



TEMENOS
THE BANKING SOFTWARE COMPANY

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The 10th Annual Temenos Survey of Challenges, Priorities and Trends in the Financial Services Sector

Searching for profitability in a fast-changing world



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Executive Summary

Banks facing an almost perfect storm of challenges...

In this year's survey, which is produced together with Accenture, a leading global professional services company and strategic Temenos partner, banks cited the following significant challenges to their business: meeting regulatory requirements (17% of respondents), securing customer loyalty (17%), using data effectively (15%), addressing increased competition (15%) and managing the growing risk of cybercrime (10%). The high levels of concern across these areas crowded out other issues, such as balancing risk with growth, which had been major concerns in the past.

...undermining profitability

All of these areas of concern potentially depress bank profitability, which emerged in this year's survey as the biggest challenge faced by banks. It was cited by 19% of respondents compared to 15% the year before, and reflects the fact that, notwithstanding an improving cyclical backdrop of slowly rising interest rates and better asset quality, profitability (particularly in Europe) has been fundamentally reset in the post-crisis era.

Fintechs are now friends, not foes

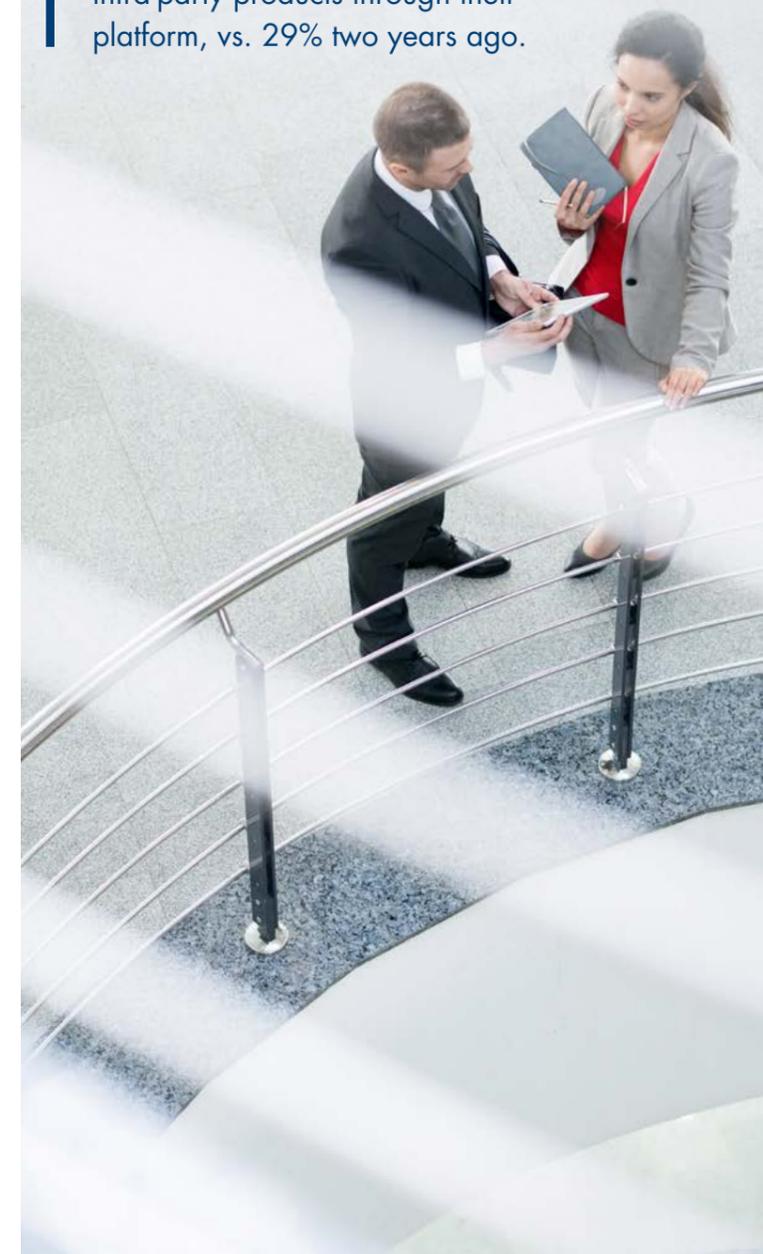
In a continuation of last year's trend, fewer banks are citing fintech companies as their biggest source of competition (16% vs. 19%). Instead, the vast majority of survey respondents want to work with fintech companies. However, they face challenges in doing so, determining which of the thousands of firms they should work with (curation was cited by 18% of respondents) and, in particular, steering small fintech companies through their own procurement processes (55%).

Open for business

The move to embrace fintech companies mirrors a progressive attitude to Open Banking in general. 79% of our respondents indicated that open banking is more of an opportunity than a threat (vs. 52% two years ago), and 62% said that they would be prepared to distribute third-party products through their platform (vs. 29% two years ago).

62%

of bankers are willing to distribute third-party products through their platform, vs. 29% two years ago.



Beware challenger banks

Another notable change in this year's survey was banks' attitude to new challenger banks that respondents now see as much bigger threats. In general, banks see other banks as a slightly bigger competitive threat than non-bank entrants, such as technology companies and telecoms companies.

Yet, it is challenger banks who are seen as the leading competition, cited by

22%

of respondents as their biggest threat compared to 16% the year before,

which explains why so many banks (such as Bank Leumi with Pepper and JPMC with Finn) are launching challenger brands themselves.

Goodbye human bankers?

Perhaps the most surprising finding from this year's survey is the speed and extent to which banks expect their primary form of communication with customers to change.

In 10 years' time, banks think that

two-thirds

of customer interactions will be through chatbots and

83%

of customer interactions will be through chatbots and social apps.

In 10 years, respondents believe that only 7% of interactions will be in person (either physically or by videoconference), including only 15% for wealth firms. A shift that could have dramatic implications for the composition of bank workforces.



Digitization drives IT spend

Compliance with new regulations remains a key focus for IT spending (cited by 11% of respondents), especially for institutions in Europe and those in wealth management, which are facing multiple new regulations coming into force in 2018, such as MiFID II, PSD2 and GDPR. The biggest IT spending priorities reflect banks' digital agendas, with digital channels (18%) and analytics (14%) being two of the top three areas and the creation of APIs being cited by 8% of respondents compared to 1% last year.

The clouds are lifting

Attitudes towards the cloud also continue to shift. For several years we have expected banks would start to deploy more applications, including mission-critical ones, in the public cloud in order to lower costs, speed up development cycles and cope with the processing demands of a digital economy. Banks were held back by concerns about regulation and security, but both of these issues continue to diminish, with only 22% now worrying about data security (compared to 50% in 2011) and 29% seeing regulation as a barrier to adoption (39% in 2012).

Only

22%

now worrying about data security in cloud deployments (compared to 50% in 2011)

Structural challenges call for structural answers

Recognizing that profitability is a structural, rather than a cyclical issue, banks are increasing their IT budgets in an effort to digitize operations. 68% of respondents said that they expected their budgets to be higher in 2018 than in 2017, against just 7% who expected the budgets to be cut, giving the highest positive delta (61%) since the survey started ten years ago. While there are interesting regional disparities (86% of Asian banks expect budgets to rise compared to 60% of banks in Europe), all regions expect increases.

Addressing the fundamentals

Encouragingly, banks seem to recognize that there are no shortcuts to true digitization as core banking renovation was cited as the top IT spending priority (23%). Banks have found that trying to avoid the fundamental step of consolidating data sets onto a real-time processing platform significantly limits the benefits from upstream investments in channels and analytics. As 32% of respondents told us, legacy systems represent the biggest barrier to digitization, far ahead of issues such as lack of strategic focus (14%) or lack of skills (12%).

23%

cited core banking renovation as the top IT spending priority



Reclaiming Profitability in the Post-crisis Era

After the 2007/2008 financial crisis, the banking industry faced the uncertainty posed by the regulatory reform agenda that sought to enhance the financial sector's stability and resilience. Back in 2009, when we first asked bankers about their biggest organizational challenge, 32% of them cited tighter regulations as their biggest concern. The heightened capital, liquidity and capital planning requirements kept bankers awake at night. Today, managing the impact of regulations is still a big concern, but it has moved to second place in organizational challenges, cited by 17% of banking executives, behind profitability (Figure 1). The costs of compliance (including the need to accumulate capital from retained earnings rather than invest), the complexity of retaining customer loyalty and satisfying customers' increasing demands while

fending off new competitors and ensuring the highest standards of cybersecurity that everybody now expects from banks is taking its toll on the industry's margins. Despite an improving macroeconomic environment and lower credit losses, the pre-tax profitability of Europe's largest banks is still around half of 2006 levels. So, returning to a healthy level of profitability and adapting the business model to today's reality is this year's top concern cited by 19% of survey respondents, compared with 15% last year (Figure 2). Banks in Europe feel the need to address lower profitability levels as their biggest concern even more than their counterparts in other regions, cited by 21% of bankers. By segment, variations exist; 22% of Retail banks and 21% of Universal banks cited profitability as their biggest challenge to address.

Figure 1. What do you think are the 3 biggest challenges facing banks today? (%), 2017

