

A RESEARCH PAPER FROM FINEXTRA, IN ASSOCIATION WITH PEGA

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# AI, OPEN BANKING AND CLIENT LIFECYCLE MANAGEMENT – DIFFERENTIATION OPPORTUNITIES AROUND



Finextra

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# FOREWORD



**Nancy Weir**

**Product Marketing Director, Industry Principal  
Client Lifecycle Management, KYC and Digital Automation,  
Pegasystems**

Artificial intelligence (AI) and open banking are two of the key initiatives in recent years to hit the banking industry at a global level. They have the potential to be major disruptors to how things are currently done across the end-to-end, front-to-back-office client lifecycle. These initiatives are generating lots of interest from financial institutions, technology and data providers, as well as from regulators. The opportunities for providing excellent levels of client satisfaction by delivering the right products and services in a timely fashion and sharing client data across organisational boundaries, of course with client permission, are immense. There are also regulatory opportunities and hurdles to address as AI and open banking become more prevalent and accepted across the industry. To be successful, companies using AI and/or delving into open banking need to be aware of the overall implications of each.

AI has been around for a good number of years and is becoming more embedded into the Client Lifecycle Management processes across the banking industry. Various opportunities for using AI across the entire client lifecycle, in Marketing, Sales, Customer Decisioning, Customer Service, and AML (Anti-money Laundering) and KYC are out there. AI has the potential to significantly improve the way financial institutions work, from decision-making, risk management, to enhancing bottom-line benefits through increased revenue and reductions in costs, mainly through FTE optimisation. Many use cases have evolved, with AI becoming more and more centric to many business strategies. There are a number of key considerations to take into account in AI implementation, not least how to avoid regulatory and ethical issues, optimise AI through control and collaboration, create a robust AI quality assurance process, and very importantly harness the benefits and power of AI to deliver real business value. One of the main challenges is satisfying the regulators in the AML/KYC space that the AI framework being



adopted provides transparency, control, and auditability to evidence that the decisions being made are based on solid, reliable grounds, and that at any time, the path to getting to such decisions can be traced back.

Open banking is a major disruptor which will have a ripple effect across the financial services industry. It requires financial institutions to prepare for significant changes to their business models, aligning strategy with technology. Those institutions who embrace this early on have a great opportunity to set themselves apart as industry leaders and innovators. Successful organisations will be those that develop and maintain strategic relationships with value-add third parties, that deepen relationships with their clients by providing a seamless, hyper-personalised and well-differentiated experience; that continuously optimise for changing business conditions, and that ensure data privacy and provide regulators with end-to-end visibility into every client interaction. The key to driving that success is to work with the right technology partner to enable one-to-one customer relationships at scale, that can deliver global scale, and at the same time, provide local specialisation, that can deliver built-in speed and efficiency, and that can deliver a straightforward integration solution to third parties and internal systems.

The end game for open banking is not clear right now, nor is how the industry will get there. The early adopters will have the advantage, will be the leaders of the pack, and will gain market share ahead of their competitors.

For both AI and open banking, the possibilities are endless. The financial services industry is at a critical turning point, and the key to creating differentiation in the marketplace is in the development and implementation of a digital transformation strategy encompassing both. To do so will require collaboration across the industry, with technology vendors, and third party data providers, and at the same time, deliver a seamless, omni-channel service to clients, anywhere, anytime. This paper will provide key findings from a recent survey of fintechs and financial institutions with insight on the current views on AI and open banking and how they can drive strategy for Onboarding, Client Lifecycle Management, including KYC.

Pegasystems has worked with Finextra on the research presented in this white paper in order to further explore the key opportunities and potential pitfalls ahead for financial institutions from AI and open banking in their digital transformation journeys, and to present the current thinking across the industry. I hope you find the paper informative and interesting, and I invite you to get in touch if you would like to discuss any aspect of regtech, digital transformation, KYC, or client lifecycle management in further detail.



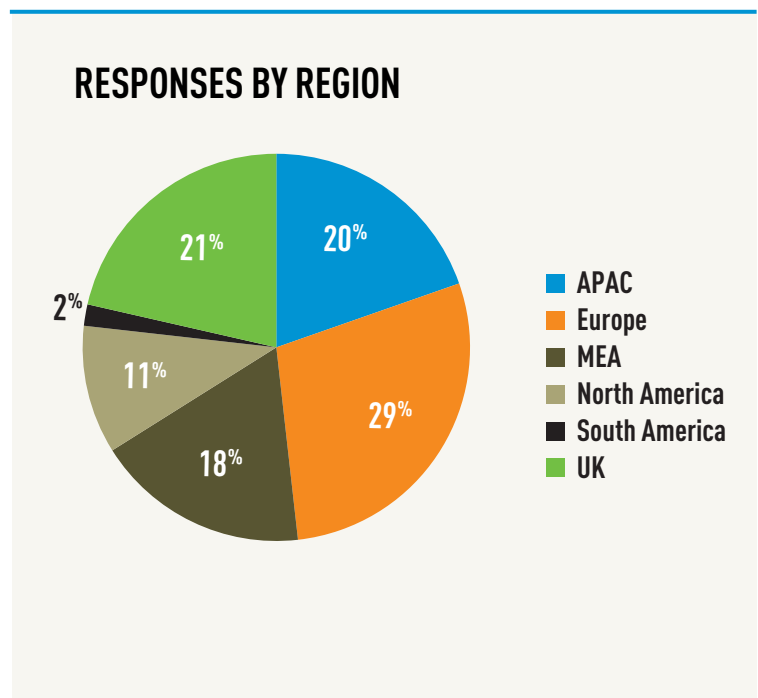
# ABOUT THIS SURVEY

In mid-2019 Finextra and Pega conducted an online survey of senior business and technology managers from 27 countries, representing 54 financial institutions and fintechs, on the impact of AI and open banking on their strategies for onboarding, KYC and client lifecycle management. Respondents from the UK and rest of Europe accounted for half of all survey participants with the remainder spread across North America, Asia Pacific and the Middle East & Africa.

Sample job titles of respondents include:

- AML and Sanctions manager
- Associate Director
- Head of Compliance and Operations
- Head of Customer Operations
- Head of Sales, Personal Loans
- Managing Director
- Head of Middle Office
- Process Automation Project Lead
- Head of Business Analytics
- Head of Digital Development
- Head of Middle Office
- Process Automation Project Lead
- Head of Business Analytics
- Head of Digital Development

CHART 1



# INTRODUCTION

In recent years, many leading banks have made great improvements in their capacity to streamline the onboarding of new customers and manage the client lifecycle from sales through to offboarding. To do so, they have moved away from a siloed business-line driven model and have stepped forward on the journey to becoming truly digital, operating across multiple jurisdictions, lines of business and products while putting the client experience front and centre. This client-centric approach is also transforming the AML/ Know Your Customer (KYC) compliance functions to maximise the re-use of data and documents, to manage more holistically the client risk, and to drive down the cost of acquisition of new clients and for existing clients, the adding of new products.

