The Role of Analytics in the New Banking Age

METHODOLOGY

This report is based on research conducted by Marketforce Business Media and Earnix in February 2017. We surveyed 300 UK banking professionals working in customer experience, insight, operations, IT, strategy and sales & marketing.

AUDIENCE PROFILE

The year our respondents' organisations received their banking licences:

Pre 1990	
Post 1990 but pre 2008 crisis	
Post 2008 crisis but pre 2015	
Since the start of 2015	
Awaiting the outcome of an application	

THE ROLE OF ANALYTICS IN THE NEW BANKING AGE

What is a bank? The definition is in flux. As the regulatory-driven Open Banking agenda powers innovation and accelerates the fragmentation of a heavily concentrated banking market, incumbent banks must act quickly to stay relevant. As customers look far and wide to satisfy their financial needs, some are questioning the need for a bank at all.

Disruption is not new in banking; after all, today's banks look very different from even twenty years ago. But the scale of disruption and the pace of change are unprecedented: in less than ten years, the industry will look radically different. The winners will be those that can rapidly convert customer insight into powerful new experiences that are personal, friction-free and add real value to daily life.

To investigate the industry's readiness for the era of opening banking, Marketforce and Earnix surveyed 300 senior banking executives. From their responses, we have identified five key imperatives for the industry as it stands on the cusp of a banking revolution:

Prepare:	technology and regulatory drivers will intensify competition and accelerate market fragmentation over the next five years
Personalise:	with the customer relationship in play, the winners will be those that can differentiate themselves by using analytics to create bespoke services and tailored products that add meaningful value
Entrench:	banks have a window of opportunity to capitalise on their existing ownership of the customer relationship to deliver highly personalised services that customers find they cannot live without
Innovate:	total digitisation, machine learning, analytics and the internet of things will deliver previously unimaginable opportunities to get closer to customers and re-invent what it means to be a bank
Invest:	banks recognise they face an analytics gap to deliver the personalisation agenda and plan to significantly ramp up spending over the next five years

Change in banking is clearly inevitable, with technological innovation at its heart. The key enabler to almost every element of the digital revolution appears to be data analytics, powering personalisation, machine learning and value-adding services. In an open banking environment, data analytics will be the commanding basis for differentiation in an increasingly competitive financial landscape.

# CHAPTER ONE:
TIME FOR BANKING REVOLUTION?

Prepare: technology and regulatory drivers will intensify competition and accelerate market fragmentation over the next five years

Waves of digital disruption have created fertile ground to seed new banks. After half a century of consolidation, the banking industry is again fragmenting, offering greater choice for consumers. Before the launch of Metro Bank in 2010, no new banking licence had been issued in the UK for over 100 years; since then, 19 new retail and commercial banking licences have been issued, with at least eight more pending. And it's not just new banks. The booming FinTech sector is propagating an array of challengers with smart user-friendly solutions for the on-the-go customer.

80% expect a significant increase in competition over the next five years as a direct result of the increasing regulatory drive towards open APIs

These new entrants are being emboldened and enabled by regulators. The open banking provisions in the EU's Payment Services Directive II (PSD2) and the UK's Competition & Market Authorities Open Banking Remedy will trigger an unstoppable groundswell of competition that will reshape the industry for decades to come. The open banking agenda will loosen the grip of the large banking groups that dominate the current account market by compelling them to use open APIs (Application Programming Interfaces), which give third parties easier access to customer data and the ability to develop services that plug directly into banks' systems. Our respondents expect the impact of these reforms to hit in the next five years: eight out of ten of our respondents expect a significant increase in competition between now and 2022 as a direct result of the increasing regulatory drive towards open APIs.