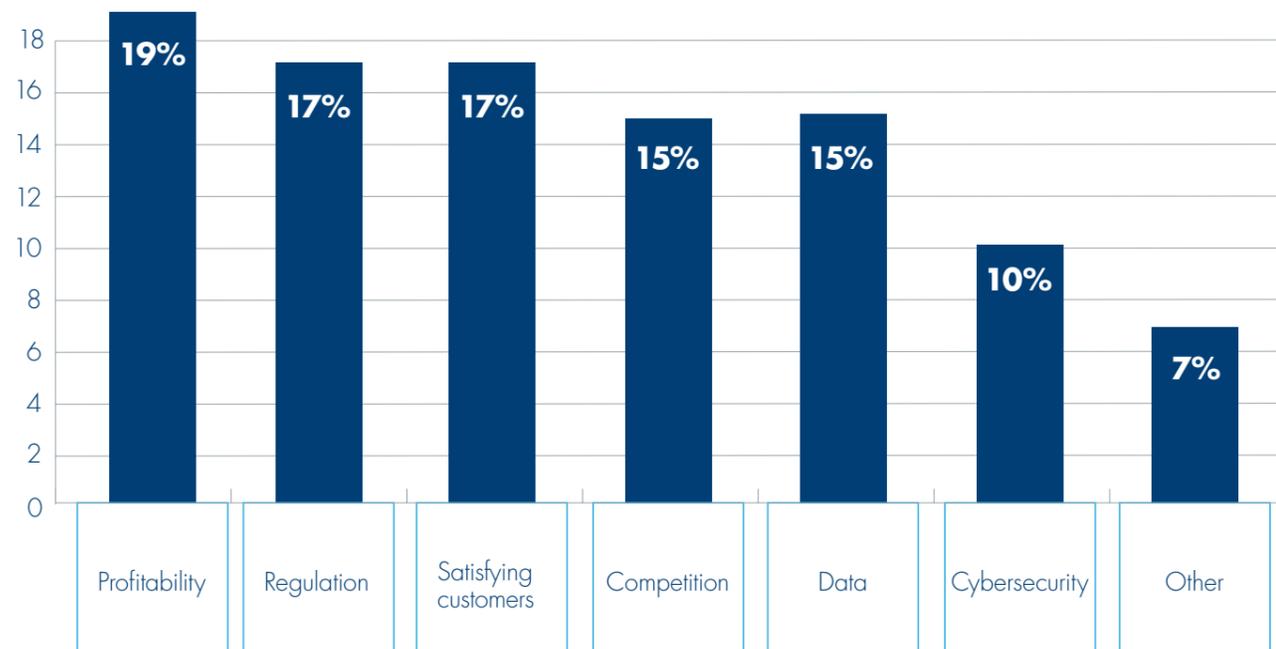
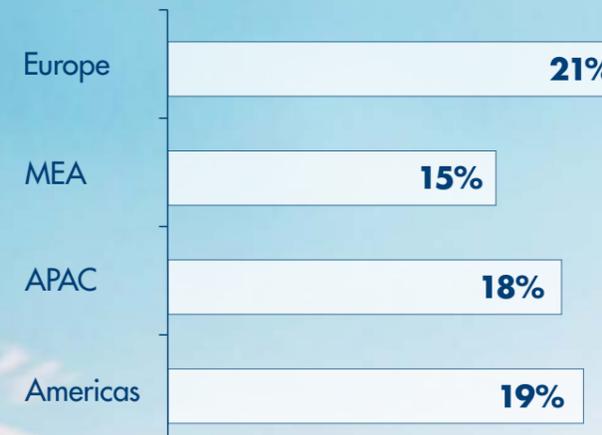
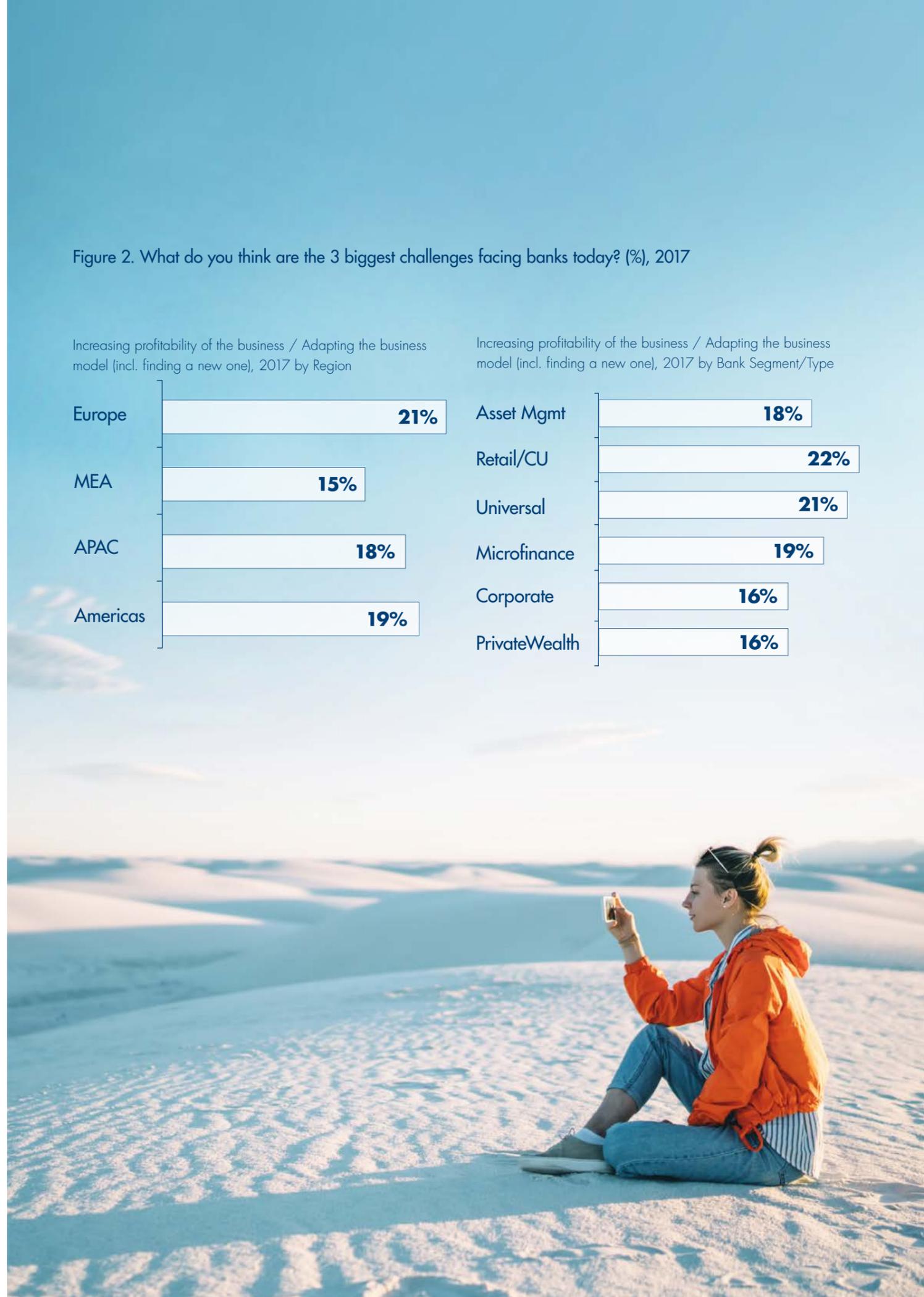
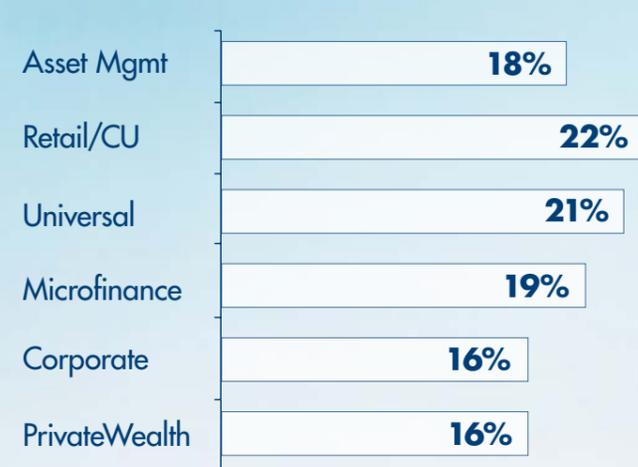


Figure 2. What do you think are the 3 biggest challenges facing banks today? (%), 2017

Increasing profitability of the business / Adapting the business model (incl. finding a new one), 2017 by Region



Increasing profitability of the business / Adapting the business model (incl. finding a new one), 2017 by Bank Segment/Type

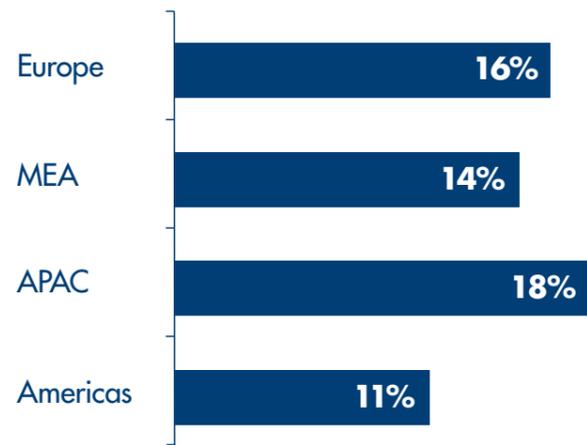


Banks have large stores of customer data and a position of trust from which to capitalize on it. According to previous Accenture research¹, most customers are willing to share more personal data with their bank, but in return expect faster and better services, lower prices, real-time location-based offers, and help with their budgets. Successfully managing data is key in satisfying today's customers and maintaining their loyalty, and banks have understood this. Managing the ever-increasing volumes of data and using

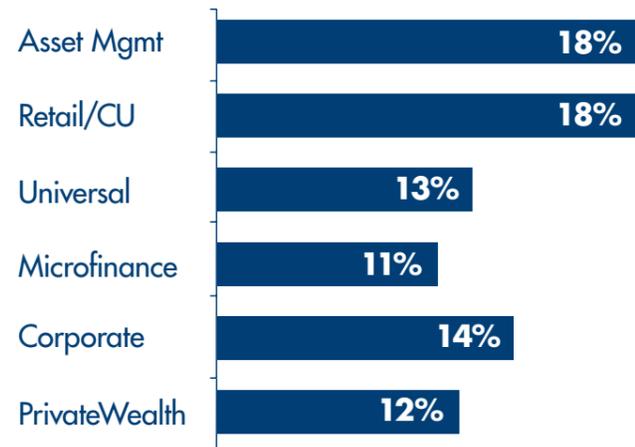
it effectively was cited as an organizational challenge by 15% of bankers in this year's survey, compared with 18% the year before (Figure 3). Banks face many challenges around data, especially around accuracy, completeness, separate databases creating inefficiencies, lack of skills, agility, and strategic vision to create value from it. As discussed later in the report, most of these challenges stem from inadequate legacy back-office platforms.

Figure 3. What do you think are the 3 biggest challenges facing banks today? (%), 2017

Managing ever-increasing volumes of Data and using it effectively, 2017 by Region



Managing ever-increasing volumes of Data and using it effectively, 2017 by Bank Segment/Type



1. Accenture, Global Distribution & Marketing Consumer Study, 2017. <https://www.accenture.com/ie-en/insight-banking-distribution-marketing-consumer-study>

2. See how Temenos supports banks' strategic choices around PSD2 and Open Banking https://www.temenos.com/contentassets/5f27a92c67db48e5bf02c5e2e7f77352/value_prop_open_banking_and_psd2.pdf

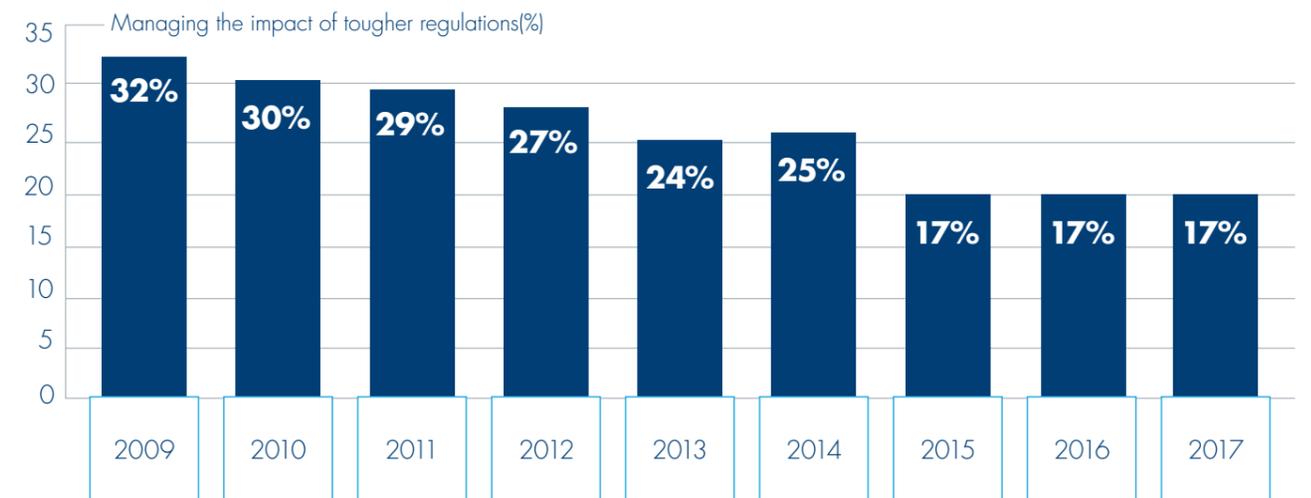
Bankers in Asia Pacific are more concerned about how best to manage data, as this challenge was cited by 18% of survey respondents, likely due to customers' digital prowess and heightened expectations, followed by Europe, where 16% of bankers mentioned it, most likely a reflection of PSD2².

Shape of Future Regulations Becomes Clear

This level of perceived concern over impact of regulations has been consistent over the past three years (at 17%, Figure 4), which means that most bankers acknowledge that the regulatory picture is much clearer now and the focus has shifted from understanding the new legislation to implementing it in a cost-effective manner. Driven by the explosion of digital data, the scarcity of compliance

talent and the risks associated with being part of complex ecosystems, the challenge that bankers face now is around finding sustainability in the way they manage compliance: investing strategically to drive efficiency and contain compliance costs, which are set to increase over the next two years, according to recent Accenture research³.

Figure 4. What do you think are the 3 biggest challenges facing banks today? (%), 2009-2017



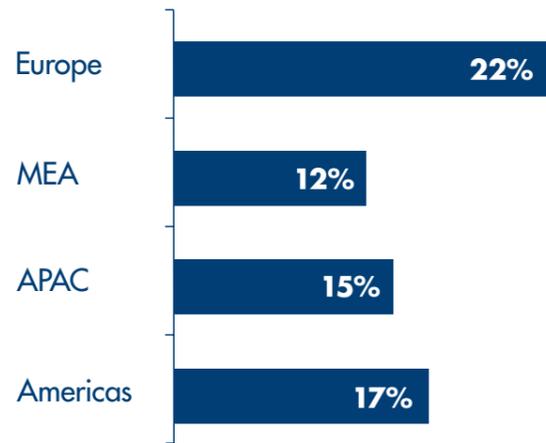
As shown in Figure 5, regional variations exist. Banks in Europe seem to feel the regulatory pressure more (22%) than the rest of the regions, like Middle East and Africa (12%), Asia Pacific (16%) and Americas (17%). What's notable this year is that the burden of regulations is increasing in Europe from last year's 19% (reflecting the final publication of the Regulatory Technical Standards on Strong Customer Authentication and Secure Communication under PSD2, the upcoming General Data Protection Regulation rules

or the imminent deadline of MiFID II), while banks in the Americas see regulation as less of a burden this year as compared with last year's 23% (indicating the overall mood of deregulation that is promoted by the new administration). By segment type, similar with last year, the burden of new regulations is felt the most by private wealth management institutions (26%) and asset managers (24%), which further underlines the complexity of MiFID II.