For both clients and banks, the main objectives are very similar: the clients are looking for omni-channel entry options, faster time to do business, and a seamless, streamlined process wherever they are doing business, regardless of business line or products; the banks are looking to generate revenue quickly, to have visibility of the overall client relationships across jurisdictions, to re-use data and documents wherever possible to minimise client disruption, to create a unique differentiation through a superior level of service, and at the same time to adhere to local and global regulatory requirements.

In the current climate where all areas of financial institutions responsible for KYC face an exponentially increasing challenge to thoroughly identify new customers and monitor all customer behaviours on an ongoing basis, AI solutions are showing great promise. The range of technology and data science practices that sit under the AI umbrella– from machine learning models, natural language processing and robotic process automation through to deep learning and neural network models– can deal with the global scale of data available and find patterns that humans can't. There are, however, challenges around transparency, explainability and ethics to overcome before the full value can be realised.



Meanwhile, for financial institutions operating in jurisdictions that are mandating or guiding their industries towards an open banking model—where an API-driven ecosystem enables new partnership and platform models—there are challenges around onboarding third party payment providers as partners/customers, as well as securely sharing access to customer data.

This survey sought to gauge the current perception in the market of AI's current use and suitability, and potential benefits and challenges, for implementation in the areas of onboarding, KYC and Client Lifecycle Management. It also asked questions to evaluate where open banking provides opportunities for growing market share and revenue growth, and to what extent it complicates onboarding and regulatory compliance processes.



# EXECUTIVE SUMMARY

- 71% of organisations expect AI to be disruptive or highly disruptive within the next one to three years.
- 80% of survey respondents agreed or strongly agreed that AI has the potential to shape compliance efforts in the areas of KYC and AML.
- For 50% of respondents, improving the overall process of onboarding a customer was the top or second-ranked area for AI implementation.
- Talent and skills shortages were cited by 44% of respondents as the biggest or second biggest obstacle to adopting AI solutions for onboarding, CLM and KYC.
- Lack of trust in the results was cited by 32% of respondents as the number one concern about relying on AI outputs for decisions, followed closely by the ability to audit AI algorithms and explain the decisions reached, which are key elements that are required in order to demonstrate that the results can be trusted. They are also required to satisfy regulatory scrutiny.
- Increasing the breadth of product and services provided to customers was seen as the major benefit of AI implementation in onboarding, CLM and KYC by 27% of respondents, followed closely by speed-to-market at 23%. AI can deliver this by allowing for greater personalisation of products and services to customer profiles, and faster onboarding of new customers for these products.
- Any potential increase in revenue and market share from open banking is likely to come through collaboration with fintechs and third party providers (TPPs) to offer new services and products; 53% of survey respondents viewed this as the primary opportunity.
- The two biggest regulatory concerns that financial institutions have are that the regulatory oversight should thoroughly cover all participants within the evolving ecosystems, and that rules about data sharing should balance security and privacy without stifling innovation. Establishing the identity of customers that aren't coming direct to the bank is the major concern for financial institutions for open banking and KYC/onboarding, even as digital identity standards are becoming bedded in across many jurisdictions.





# AI DISRUPTION AND IMPLEMENTATION PLANS

## PLENTY OF POTENTIAL BUT TIMEFRAMES WILL VARY

It is generally agreed that AI will be a catalyst for change in the financial services industry, allowing organisations to look differently at operations, staffing, processes, and the way work is done in a human-machine partnership. Other research surveys have shown the perception that this change will be for the better. For example, in PwC's 2019 AI survey of US executives, financial services executives said they expect their AI efforts to result in increased revenue and profits (50%), better customer experiences (48%), and innovative new products (42%).

But there are differing views on how disruptive AI will prove to be for individual organisations and their industry, and over what time frame. Will the use of AI lead to “disruptive innovation”, in the manner meant by business author Clayton Christensen when he coined the term in 1995, whereby new business models emerge that challenge and de-throne a traditional business model, affecting the building of traditional business cases and ROI?

Perhaps over time, and in conjunction with other meta trends such as open banking, competition from tech giants and distributed ledger technology, new businesses will emerge that outshine traditional banks within the financial services industry. But in the short to medium term the disruption from AI is more likely to be within the context of financial institutions' current business models, radically improving middle and back-office functions while also optimising onboarding and customer service.

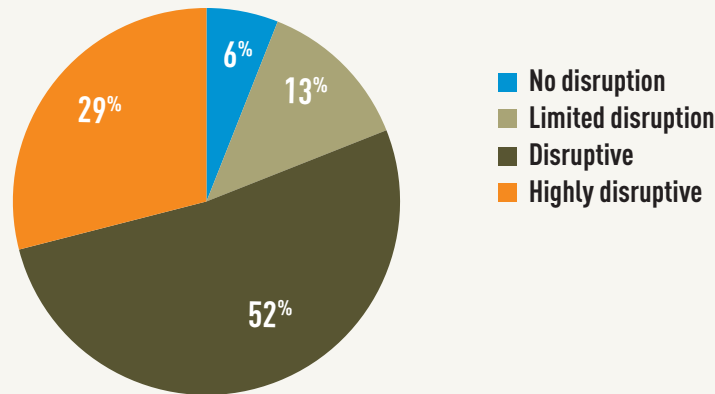
Our survey found that 71% of organisations expect AI to be disruptive or highly disruptive within the next one to three years. Views can differ depending on the perspective, seniority, and areas of responsibility within the business. Those more in touch with technology implementation or in business functions such as financial crime prevention, where AI deployments are more mature, tend to be more bullish on the potential. Whereas those who range in seniority from a level below the C-suite up to the board level tend to take a more conservative view. This can either be driven by scepticism about AI's ability to generate more than incremental improvement, or a realisation



that to be truly transformative requires an enterprise-wide AI strategy, operationalised at scale. This latter path could easily take more than three years for large organisations that are not already well embarked on the journey.

CHART 2

### WHAT IS AI'S POTENTIAL TO DISRUPT FINANCIAL SERVICES OVER THE NEXT 1-3 YEARS?



#### MOVING BEYOND RULES ENGINES TO IMPROVE COMPLIANCE

Looking more closely within financial institutions at the AML and KYC compliance functions, positive sentiment towards the potential for AI is even more overwhelming. Eighty per cent of survey respondents agreed or strongly agreed that AI can enable and shape compliance efforts in these areas.