Our respondents expect the following increases in competition across banking services as whole, as a direct result of open APIs over the next 5 years:

18%	Dramatic
63%	Significant
17%	Minor
2%	No increase
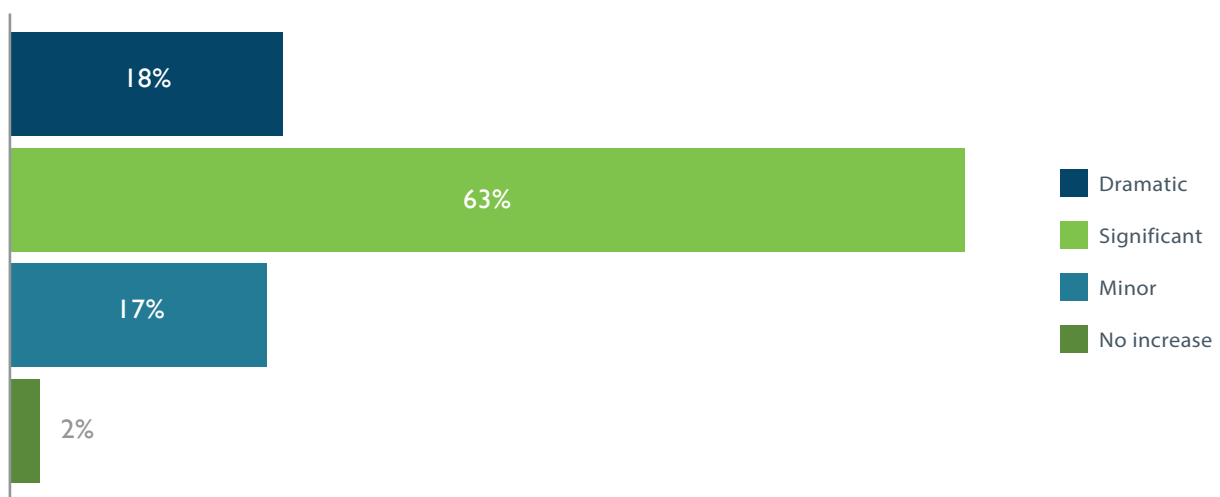
PSD2 will spawn Account Information Service Providers (AISPs) that will become the "face" of the customer's financial life. These new services will encourage customers to pick-and-mix products from a range of providers – all accessed and managed via a single online portal - to create their own bespoke virtual everyday-bank. There's clearly an appetite to cherry-pick products from multiple providers: one survey asked consumers to pick between two ideal banking scenarios and found the majority preferred to bank with multiple providers to get the best offers rather than stick with a single bank[1]. While AISP services have not yet launched, they are expected to quickly win favour, particularly with younger customers: 89 per cent of our respondents expect the majority of their Millennial customers to be using new services that give them integrated access to all their accounts across multiple banking providers within three years of PSD2's implementation.

75% believe banks will have to significantly overhaul their pricing and value models in order to maintain market share over the next five years.
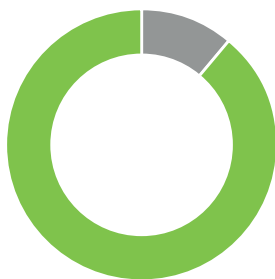
89% of respondents expect the majority of their Millennial customers to be using new services that give them integrated access to all their accounts across multiple banking providers within three years of PSD2's implementation.

This has serious implications for providers of current accounts, which have long relied on cross-selling of higher margin products over a customer's life-time to subsidise free in-credit banking – and most customers have a longer relationship with their bank than with their spouse. This business model is now at risk: according to our research, 73 per cent of bankers expect open banking to diminish the advantage of existing customer relationships and make it more difficult for banks to cross-sell and three-quarters believe banks will have to significantly overhaul their pricing and value models in order to maintain market share over the next five years.

73% of bankers expect opening banking to make it more difficult for banks to cross-sell

73%   27%
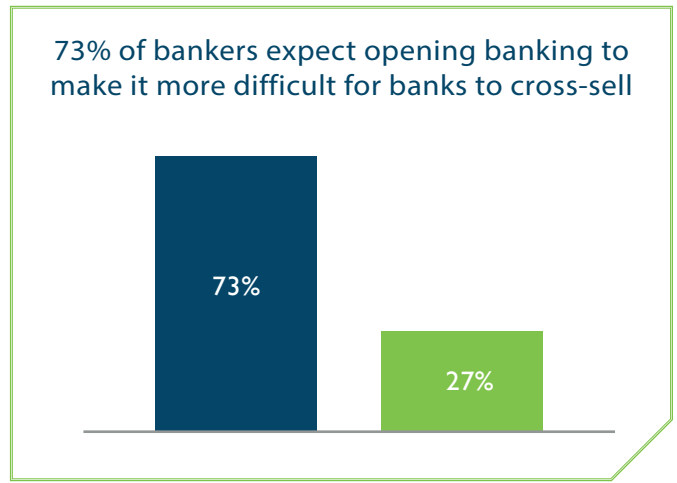
Personalise: with the customer relationship in play, the winners will be those who can differentiate themselves through tailored services and products that add meaningful value