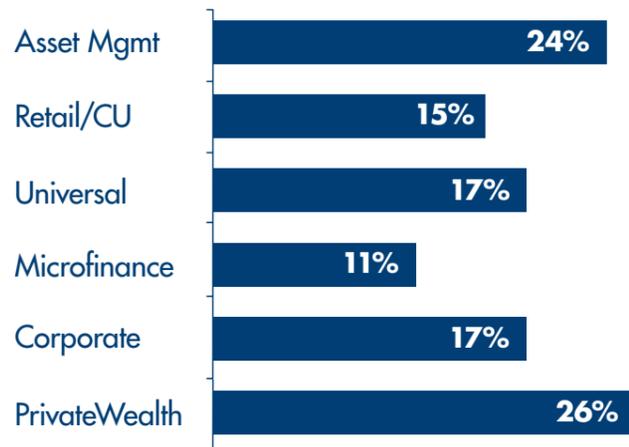
3. Accenture Global Survey on compliance costs for Financial Institutions, April 10, 2017. <https://newsroom.accenture.com/news/compliance-costs-for-financial-institutions-will-continue-to-increase-over-the-next-two-years-driven-by-regulations-and-emerging-risks-according-to-global-accenture-survey-of-executives.html>

Figure 5. What do you think are the 3 biggest challenges facing banks today? (%), 2017

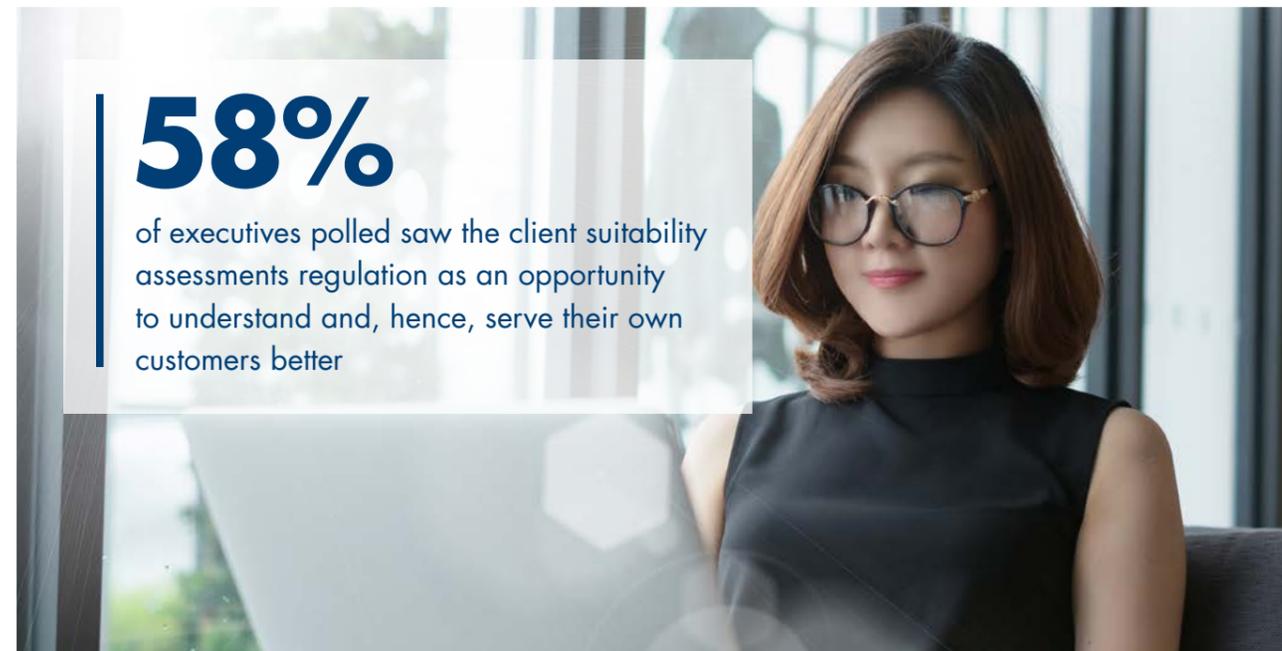
Managing the impact of tougher regulations, 2017 by Region



Managing the impact of tougher regulations, 2017 by Bank Segment/Type

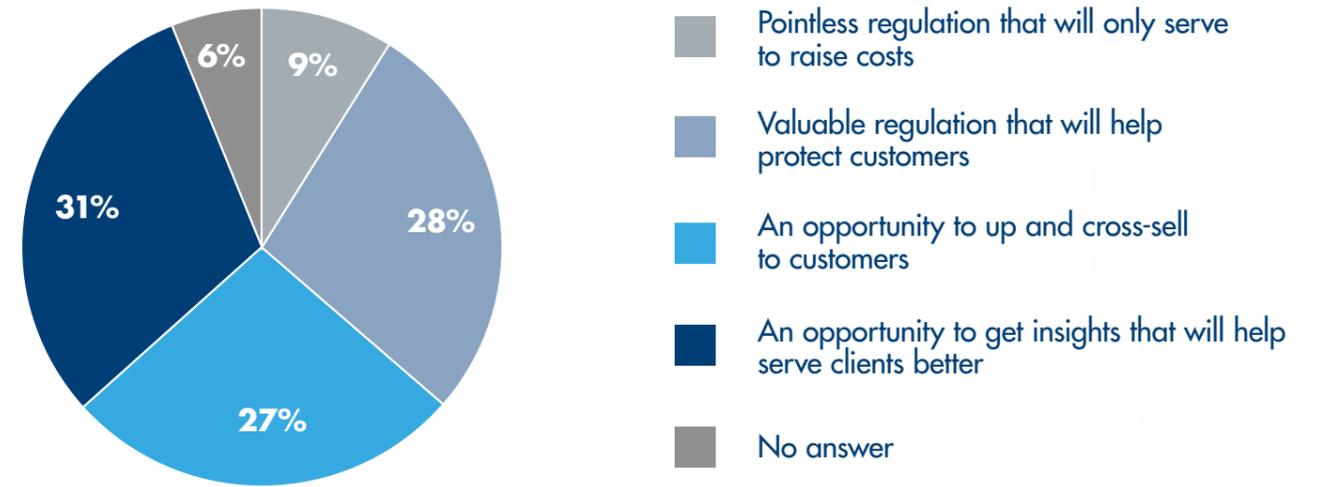


However, bankers must also think strategically about certain regulations, like PSD2, Open Banking and MiFID II suitability requirements. When asked about their attitudes towards existing and upcoming amendments⁴ to the required client suitability assessment (against clients' knowledge, experience, financial situation and investment objectives), 58% of executives polled saw the regulation as an opportunity to understand and, hence, serve their own customers better, or even to up- and cross-sell. In fact, only 9% of bankers feel that client suitability assessments bring no value and are just increasing operational costs.



4. <https://www.esma.europa.eu/press-news/esma-news/esma-consults-certain-aspects-mifid-ii-suitability-requirements>

Figure 6. Which of the following statements best describes your organization's attitude to client suitability assessments (e.g. MiFID II, risk profiling) (%), 2017



Banks Are Open for Business

Open Banking is a major phenomenon in banking, one which could be highly disruptive and which forces banks to reflect upon their strategy and business model⁵. However, the good news is that most banks (79% of respondents) see opportunities to capitalize on this change and many are reacting accordingly, as reflected also by the shifting attitude towards collaborating with fintech startups, discussed later (Figure 7).

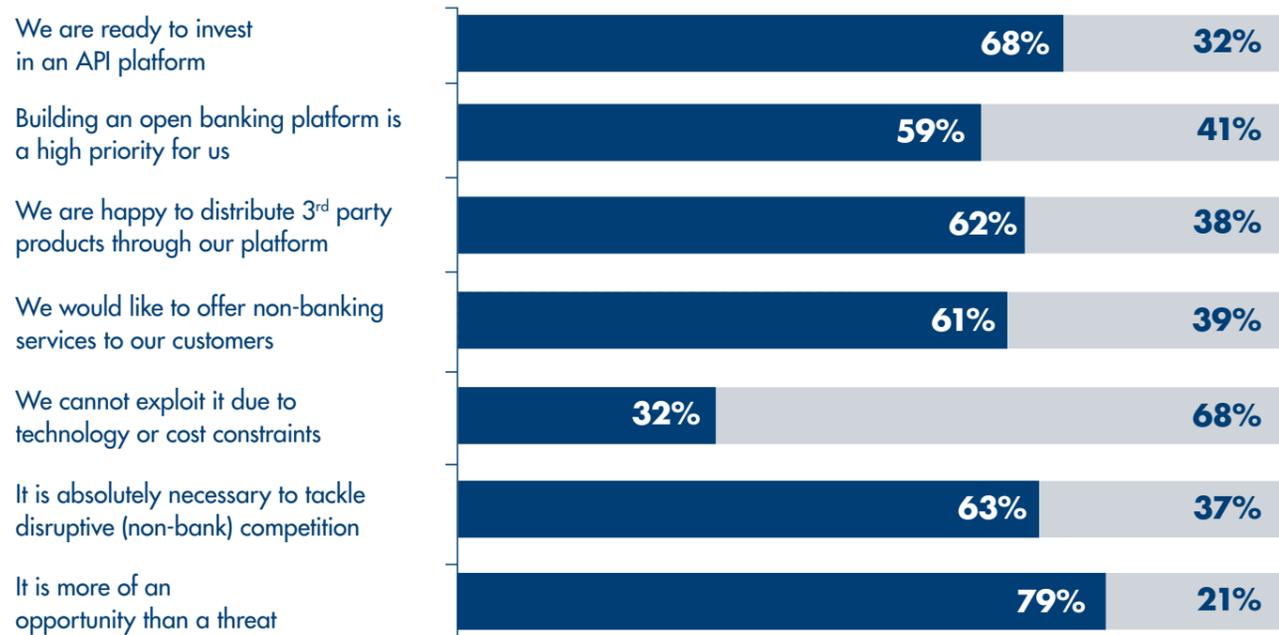
We see Open Banking as the culmination of new regulatory and new technology trends. The new regulation, which seeks to liberalize the sector, is not just occurring in Europe (with PSD2) but globally (with initiatives in Australia, Hong Kong and Singapore, among others). New technologies

are reinforcing the impact by lowering entry barriers (e.g. cloud), opening up distribution (e.g. mobile), facilitating network effects (e.g. big data) and making it easier to work with third-parties (e.g. APIs). For the first time, it is possible for companies to gain a large chunk of the banking value chain without becoming banks, thus putting more pressure on banks to be good bilateral trading partners.

It is incumbent on banks to react and they are ready to do so. 63% of respondents see it as absolutely necessary that they embrace Open Banking to tackle disruptive competition. In response, they are ready to invest in an API platform (68%) and distribute third-party banking and non-banking products (62%) over their platform.