**“We polled our peers at EBAday 2019 about the major pain points in the correspondent banking industry, particularly for cross-border payments. Interestingly, AML and KYC were clear front-runners among all the pain points. The speed of regulation, which I thought would be much higher up the list came second to last.”**

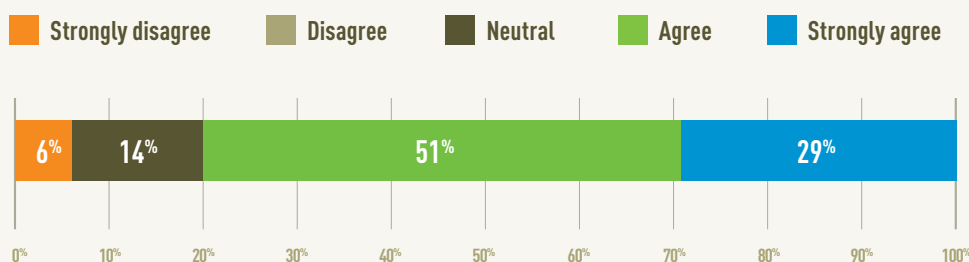
**VEERLE DAMEN, HEAD OF INTERNATIONAL PRODUCT & NETWORK, NATWEST**

Rules-based engines can help automate the steps required to comply with multiple regulations that affect onboarding and time to revenue, including AML/CTF, Dodd Frank, FINRA, MiFID II, EMIR, FATCA, CRS, and IROCC requirements. But going beyond rules, machine learning and natural language processing tools can work with diverse and unstructured big data derived from various internal and third party sources and apply methods such as entity extraction, entity matching, named entity linking and carpet classification. Using these, the models can learn to rank and filter various search queries on top of content and alerts from rules engines to help reduce false alert rates and detect more of the fraudulent and money laundering transactions that currently go undetected.

Going further still, methods such as deep learning and graph neural networks are currently at the forefront of AI research. If challenges around transparency, auditability and explainability can be overcome, these show even greater promise for mapping and finding patterns to improve AML and KYC compliance in the complex web of global transactions, legal entities and individuals.

CHART 3

**TO WHAT EXTENT DO YOU AGREE WITH THIS STATEMENT: AI HAS THE ABILITY TO SHAPE OR INFLUENCE HOW A FINANCIAL INSTITUTION CONFORMS TO AML AND KYC COMPLIANCE AND REGULATION?**



“We’ve seen waves of investment in the compliance sector. After the financial crisis it was because of the regulatory tsunami with which we were hit. So regulated firms were focused on creating best-of-breed compliance departments, which required a lot of investment. Now it has changed a little bit, where firms are looking at opportunities from rules and regulations and they’re overlaying technology with that. And that requires investment as well. Finally, have a look at countries like the UK, which has the toughest senior executive accountability regime and others are following. As one of these executives you want more from your compliance teams to ensure you’re comfortable that you’re meeting all your roles and responsibilities. This is putting yet more pressure on compliance and driving additional investment.”

SOPHIA BANTANIDIS, HEAD OF REGULATORY STRATEGY & POLICY INNOVATION, CITI

### GETTING ONBOARDING RIGHT BOOSTS PROFITABILITY AND CUSTOMER SATISFACTION

The quality and speed of a financial institution’s onboarding processes can have a direct link to ongoing customer profitability, whether it’s in the consumer segment, small business or corporate, capital markets, wealth management, or asset management segments.

In the retail banking space, studies have demonstrated correlation between an optimal onboarding process and both the intent to reuse the same financial institution in the future and the intent to recommend the bank to others.

The initial weeks, days, and even minutes after a consumer applies to open an account are critical in determining how profitable that banking relationship will ultimately become. And even once an application is approved, it’s important to make sure the customer can begin using the product’s features to the full as soon as possible. For example, US retail bank BBVA Compass found that a process that emphasises early product engagement can boost the likelihood of using the same institution in future by 20 percentage points.

Another research report from Javelin found that expediting the onboarding and activation process for new customers who do not fully engage because they think these initial activation processes are too difficult will increase a retail financial institutions’ profit from new account holders by eight per cent. In other words, it pays dividends to deliver a seamless and fast onboarding experience.

In the corporate banking space, a previous survey from Finextra and Pega found that 90% of big corporates would consider switching to a different financial institution for better client service around onboarding, account maintenance, service requests and inquiry handling. In an environment where onboarding can still sometimes be measured in weeks, particularly for multinational entities and cross-border products, it is clear that onboarding can be a competitive differentiator for attracting and retaining clients.

In capital markets, the speed of this process is not only important for clients, who are keen to trade, but also for banks. A streamlined and efficient process will be quicker, cheaper and crucially, will reduce the “time to value” from initiating a client relationship to generating revenue.

For any financial institution, focusing on getting onboarding right and realising the opportunities and benefits involved in an efficient client service function can also be a catalyst for embedding client-centric behaviour throughout the organisation.

#### AI TO IMPROVE OVERALL ONBOARDING EXPERIENCE

Our survey found that improving the overall process of onboarding a customer was the top-ranked area for AI implementation by 32% of respondents, with 50% ranking it first or second. AI can provide benefits in several areas: speed, thoroughness of checks for compliance purposes across jurisdictions and lines of business, and recommendation of relevant products and services during the customer onboarding process.

In an ideal world for onboarding speed, customers should be able to complete the process entirely within their digital channel of choice. On the bank side, if these channels are connected directly to an AI-assisted decision engine, then it should be possible for applications for simpler products and customers that match a very positive, or very negative, profile to receive a fully automated decision in seconds.

Even where decisions can't be entirely automated, those same AI solutions should be able to provide significantly enhanced insight for a human to make the decision faster and more efficiently based on a broader set of AI processed input data.

For example, in a retail banking application, an AI model could be trained to flag attempts at tampering with financial information or false documentation, and have these passed to humans for review.

In a small business lending situation with AI models trained on multiple internal and external data sources related to customer profiles, public records and news events, a human decision maker could be presented with all the automated checks that have passed. They could then be asked to review only the specific element that did not get an automatic pass. This could, for example, be a check of the business' exposure to another company that has been both named as a customer in media reports, and has been linked to other contract disputes or insolvency speculation.

This kind of extensive entity resolution is also useful in capital markets. Confidence in the truth of the client's identity can be established by matching them against their potential network generated by analysis of the initial data set provided by the client. This accuracy can be enhanced with additional data from existing and external data sources, and underpinned by the transparent and traceable layers of probability generated by the underlying data set.

### PRODUCT SUITABILITY AND ONGOING COMPLIANCE

At the point of customer onboarding, the presentation of appropriate products and services in addition to what the customer is applying for is crucial to improve uptake rates and lifetime customer profitability. But it's also required to stay on the right side of regulations designed to prevent predatory sales practices. Banks must ensure all product offers are suitable for each customer, whether at this onboarding stage or as part of ongoing client lifecycle monitoring.

Automatic risk profiling, and more general lifecycle monitoring of accounts and behaviour were also ranked highly in this survey among areas that will see AI investment. In this ongoing service-focused stage of the customer relationship, AI can help to seamlessly address conformity with AML, KYC, and tax regulation, without being obtrusive to the customer, and while minimising both false alerts and excessive manual reviewing of transactions.

At the other end of the scale, 60% of respondents ranked meeting the growing demands of regulatory compliance as the last or second lowest priority in current plans to implement AI-based solutions. While this is undoubtedly a benefit that can arise from the implementation of AI solutions, respondents cited risk profiling (42% very important or important) and lifecycle and behaviour monitoring (47% very important or important) as higher priority areas for immediate AI implementation. As stated, 50% ranked onboarding as very important or important. Hence, the business outcome and risk management outputs they are seeking to improve with AI technology is a priority.

