents whether they were investigating or investing in the top three trends they had named as having the most impact on their organization in the next three years. An interesting, and somewhat contradictory picture emerged.

The top honors went to "algorithms for predictive fraud detection" where 86 percent of the respondents who had picked this as a top trend claimed they were already investing money into it. Opti-channels for better customer experience (75 percent), PFM solutions (68 percent), technology for channel innovation (67 percent), and for cash management (63 percent) took the next four spots.

It was only then that the respondents got around to the three items that topped the trends list. More than half the respondents (61 percent) said they were investing in data analytics for personalization and paperless trade finance (both). The second trend, namely, open APIs, came ninth overall with only 56 percent of the respondents mentioning it.

Is your organization investing in or investigating any of the top trends?

	Investing in this trend	Planning on investing in this trend	Investigating this trend	Not investing in, planning on investing in or investigating this trend
Algorithms for predictive fraud detection	86%	5%	10%	-
Using opti-channel (forward from omnichannel) banking to improve customer experience	75%	17%	8%	-
Personal finance management (PFM) solutions – both enhancing features as well as enabling PFM on various channels	68%	20%	12%	-
Technology for innovations in channels – cardless payment services, customer on-boarding through ATM, mobile wallets, etc.	67%	23%	10%	-
Technology to drive efficient cash management for greater liquidity	63%	31%	6%	-
Data analytics for deep personalization of products	61%	28%	9%	2%
Paperless trade finance through collaboration with technology providers to implement solutions using blockchain and Internet of Things	61%	29%	11%	-
Improving peer-to-peer lending through legacy systems modernization and adopting new technology	58%	35%	6%	-
Open banking APIs – collaborating with other industry players by providing open application programming interface (API) access to systems	56%	26%	19%	-
Payments innovations through blockchain technology	55%	32%	13%	-
Upgrading core banking systems to digitalize or consolidate disjointed systems	50%	25%	25%	-
Predictive automation in backend application management	46%	38%	15%	-
Using digital advisors (Robo advisors)	29%	57%	14%	-

The same inconsistency was also visible in the answer to the question, “Which of the following technologies or solutions will your organization use in order to realize the promise of all of these trends?” Banking respondents who believe that at least one trend will have a positive impact placed their confidence in big data analytics, cyber security, and enterprise cloud, the exact three technologies that were already being used the most, whereas the trends were pointing at analytics, APIs, blockchain, and IoT.

While it is hard to say for sure without explicitly asking the respondents about the reasons for this gap, it seems reasonable to assume that banks continue to favor “known” priorities, such as fraud prevention and customer experience improvement, but want to wait and watch a little longer before putting their money into relatively less mature concepts or technologies such as open banking and blockchain. However, the lack of investment interest in analytics, which is already in use in banking organizations and is also the driver of the topmost trend over the next three years (data analytics for deep personalization), is harder to explain. Could it be that banks have already got the analytics they need, and it is now time to reap returns on that investment?

IN CONCLUSION

The survey also asked the banks if they had what it took to implement their top trends. To this, 90 percent of the respondents naming a number one trend said their organization could improve its skills, while 86 percent said it could improve the technologies it had in place.

Clearly, the adoption of digital technologies is a continuous work in progress in the banking industry. Banks have deep awareness and the right strategic intentions when it comes to the digital agenda; this when coupled with the conviction to act can take them a long way.

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