Figure 7. Open Banking readiness: To what extent do you agree/disagree with each of the following statements about Open Banking? (%), 2017

Agree or completely agree with the following statement about Open Banking, 2017

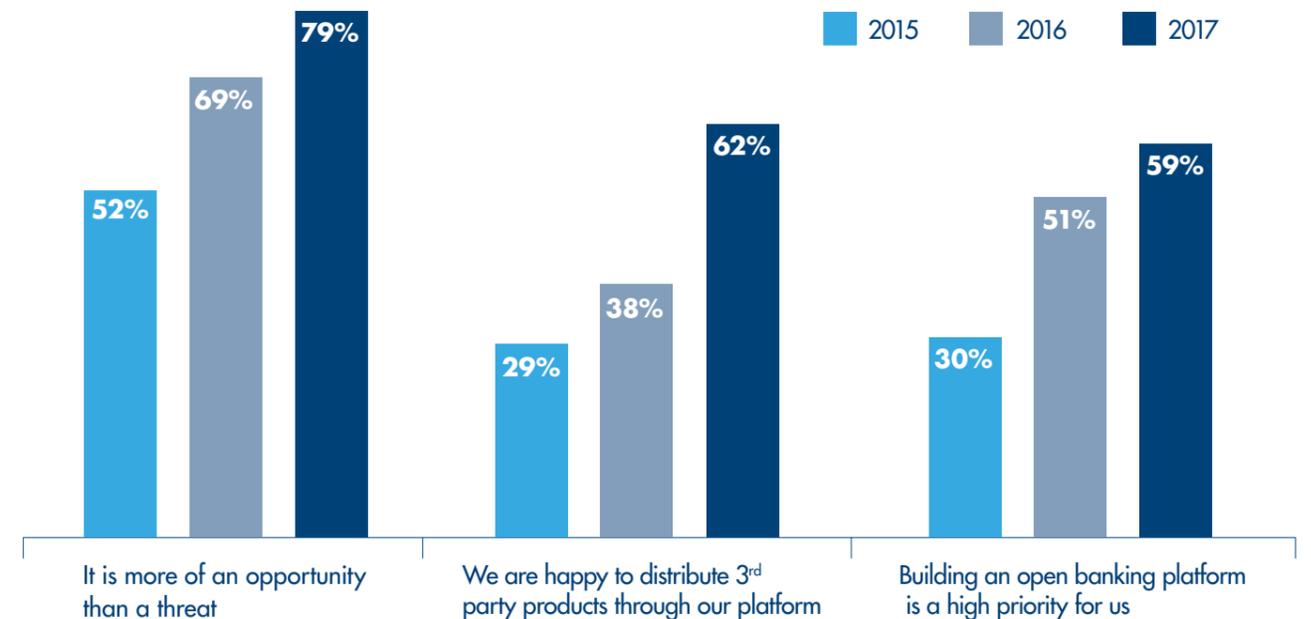


5. See this discussion about what business models might be viable to capitalize on open banking <https://www.temenos.com/en/blog/2016/october/4-banking-business-models-for-the-digital-age/>



This represents a major shift in attitudes compared to the year before and, in particular, compared to 2015 (Figure 8). While a slim majority (52%) saw Open Banking as more of an opportunity than a threat back in 2015, there was little readiness to capitalize on that opportunity through business model change. Only 29% in 2015 (and 38% in 2016) thought it would be necessary to distribute third-party products to hold on to and monetize existing customer relationships. Similarly, in 2015 only 30% of respondents saw it as a priority to build an open banking platform through which to distribute those third-party products.

Figure 8. Open Banking readiness: To what extent do you agree/disagree with each of the following statements about Open Banking? (%), 2015-2017



This year's survey shows that most banks now see the opportunity (79%) and most banks (68%) believe they have the technology know-how to put in place an Open Banking strategy, and are addressing the cultural and business model restraints on executing such a strategy.

Perception of Fintech Startups Moves From Foe to Friend

One of the provisions of PSD2 is that, with customer consent, a bank must share customer data with third parties. The threat of digital channels was that they could split the distribution from the manufacturing of financial services and open up a competitive window for challenger banks and other non-banking players. In opening up to third parties, it is not surprising to observe that banks now see fintech companies as less of a competitive threat and more as an ally for their future within business ecosystems. Only 16% of bankers today see fintech companies as their biggest competitive threat, down from 19% in 2016. Instead, most are actively seeking to forge partnerships with fintech companies.

However, working with fintechs isn't necessarily straightforward. There are thousands of fintech companies in operation and it is difficult for many banks to dedicate the time and resources to pick the best; 17% said that they need help with curation (Figure 9). The much bigger problem is that banks struggle to get fintech firms through their procurement processes, given the lack of a clear engagement model for fintech companies, compounded

by a lack of personnel resources at these fintech firms. We estimate, based on our engagement with banks' innovation departments, that it takes 18 months from finding to signing up a fintech firm due to the time needed to navigate procurement processes, negotiate contracts and satisfy other stakeholders, such as IT security. Add probably another 18 months⁶ to deploy, which is a veritable eternity in the digital world that increases the risk that banks end up partnering with the previous generation of fintechs rather than those having the biggest current impact.

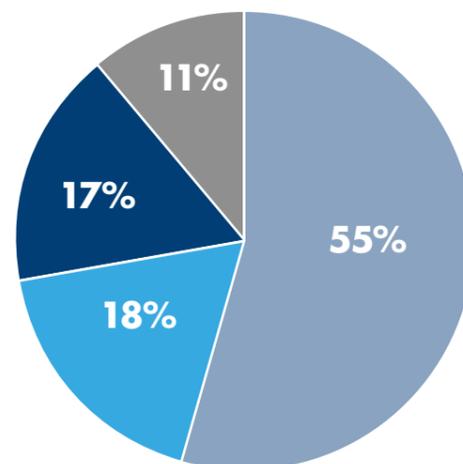
So, while the desire to partner with fintechs is undoubtedly there, the ability to execute the partnerships is still lacking.

73%

of banks need help with curating or integrating fintech startups

Figure 9. If you would be willing to partner/integrate with FinTech startups, what do you see as main barriers in achieving a successful collaboration? (%), 2017

- We need help with procurement / integration
- We need help with curation
- We are put off by regulatory hurdles
- Fintechs are irrelevant / have no interest in collaborating



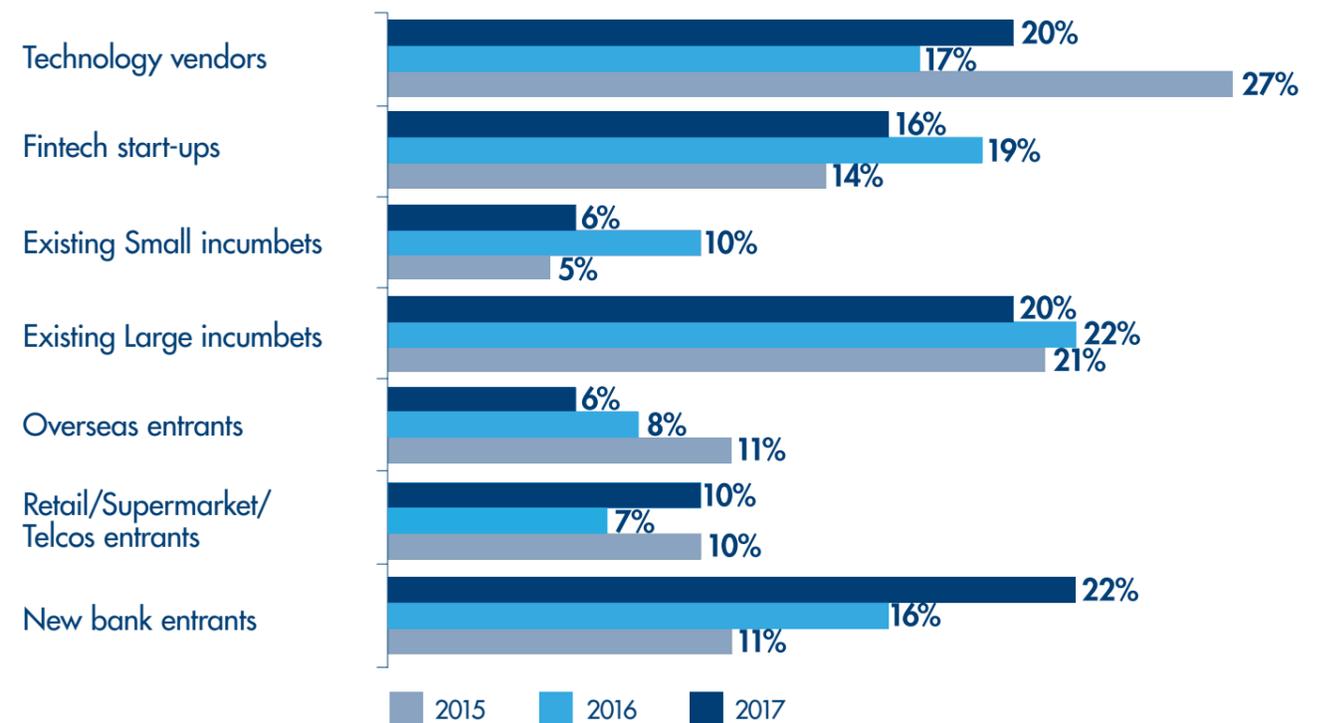
6. See how Temenos Innovation Acceleration Platform (IAP) can help reduce this time <https://marketplace.temenos.com/apps/173362#loverview>

The Biggest Threat Now Comes from Challenger Banks

In terms of the threat emerging from within the industry—that is to say, other banks—the trends are broadly consistent with past years, as shown in Figure 10. Overseas banks are seen as a steadily diminishing threat as, amongst other things, new rules on capital requirements have seen banks retrench to core markets and core activities.

Small incumbent banks, lacking scale and financial muscle, are also seen as a minor threat (just 6% cite them as the top threat). Large incumbent banks, with big customer numbers, big balance sheets and big brands, are still seen as formidable competitors, cited by 20% of respondents as their biggest threat.

Figure 10. The evolving competitive threat: Which of the following do you see as the biggest competitive threats to your organization? (%), 2015-2017



Yet, it is challenger banks that are now seen as the biggest threat. The threat level has been rising: 11% of respondents saw challenger banks as their biggest threat in 2015, 16% in 2016 and now 22%. We believe the reason is that they have many of the advantages of incumbent banks—such as the right to undertake activities that require a banking licence and the trust that comes with being a regulated institution—but without many of the disadvantages, such as legacy IT and an inflexible cost base. In response, many banks are launching challenger brands themselves, such as Leumi with Pepper, Commercial Bank of Africa with M-Shwari and BNP Paribas with Hello. Where a bank does this, it not only creates a digitally native entity to

compete against the non-banking entrants, but it creates a bank that is free of legacy concerns—IT, processes, revenue cannibalization and so forth—and to which it can possibly migrate its legacy customer base over time, if successful. There is some downside, however, in running parallel institutions with additional costs and complexities that a multi-business model approach entails.

Nonetheless, we predict that many new banks will launch challenger brands in 2018 and beyond, creating a more nimble entity with which to prosper in the digital age.

Tech Companies Still Loom Large

With access to customer transaction data, internet platforms like Google and Facebook would be in a much better position to personalize recommendations, content and offers, and to serve them at much more opportune times. In this context, it is not surprising that banks remain very concerned about the threat from big technology providers, with 20% of bankers seeing them as their biggest competitive threat, up from 17% in 2016 (although down from a high of 27% in 2015).

Other non-bank competitors also pose a threat, but not as great as tech platforms. 10% of our respondents, up from 7% in 2016, see other non-bank competitors, such as retailers and telcos, as their biggest threat. This reflects the gradual resurgence of telcos in banking, such as Orange which launched a bank in France in 2017.

Retailers have also long threatened to take a greater role in banking, using their stores for distribution and their customer service ethos to provide differentiated experience, but without taking much market share. It would seem that retailers may have bigger concerns protecting their markets from digital platforms, like Amazon, than to make new forays into banking. Instead, telcos, which are already present in the digital value chain, may be able to make a stronger play for banking market share.

Taken together with fintech firms, non-traditional competitors are seen as the biggest threat by roughly half of respondents (46%), somewhat down from previous years (Figure 11). In 2014, 56% of bankers saw a greater threat coming from outside the industry than from inside the industry; at that time, fintech companies were considered to be a much bigger, direct competitive threat.