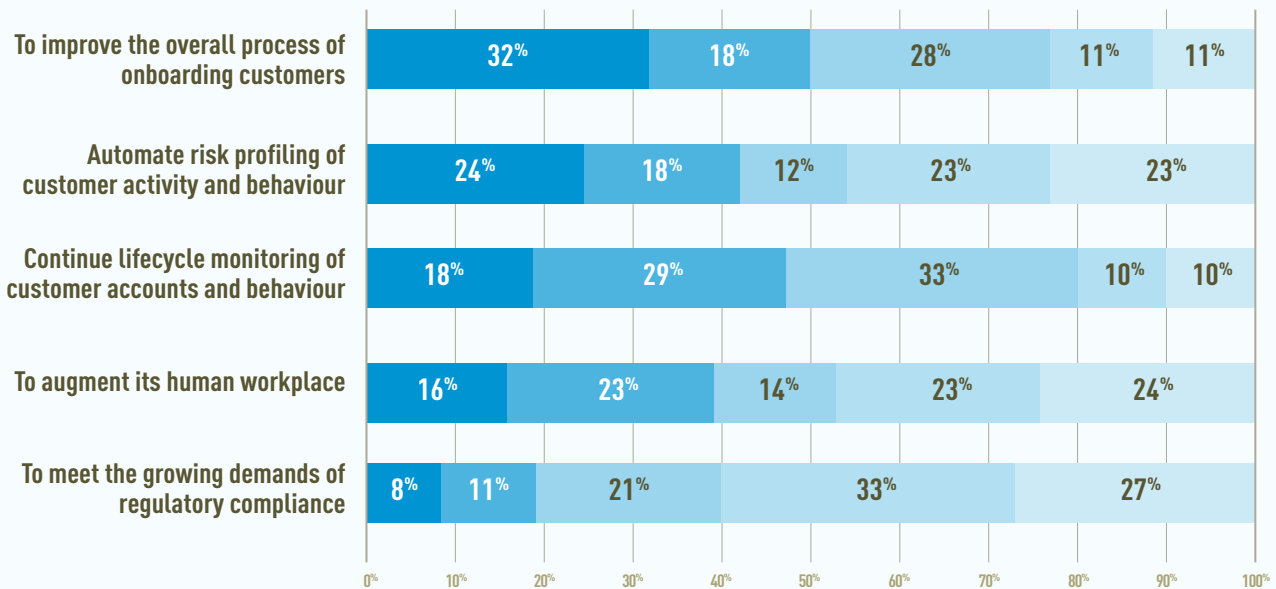


Financial organisations are putting the customer first in their business cases for AI, without ignoring the regulatory requirements, and increasing compliance efficiency for them internally. As implementation plans take shape, broader and more complex and highly agile implementations may therefore follow, accommodating iterative regulatory updates, for example, and joining the AI dots across the business lines company-wide.

CHART 4

**TO WHAT EXTENT IS YOUR FINANCIAL INSTITUTION PLANNING TO IMPLEMENT AI-BASED SOLUTIONS TO IMPROVE THE FOLLOWING BUSINESS FUNCTIONS?**

(PLEASE RANK THE FOLLOWING WHERE 1 = MOST IMPORTANT)



# BENEFITS AND PITFALLS OF AI

## SKILLS SHORTAGE AND LACK OF ENTERPRISE-WIDE STRATEGY

With its growing complexity and wide range of applicability to business problems, AI also brings with it a number of obstacles that need to be overcome if it is to live up to its potential. Many of these apply to use cases in any industry, and any business function. Chief among them is the lack of available talent and skills across the technology and practical aspects of AI. This was cited by 44% of respondents and the biggest or second biggest obstacle to adopting AI solutions for onboarding, CLM and KYC.

This skills shortage extends beyond just the availability of data scientists and Python and R developers, for which there is a growing tertiary education and training sector- sometimes involving partnerships between large financial groups and educational institutions.

It also extends to a lack of line-of-business leaders and compliance experts with experience of working with AI practitioners, and increasingly, the availability of ethicists. The AI ethicist role has begun to be created across government departments and tech giants over the past several years. It entails the critical responsibility of establishing AI frameworks that uphold organisational standards and codes of ethics. This may be currently a responsibility covered by existing leaders in an organisation, but particularly in a sector as heavily regulated as financial services, it is likely to become an in-demand discrete position. This is particularly the case in Europe with the release this year by the European Commission of its Ethics Guidelines for Trustworthy Artificial Intelligence, which represents the first significant government-initiated effort to influence the use of AI systems.