Figure 11. The evolving competitive threat: Which of the following do you see as the biggest competitive threats to your organization? (%), 2014-2017

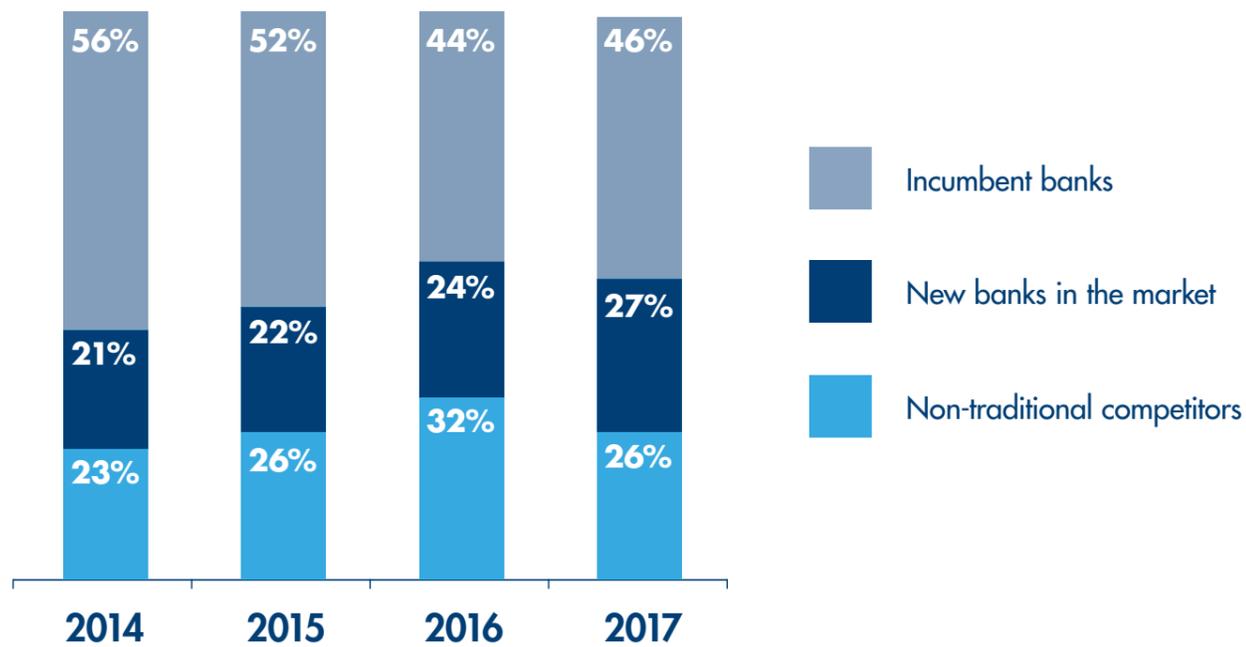
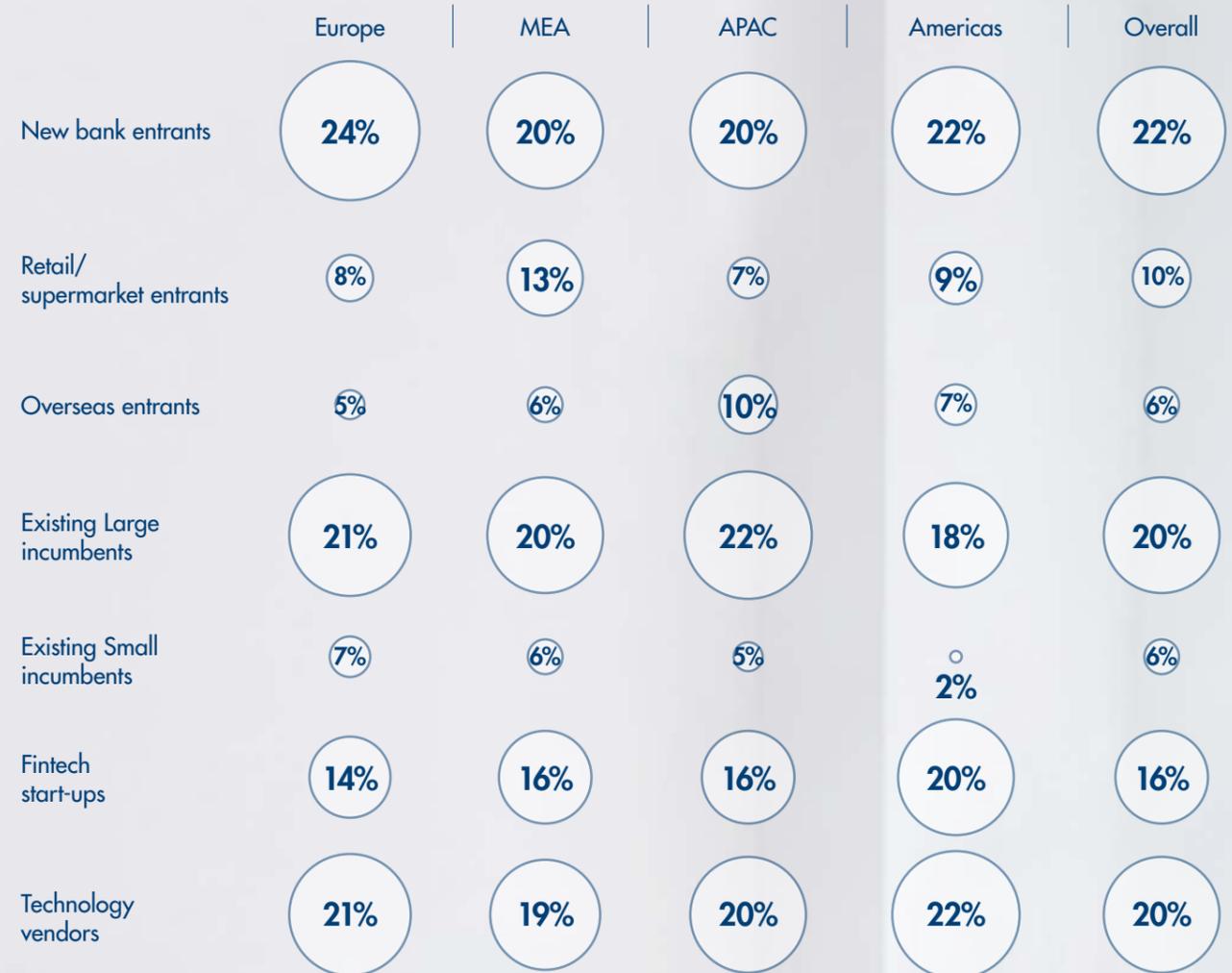


Figure 12. The evolving competitive threat: Which of the following do you see as the biggest competitive threats to your organization? (%), by Region and by Bank Segment/Type 2017



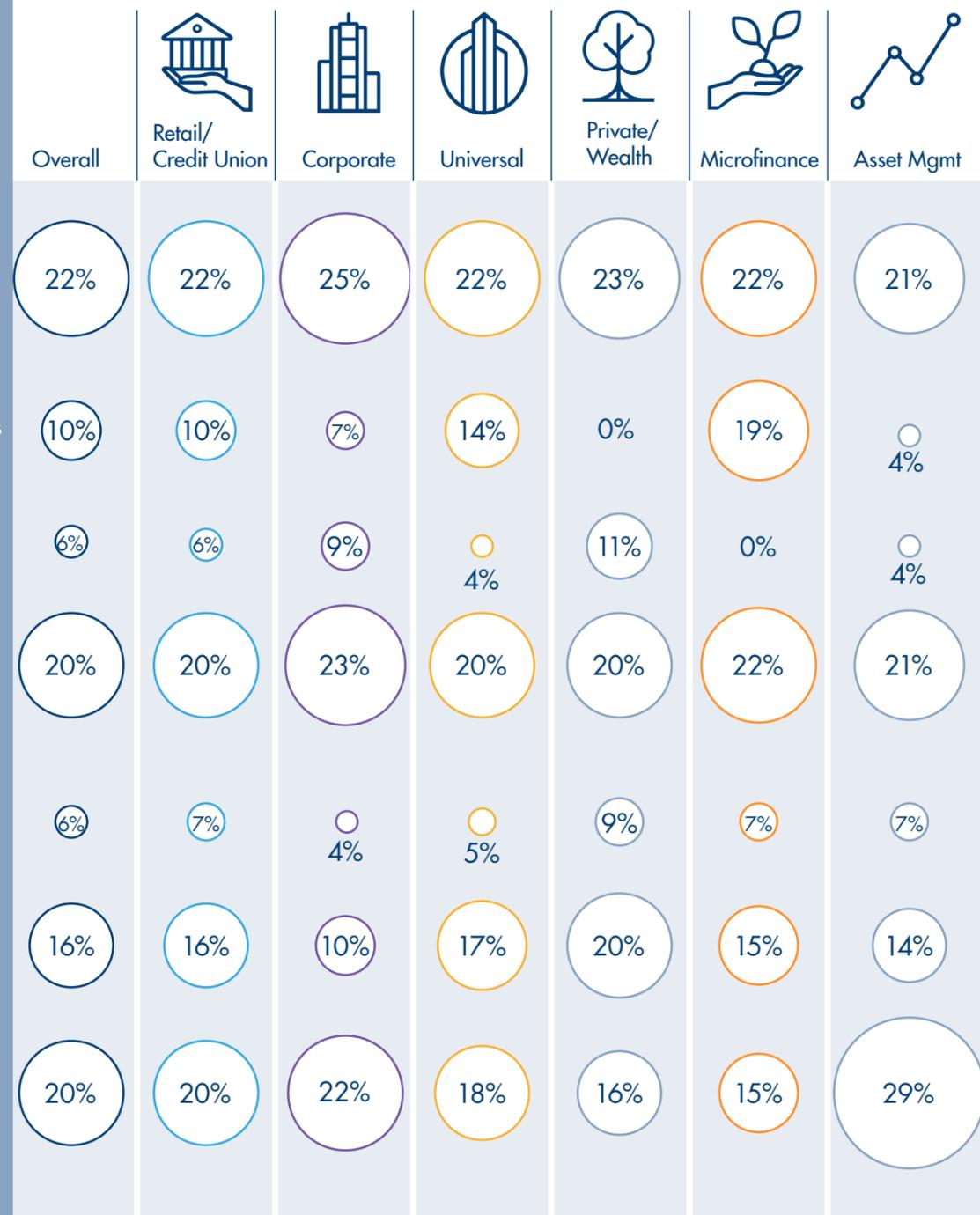
Interaction Channels to Evolve Radically...

The banking industry has had a long history of change, driven by new technologies. Therefore, it is no surprise that the era of ubiquitous computing and networks will change banking once again. This time, though, the change is radical. Technology is fragmenting the banking value chain and this creates threat as well as opportunity. As the distribution mix has diversified, with more and more transactions moving to online, mobile and other IoT devices, some banks are exploring how best to hold onto the customer interaction point. The challenge, however, lies in the speed with which the form of interaction between customers and financial services is changing.

Over the next three years, banks expect their own mobile banking app to become the primary form of communication with customers (for some retail banks, this is a current reality already), managing 30% of total interactions (Figure 13). This number is expected to change drastically for the longer-term future, as bankers believe their own mobile apps will be the platform for only 6% of interactions 10 years from now. In-person interactions, such as face-to-face meetings or phone/video conferences, will also lose relevance, according to survey respondents. They see this communication channel dropping from managing 30% of interactions within the next 3 years to 7% within the next 10 years. Private Wealth Management institutions are slightly more conservative about the speed of change. They foresee, consistent with previous Temenos research, a more hybrid⁷ environment, yet still in line with the overall trend: in-person interactions to drop from 40% to 15% within 10 years.

Surprisingly, the channel that will dominate 64% of customer interactions across all segments within 10 years, according to respondents, are chatbots driven by artificial intelligence—more specifically, natural language processing (NLP). Again, the response is consistent across segments, with only wealth managers predicting a slightly lower figure (56% of interactions done via chatbots). The second most important channel within 10 years predicted by our survey respondents are social platforms (such as Facebook Messenger, WhatsApp, and WeChat), which are becoming aggregators of everyday human life. The exception is private wealth banks that see only 8% of interaction being driven via social platforms, whereas for other segments this channel will account for between 20% and 22% of interactions.

We believe banks could fend off the threat from social platforms. The bank business model is better equipped to serve customers compared to today's aggregators⁸. However, if the prevalence of chatbots will indeed become a reality, then banks must react⁹ to hold onto critical customer touch-points against Alexa, Siri and others. While banks will need to make transactions services available on these common platforms, the challenge will be migrating customers from such platforms to bank-specific interactions when it comes to important conversations about a house purchase, retirement, business planning or other such needs.



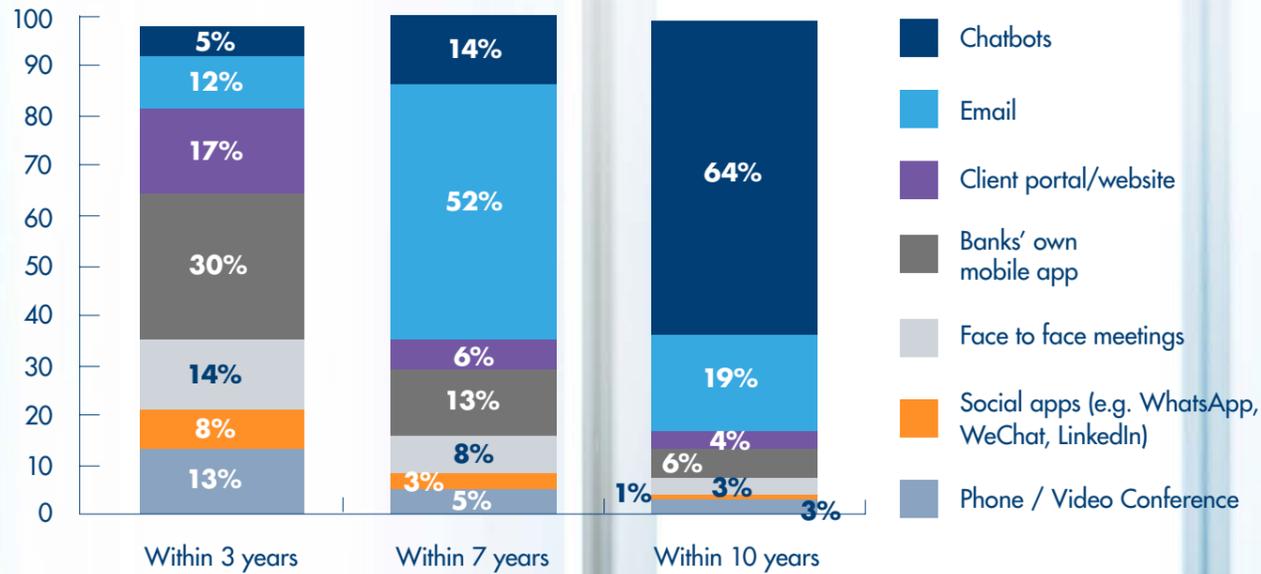
7. The Rise of Bionic Wealth - <https://www.temenos.com/globalassets/mi/wp/16/insights-temenos-white-paperfin-web5.pdf>

8. Banks will make better aggregators than Google - <https://medium.com/@RobinsonBenP/how-banks-will-make-better-aggregators-than-google-6243bdadd8>

9. Avenir Banking Bot fully integrated in Temenos MarketPlace - <https://marketplace.temenos.com/apps/151718#loverview>

Figure 13. What will be the primary form of communication between banks and customers in the future? (%), 2017

The evolving primary form of communication b/n banks and customers, 2017

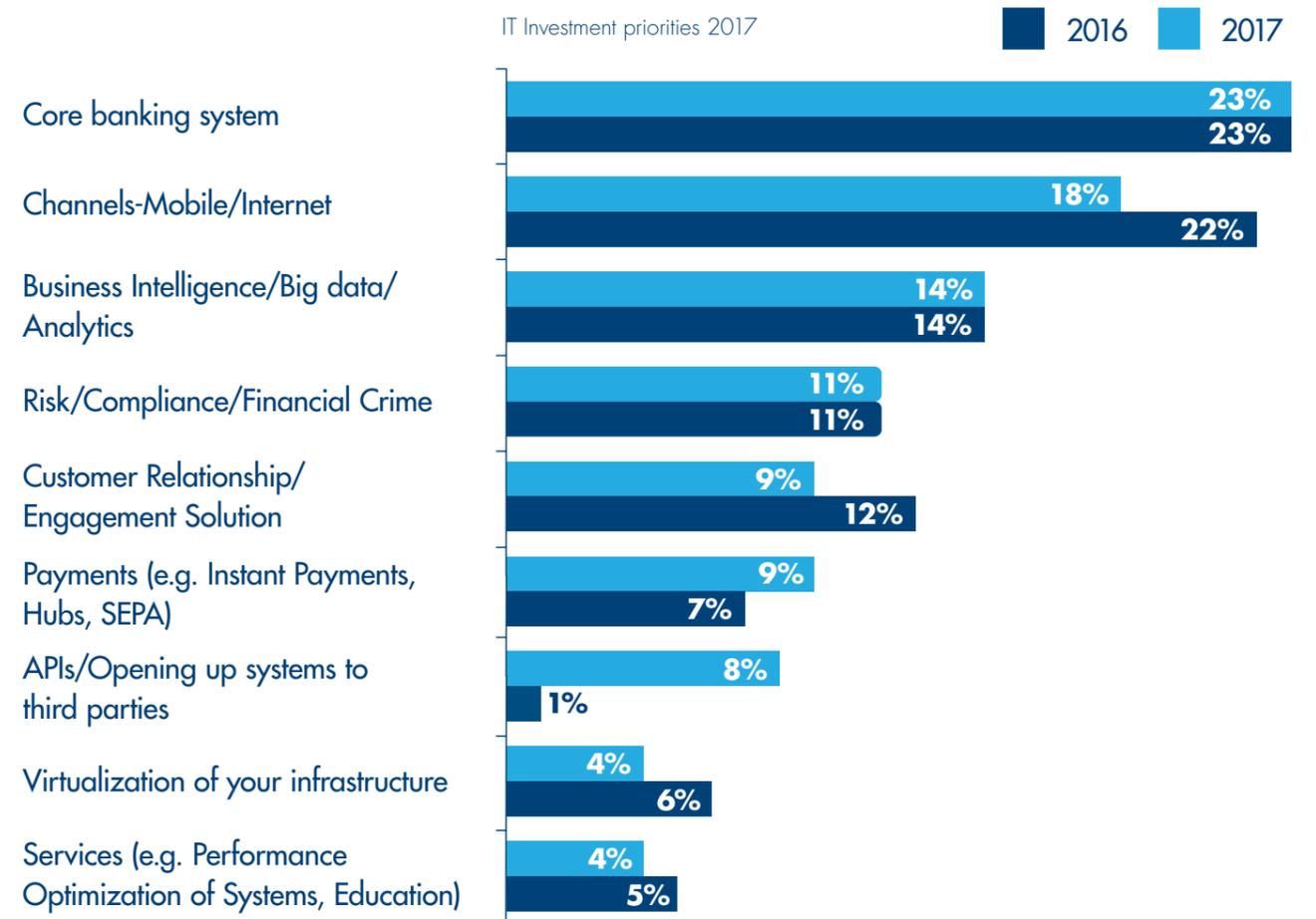


...Driving increasing investments from banks in digital

Investing in digital channels continues to be the second-biggest priority within banks IT budgets for 2018, the same position it held in the past three years as shown in Figure 14. However, this year we observe a slight decrease, with 18% of banks citing it as a priority, compared with 22% in 2016. This is likely due to the fact that most banks have already invested in this area over the past years, and now some are realizing that maximizing return on that investment requires full modernization across the middle- and back-office.

For some banks, though, the attention has shifted slightly. The most notable increase of focus is the investment in APIs and opening up the systems, cited by 8% in 2017 compared with 1% in 2016. While this could be seen as mostly a European focus, due to the imminence of PSD2 regulations, we believe the investment in APIs is global and more strategic¹⁰. For example, 12% of banks in Asia Pacific cited it as a priority in 2017, more than the 11% of banks in Europe. Banks are increasingly interested in further monetizing APIs, but also to drive value by aggregating data from multiple sources in the ecosystem. Hence, big data and analytics maintained its position in the top-3 investment priorities in 2017, with 14% of bankers citing it. As more countries adopt instant payments schemes and the demand for cross-border and multi-currency accounts increase in both retail and corporate, banks are also ramping up their focus in the area: 9% of banks cited investment in payments technology (such as instant payments, hubs, SEPA and so forth) a priority, compared with 7% in 2016.

Figure 14. What are your top 3 IT investment priorities? (%), 2017



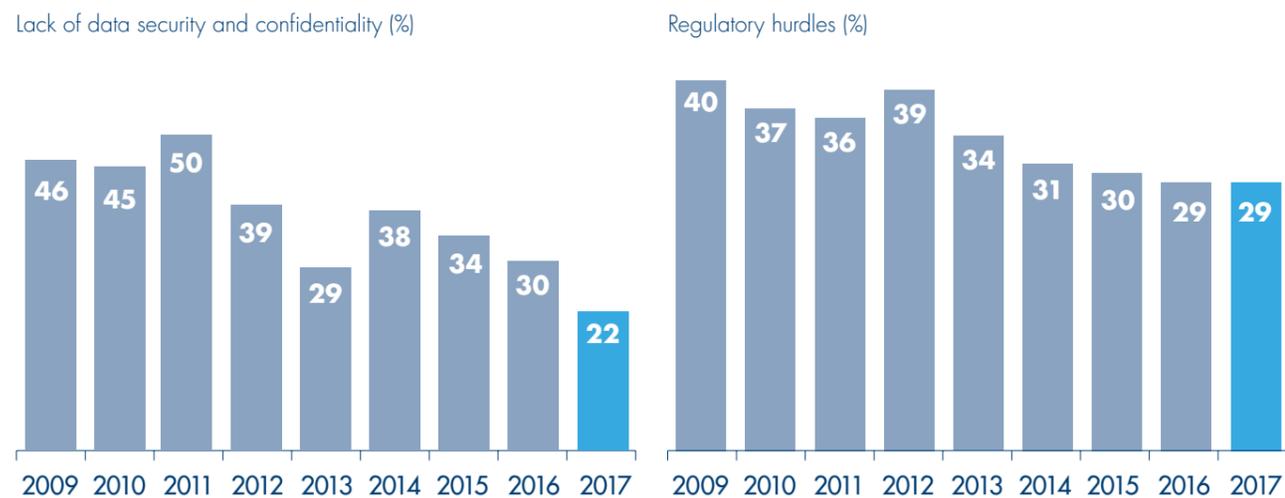
¹⁰ Temenos supports banks' strategies around PSD2 and Open Banking https://www.temenos.com/contentassets/5f27a92c67db48e5bf02c5e2e7f77352/value_prop_open_banking_and_psd2.pdf

Cloud is Becoming Mainstream in Banking

Back in 2009, when we first started asking banks about their attitudes towards cloud computing, the topic was seen as somewhat taboo. Just slightly over half of the institutions asked were using at least one application in the cloud, mostly e-mail, collaboration tools and CRM. We could refer to that period as the 'Stratus'¹¹ period, as the cloud's attractiveness was low-hanging, solely for non-critical applications and mainly for small microfinance institutions.

The two biggest barriers towards further adoption were seen as data security and privacy and regulatory hurdles (Figure 15), as financial regulators were not providing a clear starting point or enough guidance for banks. As the myths around cloud being unsafe are being dispelled and regulators across the globe having stepped up to their role, the usage of cloud in banking is becoming more widespread. Regulated institutions have realized the benefits of adopting cloud in more mission-critical areas, such as data storage, business intelligence, payment hubs and even core banking processes. As the clouds have lifted, and usage diversified, we have entered the 'Cirrus'¹² era.

Figure 15. Two biggest barriers towards further adoption: What do you perceive are the biggest barriers to adoption of the cloud in banking? (%), 2009-2017



Over the years, our survey has captured the change in both the rising adoption of cloud and the banks' perception of the technology and its inherent benefits¹³. Bankers have realized that big data centre and cloud computing providers, like Microsoft, that is investing \$1 billion per year to secure its software and infrastructure service¹⁴, are better positioned to manage physical and cyber threats

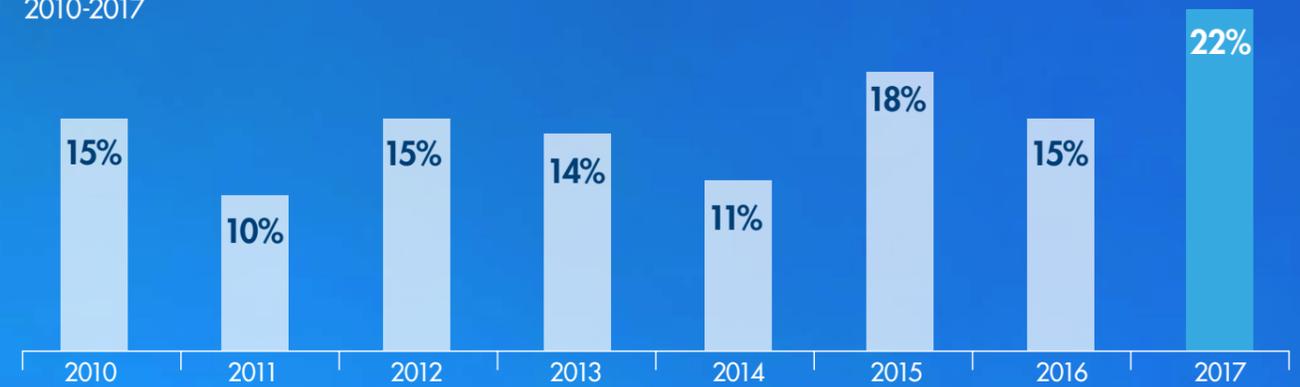
than individual banking IT teams. Today, just 22% of bank executives see data security and confidentiality as a barrier to further adoption of cloud, a considerable decrease from last year's 30%, but an even more notable change in attitude from 2011, when 50% of respondents saw security as a concern (Figure 15).