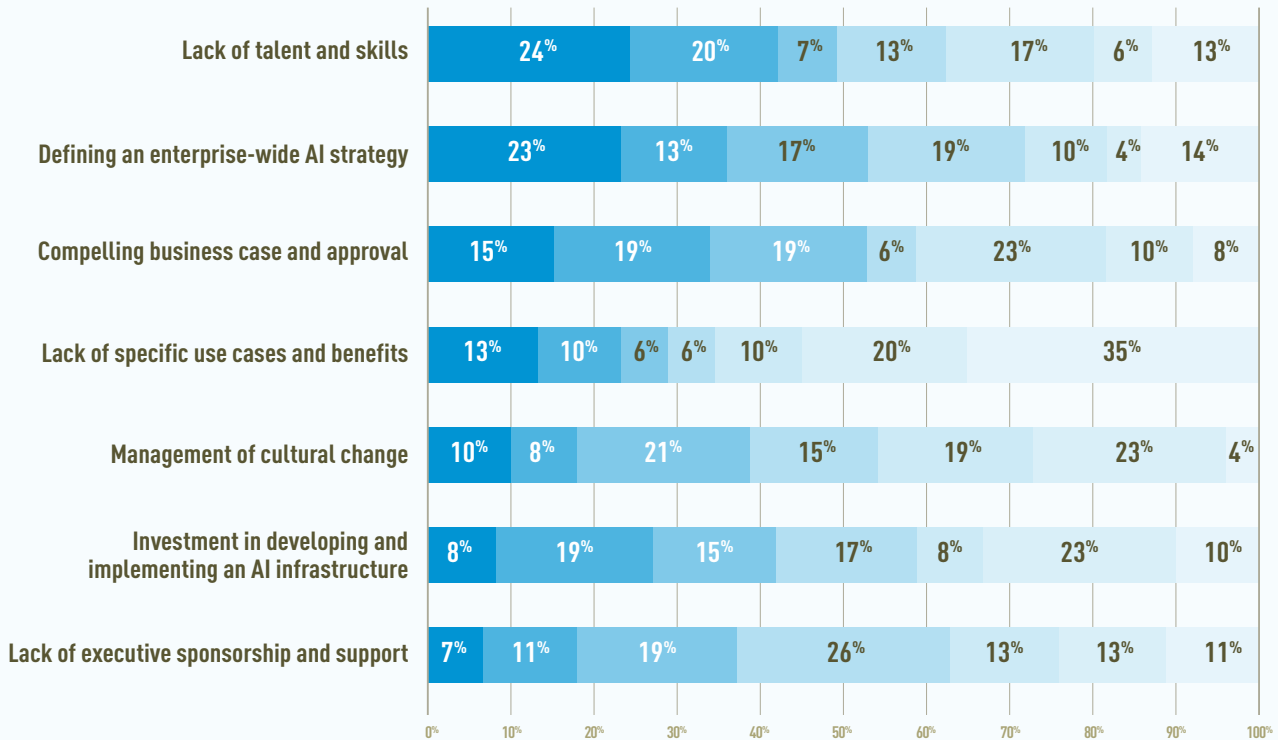




CHART 5

## WHAT ARE THE OBSTACLES YOU SEE IN ADOPTING AI SOLUTIONS FOR ONBOARDING, CLIENT LIFECYCLE MANAGEMENT AND KYC IN YOUR ORGANISATION?

(1= BIGGEST OBSTACLE, 7=SMALLEST)



The second biggest obstacle indicated by survey respondents was the lack of a defined enterprise-wide AI strategy. Thirty-six per cent ranked this number 1 or 2.

A 2019 survey by International Data Corporation (IDC) of global organisations that are already using artificial intelligence (AI) solutions found only 25% have developed an enterprise-wide AI strategy.

**“Lack of such a strategy can sometimes hold up the operationalising of any potential AI use cases that have shown promise in pilots, as approval for production deployments depends on the finalisation of strategy. Other times, AI solutions can be deployed in a patchwork fashion across the business without any such strategy even being considered, which can result in duplication, multiple cost centres and difficulties in measuring and realising the potential benefits.”**

**CLARA DURODIÉ, EXECUTIVE CHAIR, COGNITIVE FINANCE GROUP**



As Durodié points out, this bears ironic hallmarks of regression towards the siloed organisation many businesses seek to move away from through the utilisation of AI. It is likely that the joining up of AI solutions is the next iteration of AI development for many firms. This indicates the onset of internal cultural change as well, as traditional business cases can no longer be calculated in the same way.

Some of these risks can be mitigated when AI capabilities are being deployed into existing best-of-breed solutions for functions such as KYC, onboarding and CLM. But enterprise strategies for the handling of data and model governance should still be applied as best practice.

### NO SHORTAGE OF USE CASES

Lack of use cases was the obstacle to AI deployment that was deemed least important, with 35% of all respondents ranking it last out of seven. This demonstrates growing awareness of the potential for AI in a range of areas related to onboarding, KYC and CLM. Even if organisations are not yet themselves in the process of piloting or implementing solutions, most of them are aware of at least some of the use cases that have already been outlined in this paper. Identifying business problems relating to data at scale, pattern spotting, more effective decisions and efficient processing is clearly not a problem for most institutions.

### TRUST, AUDITABILITY AND EXPLAINABILITY

There are further concerns relating to AI when the outputs of models are being fed directly into business decisions- either in a direct, automated way or assisted decision-making with a human in the loop.

Lack of trust in the results was cited by 32% of respondents as the number one concern, followed closely by the ability to audit AI algorithms and explain the decisions reached- key elements that are required in order to demonstrate that the results can be trusted.

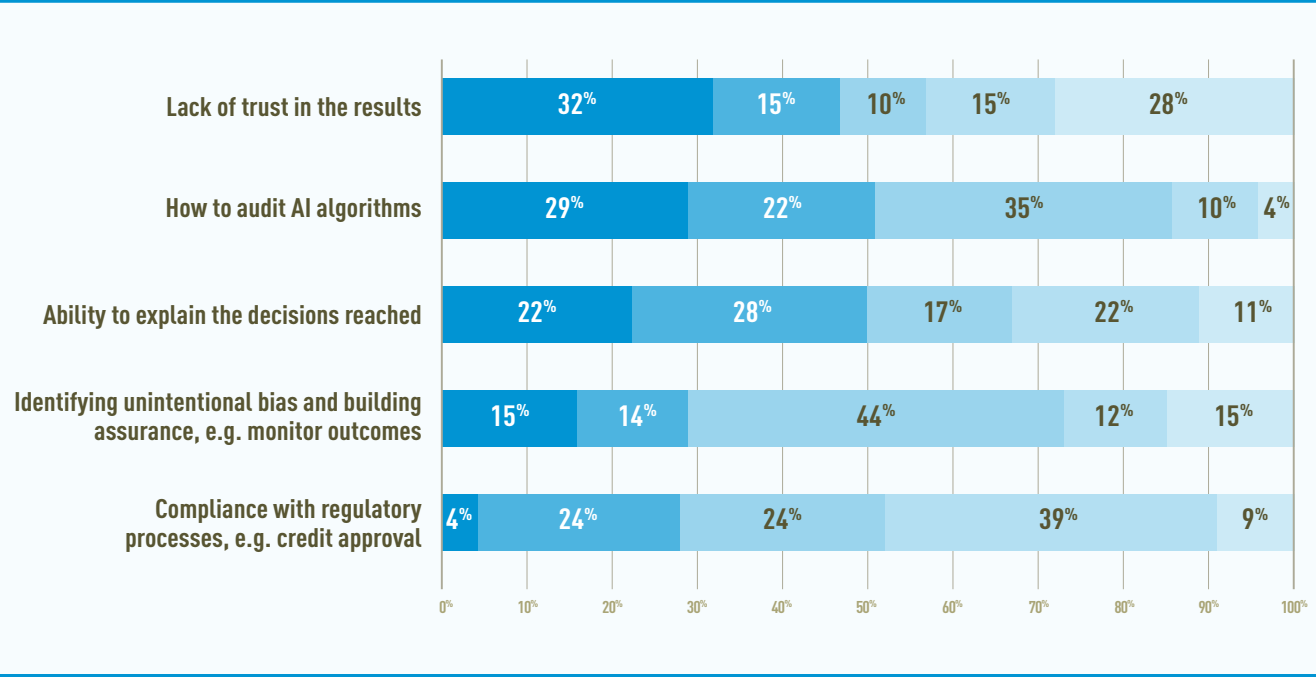
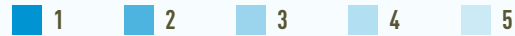
Mistakenly rejecting new customers is obviously a risk to be avoided, as is exposure to regulatory fines through accepting new clients that should have been flagged as untouchable.

As organisations develop their AI strategies, they should veer towards the deployment of transparent, documented, and auditable AI models to mitigate the risk of any regulatory scrutiny on the process, interpretation of results, and controls.



CHART 6

**FOR ONBOARDING, CLIENT LIFECYCLE MANAGEMENT AND KYC FUNCTIONS, WHAT IS YOUR LEVEL OF CONCERN WHEN EVALUATING OUTPUTS INCORPORATING AI-BASED CONCLUSIONS? (PLEASE RANK THE FOLLOWING WHERE 1 = MOST CONCERNING)**



**BREADTH AND SPEED OF SERVICE**

When it comes to achieving business benefits from AI in financial services, fraud prevention and risk management have often been viewed as low-hanging fruit. Already driven by disparate data sources and incorporating mathematical modelling and rules-based approaches, these functions have been among the first areas of production implementation of AI solutions for many financial institutions.

But when asked to identify what major benefits AI could deliver to onboarding, KYC and CLM functions, our survey respondents were more likely to identify the breadth of products and services provided to customers as the major benefit. Twenty-seven per cent identified this as their top ranked benefit, followed closely by speed-to-market at 23%.

By combining machine learning-based pattern matching with a product-based recommendation engine, financial organisations can present and close appropriate recommendations for new and existing customers. But they can



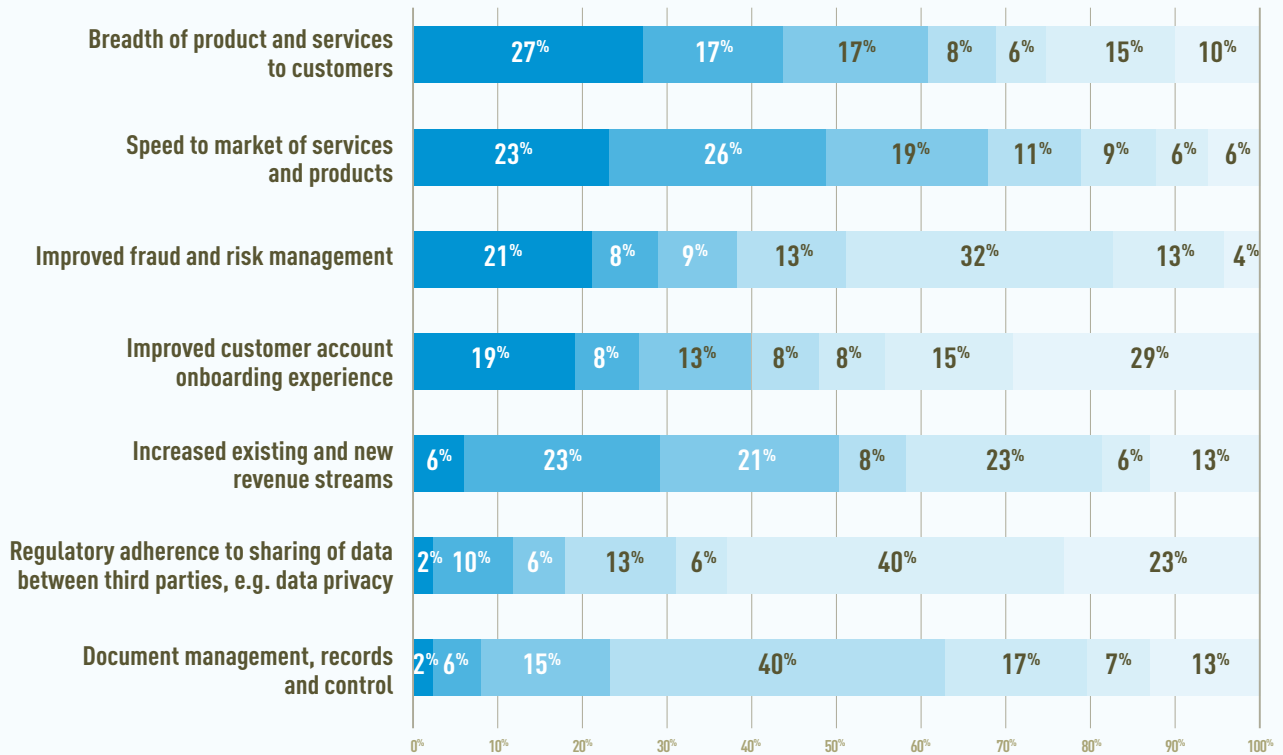
also potentially use these tools for expanding their product and service range to tailor new and variant offerings for particular customer personas.

Close behind the top two benefits came improved fraud and risk management with 21% of respondents ranking this the number one benefit from using AI.

CHART 7

**FOR ONBOARDING, CLIENT LIFECYCLE MANAGEMENT AND KYC FUNCTIONS, WHERE DO YOU ENVISAGE MAJOR BENEFITS FROM AI WILL BE DELIVERED?**

(PLEASE RANK THE FOLLOWING WHERE 1 = MOST IMPORTANT)



# OPEN BANKING IMPLICATIONS FOR REVENUE GROWTH AND AML/KYC

## COLLABORATION - THE KEY TO UNLOCKING OPPORTUNITIES

Open banking is a major disruptor to traditional banking. At its simplest level, it aims to give consumers control of the data which banks and financial institutions hold on them and the ability for this data to be shared with other companies with the consent of the customer.

Open banking has the potential to radically transform the way in which banking services are accessed by customers, money is received, and payments are made, globally.

Although it has been around for a few years, open banking is still in its infancy. In the last couple of years, it has gained significant traction across the industry globally, with regulators taking a keen interest in how the open banking model is evolving. In particular, the collaboration between the traditional banking institutions, digital banks, third party providers, and technology companies has attracted a lot of focus. The rate of evolution varies significantly between regions and countries. In some regions, the regulators are mandating open banking more quickly than in others.

The UK was an early mover through the efforts of the FCA, the Open Banking Implementation Entity (OBIE) and the CMA9, and has mandated open banking, with the sharing of customer and transaction data via open APIs having been in operation since 1 January 2018. The European Union has also mandated open banking, with payment initiation and account data retrieval by third parties having come into effect in May 2018.

In Australia, the four largest banks began providing some data over open APIs in mid-2019, with the rest of the industry to follow suit. This will apply to all retail financial products on a timeline through to mid-2021. Various other countries, including the US and Singapore, are also taking steps towards open banking, data sharing and open APIs.



While the benefits for customers are around ease of service comparison and switching providers, for banks the opportunities are less certain. But one thing that most agree on is that any potential increase in revenue and market share from open banking is likely to come through collaboration with fintechs and third party providers to offer new services and products. Fifty-three per cent of survey respondents viewed this as the primary opportunity.

To make the most of this in areas outside their currently identified core offerings they will need to develop and maintain these new strategic relationships in a transparent, efficient, and mutually beneficial manner. The exact shape of how these banking ecosystems will evolve is not yet clear. While a small number of parties are beginning to go live with API services, the impact so far has not been great. But it is early days and while such developments are often incremental, it's common to underestimate the amount of change in the medium to long term.

That said, those in charge of open banking strategy at established financial institutions are aware they will require flexibility in their approach, while considering the possibilities. Who are the participants- current and future? What kind of optimised data exchange will be required to deliver these digital banking opportunities while optimising security, efficiencies and ease of access?