11. Stratus clouds are low-level clouds, found below 1,800 meters
 12. Cirrus clouds are high-level clouds, typically found at heights greater than 6,000 meters
 13. https://www.temenos.com/globalassets/mi/wp/16/temenos_banking_in-the-cloud-wp160712-2.pdf
 14. Microsoft World Class Datacenters Security Video - <https://www.youtube.com/watch?v=r1cyTL8jRg>

There has also been significant progress over the past 18 months from regulators engaging around cloud adoption. They also realize the positive impact cloud can have on boosting competition and enhancing security of the banking ecosystem. In the UK, the Financial Conduct Authority has published guidelines¹⁵ for financial institutions looking to outsource operations to the cloud, followed shortly after by the Monetary Authority of Singapore¹⁶ and by Luxembourg's Commission de Surveillance du Secteur Financier¹⁷.

This is also reflected in our survey. Bank executives citing regulatory hurdles as a barrier to cloud adoption dropped from 40% in 2009 to 29% in 2017. This level is similar with last year, but the notable change is that while last year there were significant regional variations (such as 36% of respondents in Middle East and Africa cited it), this year the belief that regulatory barriers are disappearing seems to be uniform across the globe.

Figure 16. What do you perceive are the biggest barriers to adoption of the cloud in banking? (%), 2010-2017



As the reasons to cite security and regulations as barriers are fading away, this year's survey brings to the surface a more internal challenge: culture (cited by 16% of bankers, compared with 13% in 2016 and 10% in 2015) and, surprisingly, skills to deploy cloud projects. In a steep increase compared with last year, 22% of bankers cited the lack of both internal skills and shared knowledge across the industry as their biggest challenge with cloud (with APAC leading at 25%, which underlines a bigger problem for banks in the region to attract and retain talent¹⁸) vs. 15% in 2016.

It seems that most banks are waiting for a few successful pioneers before moving to the cloud, especially with core processing. However, as the persistently low industry margins take their toll and the rising customer interactions demand infinite scalability at low cost, we expect this barrier to disappear soon. As banks embark on the journey to win in the digital economy¹⁹, cloud computing will prove to be instrumental in shaping the transformation.

15. <https://www.fca.org.uk/publications/finalised-guidance/fg16-5-guidance-firms-outsourcing%E2%80%98cloud%E2%80%99-and-other-third-party-it>
 16. <http://www.mas.gov.sg/News-and-Publications/Media-Releases/2016/MAS-Issues-New-Guidelines-on-Outsourcing-Risk-Management.aspx>
 17. http://www.cssf.lu/fileadmin/files/Lois_reglements/Circulaires/Hors_blanchiment_terrorisme/cssf17_654eng.pdf
 18. <https://news.efinancialcareers.com/hk-en/266279/talent-shortage-asia-banking-technology>
 19. Accenture, Winning in the Digital Economy report, May 8, 2017 - <https://www.accenture.com/us-en/insight-banking-winning-digital-economy>

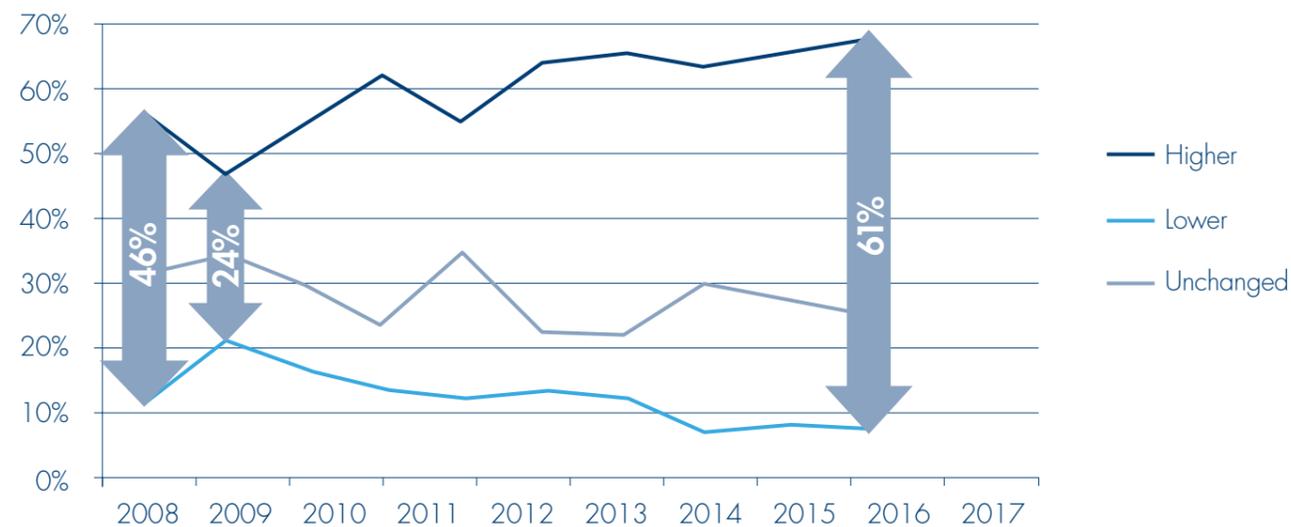
IT Spending Increasing Across All Regions and Segments...

Banks have rebuilt their balance sheets, both in terms of capital levels and in terms of quality of assets, which means that they are far better positioned to embark upon the technology investments required to address the structural low profitability and navigate the current fast-changing environment. We have been asking banks over the past 10 years about the likelihood that their IT budgets would increase or decrease in the next budget window.

This year, a record-level of 68% of bankers mentioned they expect an increased IT budget for 2018 (compared with 65% last year and 64% two years ago), while only 7% expect a decrease in their investment. The 61% difference between bankers who expect increases versus decreases is at the highest level since we first started asking the question (from 58% in 2016 and 54% in 2014), as shown in Figure 17.

Figure 17. Compared to last year, how is your IT budget over the next twelve months? (%) 2008 - 2017

Financial institutions intending to increase vs. decrease IT spending 2008 - 2017



68%

of bankers mentioned they expect an increased IT budget for 2018 (compared with 65% last year and 64% two years ago)

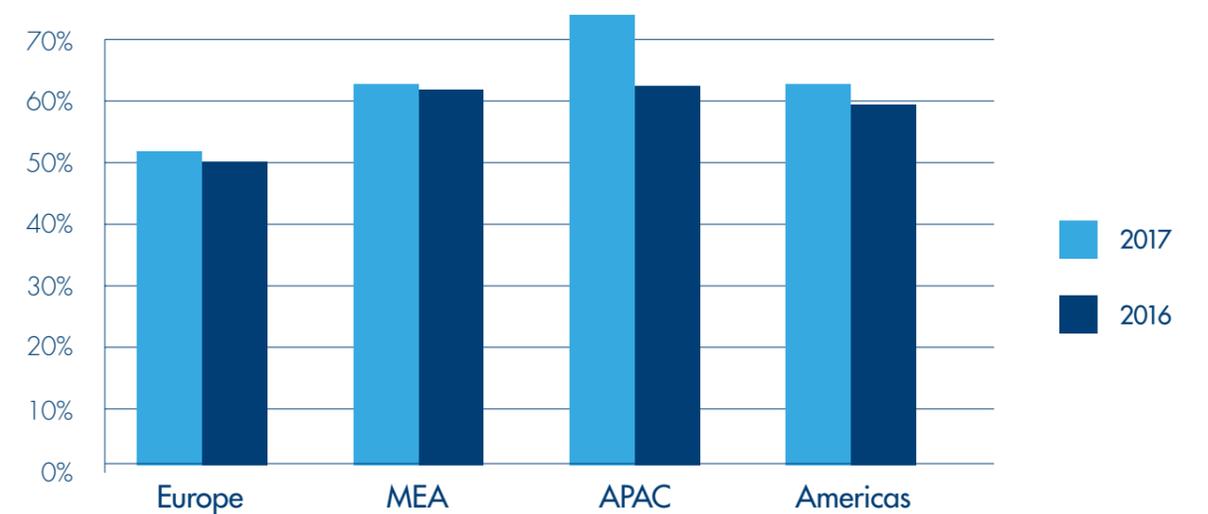


This positive sentiment of increasing IT investment levels is evident across all regions and segments (Figure 18). As previously noted by Accenture research²⁰, banks realize they need to chart a new course and become fully digital to both serve customers as a trusted adviser, and attract and retain talent.

The most notable increase was signalled by banks in Asia Pacific, 86% in 2017 from 72% in 2016, motivated probably by the more stringent digital demands of customers and the growing threat from tech platforms, like Alibaba and Tencent, as they make aggressive steps to expand beyond China, while blurring the lines between industries. In the Americas, 72% of banks cited increased IT budgets, compared with last year's 68%.

Figure 18. Financial institutions planning IT budget increases by Region 2016-2017

Institutions planning IT Budgets increase by Region 2017 vs 2016



By segment, the biggest variations vs. last year came from Universal banks, with 75% of bankers expecting higher budgets in 2017 compared with 52% a year ago. This likely reflects the scale of the digitization effort that is needed at these banks, although costs and best practices can be shared across the different divisions. Corporate bankers are also pumping up their IT budgets next year, with 71% of banks in 2017 planning increased budgets vs. a more cautious 59% in 2016. This confirms what Accenture

research has pointed out: the retail banking experience is now shaping the corporate demand²¹, which has caught up with rest of the verticals. Corporate clients now expect the ability to transact and monitor risk in real-time 24x7, interact via an omni-channel environment, restructure their payments businesses into cost-effective hubs and spur collaboration across departments. 70% of asset managers also plan to increase IT budgets, compared with 57% last year, investing to address shrinking margins.