Within their own direct product and service offerings that remain, financial institutions will also need to deepen relationships through the provision of a seamless, hyper-personalised, and well-differentiated customer experience, while continuously optimising for the changing business conditions.

**“There’s a lot of focus within open banking on the APIs and data standards required. But in the AI space, there’s a particular focus from a collaborative point of view on ensuring all the players in the industry have a common understanding of what particular data means and can be used for, with agreement on how that can be shared. Putting the three elements together – data to share, common agreement on meaning and usage, and the ability to share – means the opportunities from AI in open banking are vast.”**

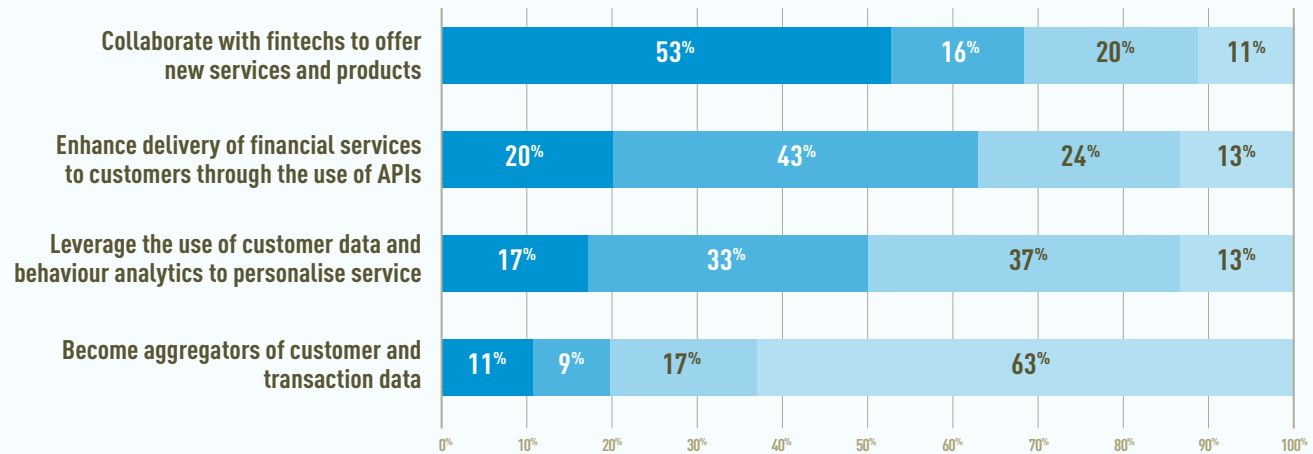
**VINCENT BRENNAN, DEPUTY CHAIRMAN, EURO BANKING ASSOCIATION AND CHAIR OF THE ASSOCIATION'S OPEN BANKING WORKING GROUP**

## CHART 8

### HOW CAN FINANCIAL INSTITUTIONS DRIVE THE OPPORTUNITIES OF OPEN BANKING TO INCREASE REVENUE AND MARKET SHARE?

(PLEASE RANK THE FOLLOWING WHERE 1 = MOST IMPORTANT DRIVER OF OPPORTUNITY)

■ 1 ■ 2 ■ 3 ■ 4



#### REGULATORY ISSUES FOR CONSIDERATION

In an environment where a bank's customer could potentially be accessing the products and services of dozens of providers through them, trust plays a massive role in the ecosystem. The customer will need to trust that their bank has done their due diligence on the partners they work with. And the banks need to trust that there is a level playing field for all industry participants. This is one reason that our survey respondents indicated that wholesale market regulation of all providers of payments services was the most important regulatory issue to be taken into account, with 28% ranking it number one.

The second biggest issue was seen as the impact of sharing sensitive customer data with regulated third parties. There is awareness that even though these smaller third parties are regulated that they may be at greater risk of being hacked or the victim of other data breach mechanisms. Or they may intentionally use data in ways that have not been approved by the customer or regulator.



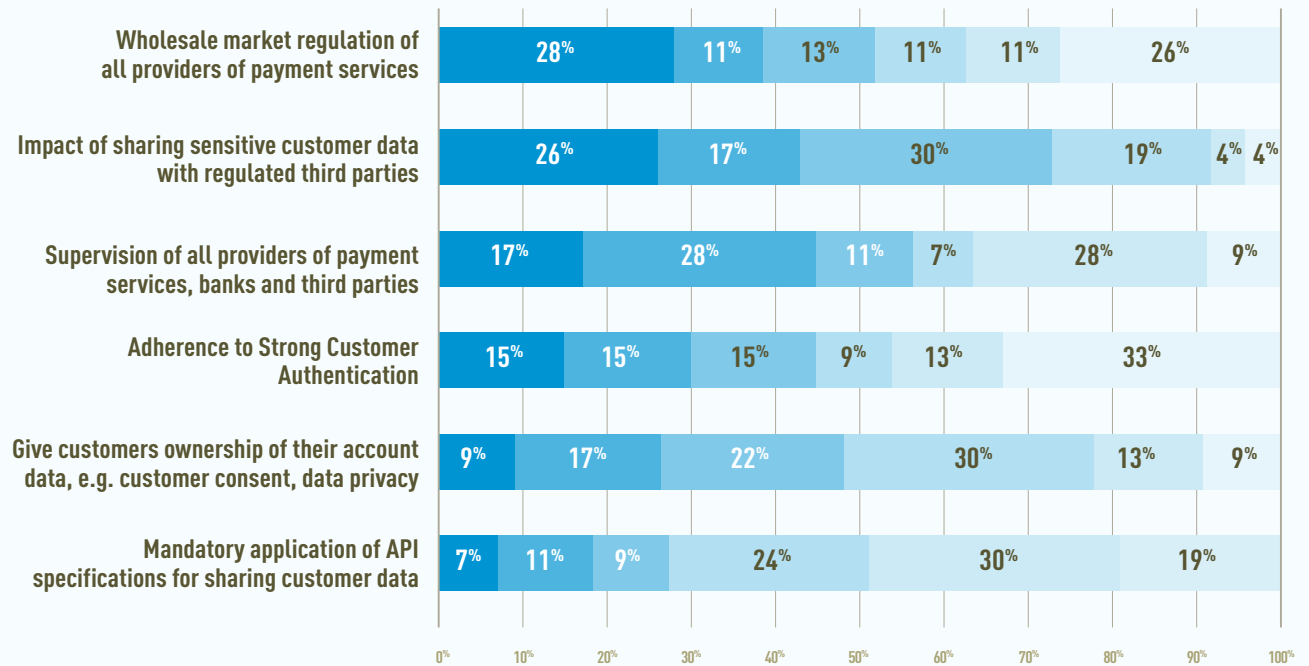
“We are also implementing an API strategy for our future corporate customer offering. This is even more interesting than PSD2. We’re painting the picture for the future of corporate banking. We have been living in the net bank era for the past 20 years and I believe we’re now at the doorstep of a new era. We’re creating some core capabilities for real-time data-driven future banking services and building an internal API foundation is an essential part of that work.”