20. Accenture Banking Technology Vision 2017

https://www.accenture.com/t20170322T205838Z_w_/us-en/_acnmedia/PDF-47/Accenture-Banking-Technology-Vision-2017.pdf

21. Accenture Payments – Transforming corporate payments for the digital age

https://www.accenture.com/t20170130T001444Z_w_/us-en/_acnmedia/PDF-42/Accenture-Transforming-Corporate-Payments-Digital-Age.pdf

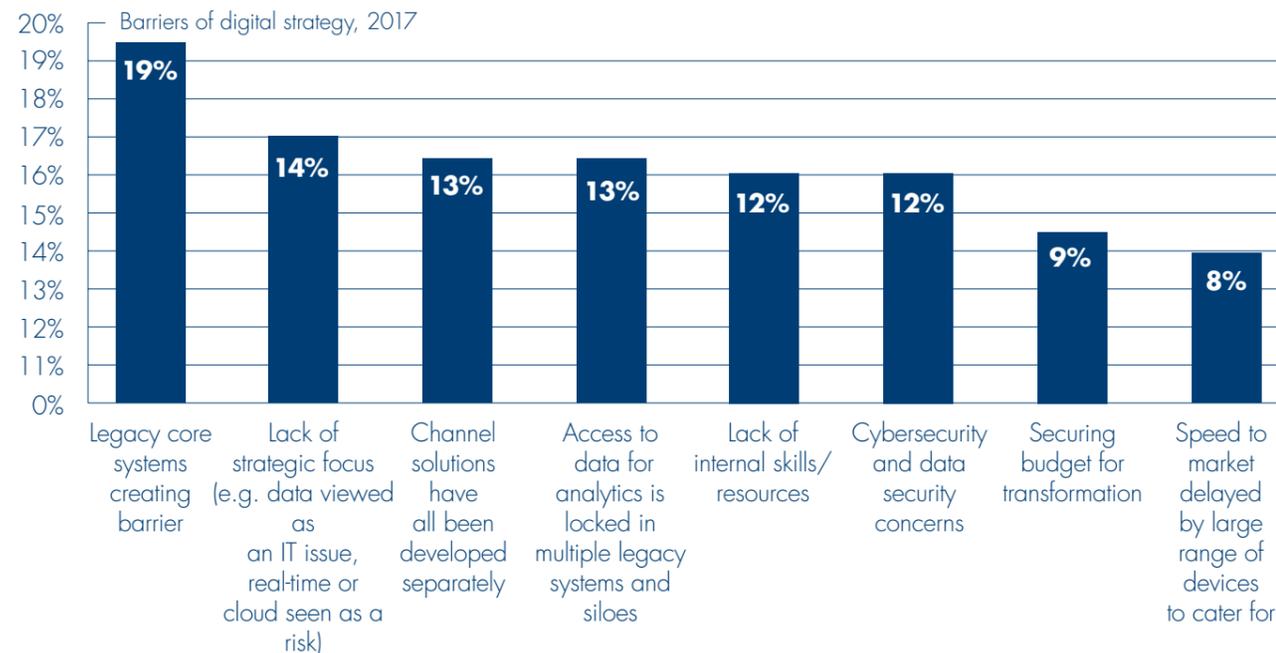
...With a Digital Core Platform Seen as the Ticket to Entry in Digital Ecosystems

Banks have realized that investment in digital channels and analytics alone will not deliver the required real-time user experience, nor will it bring the strategic cost reduction that will unlock future growth initiatives. As banks are faced with unprecedented low margins, new business models are an imperative. To enable these new models, a full digital transformation is required, including a modern digital core banking platform that will arm banks with consolidated data-sets, real-time processing, insights-based products, flexibility and, very important in today's exponential growth world, increased scalability.

For the fourth year in a row, core banking platforms have remained the biggest IT investment priority, with 23% of survey respondents citing core banking projects as their number one focus in 2017, similar with 2016 and 2015. This level was consistent across regions and presented minimal variations across segments (notably, 27% and 25% of Corporate²² and Universal banks respectively mentioned core processing platforms as their biggest

priority). Transforming for the future²³ starts now, and banks understand that there is no shortcut for this. Continuing to run on legacy applications in the back- or middle- office will prevent banks from achieving true digital banking—a reality acknowledged as well in this year's survey (Figure 19). Slightly more than one-third (32%) of survey respondents acknowledged that legacy systems (19% legacy core banking systems, from 12% two years ago; and 13% data siloes and other legacy systems, 11% two years ago) can be the biggest barrier to adopting a true digital strategy. We see this as a confirmation from our survey respondents (which are either potential customers exploring digital renovation with Temenos, or existing customers which have already reaped the benefits of a modern core platform²⁴ or are in the middle of are taking advantage of the upgradability of Temenos packaged software), that successful banks of the future understand that in their journey to become digital requires structural answers for structural challenges.

Figure 19. What challenges, if any, are you facing in implementing a digital banking strategy? (%), 2017



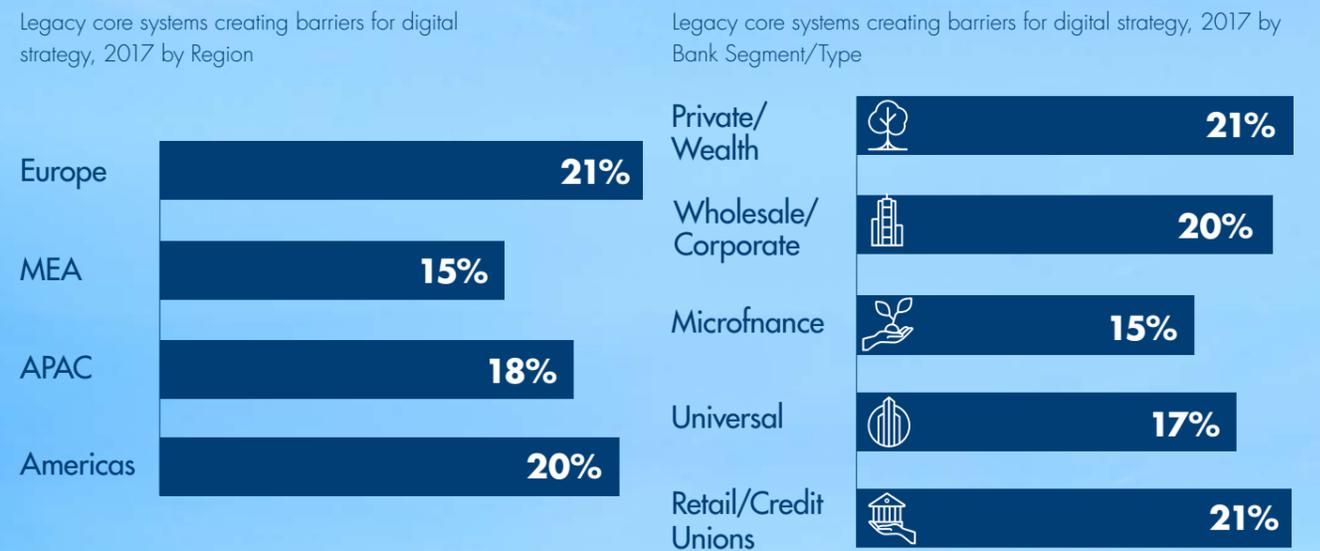
22. Central Banking included

23. https://www.nordea.com/Images/35-104789/2016-03-02_Core-Banking-ReplacementProgramme_EN.pdf

24. <https://www.temenos.com/en/customer-success/customer-case-studies/>

This seems to be a problem in Europe and the Americas in particular, with 21% and 20% respectively of the survey respondents seeing a modern core banking a prerequisite for a digital banking strategy (Figure 20). Many European banks are running legacy core platforms. We have observed in the past three years a surge in large transformation projects coming to market (Nordea, Julius Baer, Bank of Ireland, Santander OpenBank).

Figure 20. What challenges, if any, are you facing in implementing a digital banking strategy? (%), 2017



With increasing IT budgets planned worldwide, banks across all segments seem to be acknowledging the small window of opportunity to transform for today's fast-changing world and become future ready.



Conclusion: Digitize Fully and Open Up to Thrive in the Future

The banking industry is undergoing significant disruptive change. It faces new competition, less loyal customers and waves of new regulation, all of which are weighing on profitability (which emerged this year as the biggest concern for the banks we surveyed). If these challenges were not enough, technology and regulation are coming together to open up banking to new competition in a way not seen before.

79%

see Open Banking as more of an opportunity than a threat.

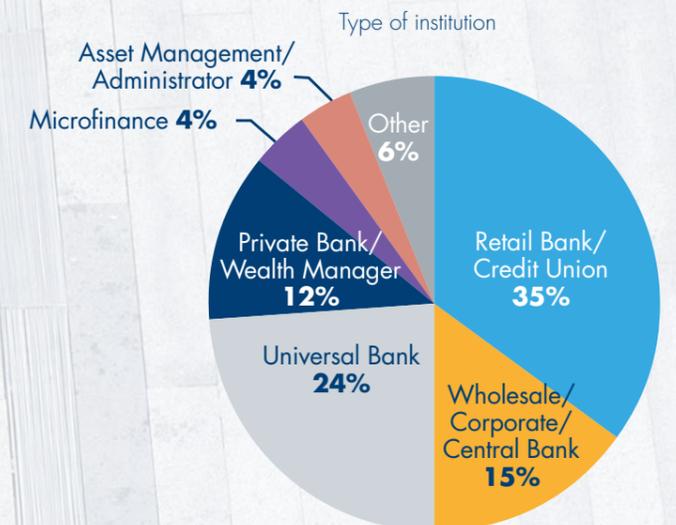
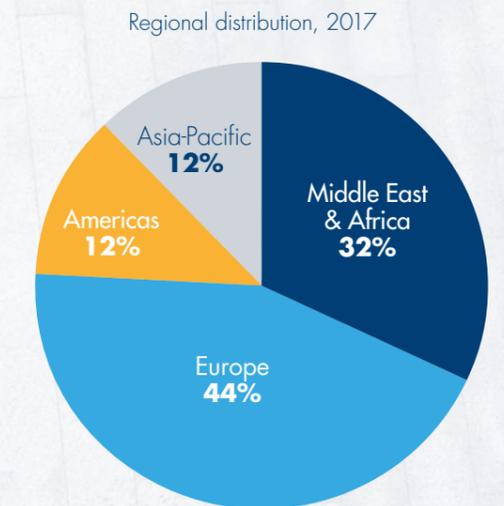
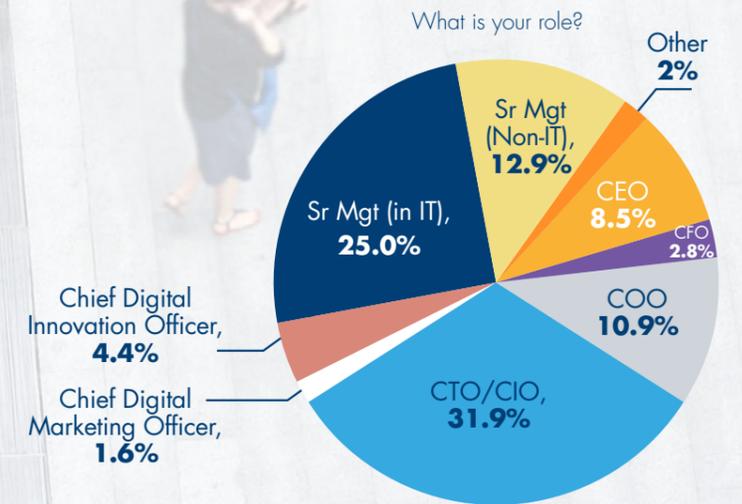
Nonetheless, a significant majority of our respondents (79%) see Open Banking as more of an opportunity than a threat. To capitalize on this opportunity, banks are increasing IT spend—the delta of increasing over decreasing budgets is the highest we have recorded—and putting that money into digitization efforts. Banks are recognizing that digitization requires upgrading core banking systems (the top IT spending priority) if it is to be truly effective as well as likely moving core infrastructure to the cloud, where previous concerns around security and regulation are diminishing fast. Banks are also recognizing that, if they are to succeed in the digital age against tech companies and challenger banks (their two biggest perceived threats), they need to go beyond just digitizing their operations and turn themselves into truly open platforms that both export and import products and services. 73% of banks are now actively looking to partner with fintechs, while 62% are ready to distribute third-party services over their platform.

In summary, while the banking sector is undoubtedly undergoing a major transformation that is putting pressure on profitability, signs are emerging that many banks recognize what it will take to succeed in the digital age.

Those banks that are making the investment in front-to-back digitization at the same time they are opening up to third-parties, place themselves in the best position to not just survive, but to prosper in the future. For those banks that are deferring digitization efforts or limiting them to digital channels, the future is likely to be less kind.

Appendix: Breakdown of Survey Participants

For this year's survey, we interviewed 248 senior bankers. The interviews were conducted over 3 days at the Temenos Community Forum (TCF 2017), which was held in Lisbon, Portugal. The graphs below give breakdowns of the survey respondents according to seniority, geography and the types of institutions for which they work. As a thank you to respondents, we made a donation for every completed survey to the Global Fund for Children <https://globalfundforchildren.org/>



About Temenos

Temenos AG (SIX: TEMN), headquartered in Geneva, is the world's leader in banking software, partnering with banks and other financial institutions to transform their businesses and stay ahead of a changing marketplace. Over 3,000 firms across the globe, including 41 of the top 50 banks, rely on Temenos to process both the daily transactions and client interactions of more than 500 million banking customers. Temenos offers cloud-native, cloud-agnostic front office and core banking, payments, fund management and wealth management software products enabling banks to deliver consistent, frictionless customer journeys and gain operational excellence. Temenos customers are proven to be more profitable than their peers: over a seven-year period, they enjoyed on average a 31% higher return on assets, a 36% higher return on equity and an 8.6 percentage point lower cost/income ratio than banks running legacy applications. For more information please visit www.temenos.com.

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