LIISA KANNIAINEN, VP, STRATEGIC PARTNER DIGITAL BANKING CBB, NORDEA

CHART 9

### WHAT ARE THE MAIN REGULATORY ISSUES TO BE TAKEN INTO ACCOUNT AS OPEN BANKING IS ADOPTED?

(PLEASE RANK THE FOLLOWING WHERE 1 = MOST IMPORTANT ISSUE)





## EFFECT OF OPEN BANKING ON AML AND KYC

When customers are coming the other way into a bank- becoming users of their products and services through the channels of partners- the major concern is still how to establish the identity of customers. This is despite ongoing efforts to introduce standard authentication protocols such as OAuth 2.0 in the UK and eIDAS in Europe. Forty per cent of survey respondents considered this the biggest impact of open banking on their AML/KYC functions.

At the other end of the scale, there is little expectation that open banking will make KYC and AML any easier, faster or more accurate. Thirty-nine per cent ranked improving speed and accuracy the least likely impact of open banking in this area. This demonstrates the challenges that organisations will have to face in managing consumers and partners in the evolving collaborative ecosystem across many layers of digital banking and payments services.

**“KYC is seen as what we do to our customers. The government and regulators require that we verify certain information, and that process is viewed as clunky and involved and frankly a big turn off to customers. That’s why we want to bring the new technology opportunities that there are in the market to our customers to make onboarding processes and KYC much easier. We start with open banking, but it’s going to turn into a completely open data economy where the right of data determination for the consumer is key, then we’ll start to see everything moving outside of banking. But that’s only going to work if we’ve got a good structure for doing identity and KYC.”**

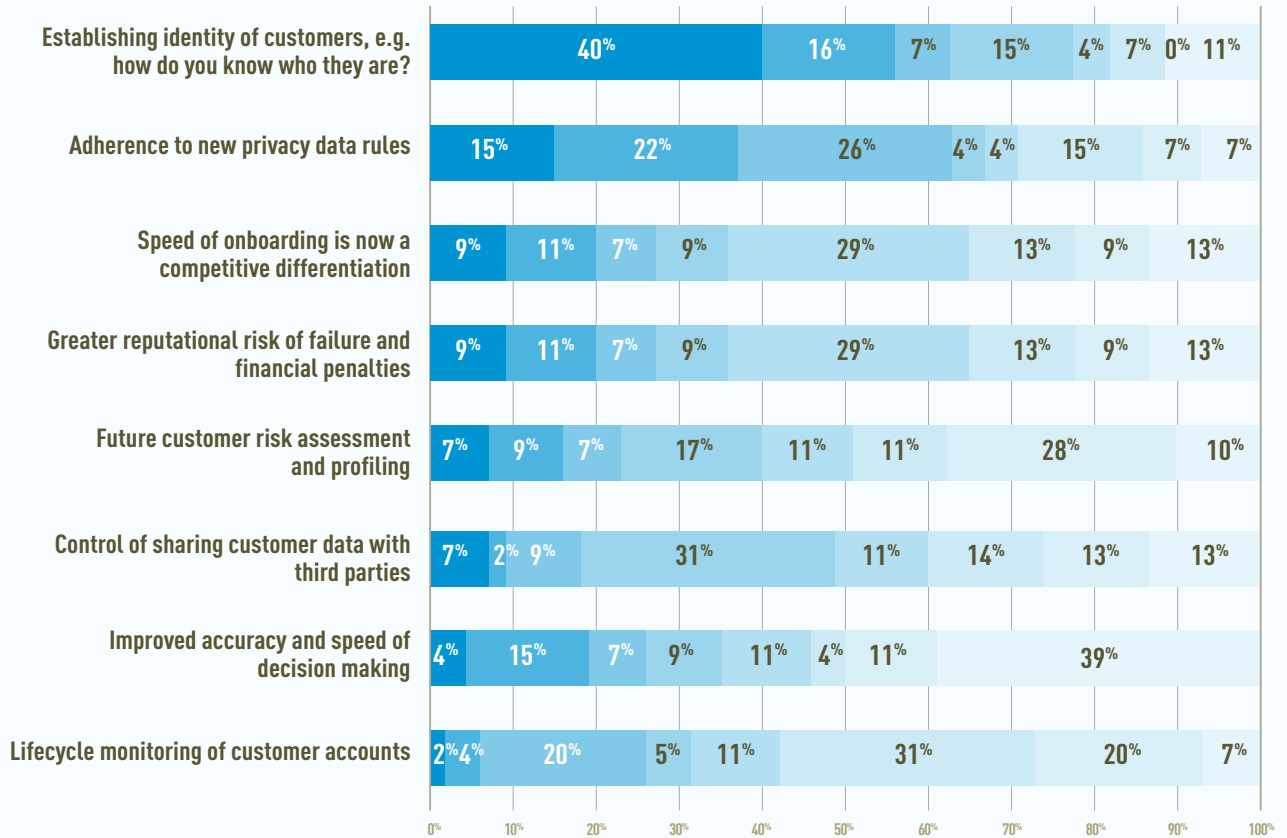
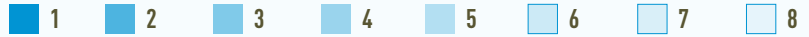
**NICO STRAUSS, TRIBE LEAD B2B SERVICES, RABOBANK**



CHART 10

## HOW IS OPEN BANKING GOING TO AFFECT YOUR APPROACH TO YOUR AML/KYC PROGRAMME?

(PLEASE RANK THE FOLLOWING WHERE 1= THE BIGGEST IMPACT)



# CONCLUSION

AI has become an integral part of technology roadmaps for financial institutions. Even though experience of live AI use in production varies widely across organisations of different scale, there is general acceptance of its power to disrupt, and an understanding of the kinds of business problems it can address.

AML and fraud prevention have been prime areas for banks' initial forays into AI, but there is a lot of interest too in using it to improve onboarding and KYC processes. In these areas there are well understood business benefits in time-to-revenue and customer lifetime profitability for any improvement in existing processes, and these benefits are even greater when the AI solutions can be extended into the ongoing customer relationship through client lifecycle management.

Being able to explain and audit the decisions being made or augmented by AI-connected systems should be a key part of any financial institutions' enterprise AI strategy. And having such a strategy in place will help the organisation better realise the benefits, not just in onboarding and compliance, but in any area of the organisation where AI could be used.

Strategies for onboarding, AI and compliance also need to be flexible enough to cope with the open banking collaborative ecosystems that are beginning to emerge, initially in Europe. Although the initial focus is in the retail banking and payments space, as the changes there gather steam, work currently being done within financial institutions to adopt an API-driven model in their corporate banking business will also start to emerge in new industry structures and processes.

As the financial industry embraces the concept of digital transformation, and as each participant develops its own strategy to get there, there seems to be unanimity among players that AI and open banking are centric to the journey and the end game, however that shapes up, as the technology continues to evolve in this new digital environment.



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