The open banking agenda comes at a time when the customer relationship has never been more fragile. Today's customers crave connected experiences and feel let down when brands fail to recognise them as an individual. Banks have experimented with personalisation but too often these efforts are based on crude segmentation that leaves customers feeling disconnected and disaffected: surveys suggest just one in three consumers believe their financial institution knows their needs well and only slightly more (34 per cent) think their bank has their best interests in mind[2].

Banks must close this gap created by leading players like GAFA if they are to effectively compete with brand-savvy challengers; they must draw on their vast treasuries of customer data to deliver unique services and meaningful insights. Our respondents clearly recognise this, with 92 per cent agreeing that the use of data analytics to offer new value-adding, insight-based services will be critical to maintaining margins over the next five years.

Those who agree that using data analytics to offer new value-adding, insight-based services to customers will become critical to maintaining margins in banking over the next 5 years

92%

8%

■ Agree   ■ Disagree

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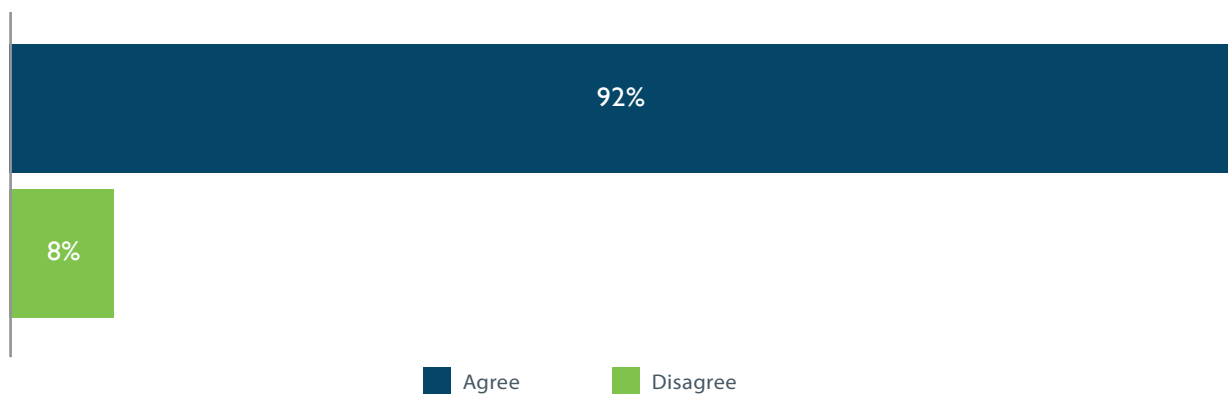
[2]*The Digital Banking Report,* Personetics/GfK, 2016

Entrench: banks have a window of opportunity to capitalise on their existing ownership of the customer relationship to deliver highly personalised services that customers find they cannot live without

Despite the threat of extreme competition, banks do enjoy a clear head start over challengers. Surveys suggest that consumers rank traditional banks as their first choice for the role of Account Information Service Provider: one study found 65 per cent would pick an established bank as their preferred AISP and 70 per cent said they would not trust a third party as much as a bank when it comes to handling sensitive banking information[3].

This head start will not last forever. The era of open banking will gradually erode the advantage of owning the customer data. The advantage will then lie with those parties that can convince customers not only that they can be trusted to keep that data secure but that they will use it to deliver a superior user experience and add meaningful value. It is no longer the data you hold but what you do with it that will deliver competitive edge and an entrenched role in the customer's life.

Innovate: analytics will deliver previously unimaginable opportunities to get closer to customers and re-invent what it means to be a bank

Banks now have an unprecedented opportunity to develop the analytics capabilities to lengthen their head start. Our hyper-connected world is set to deliver a step change in analytics capabilities, with nine out of ten of our respondents believing access to new reams of data through open APIs and the expansion of the Internet of Things will revolutionise the potential of analytics in banking. Banks can leverage this analytics revolution to transform the customer experience and generate powerful new offers, including proprietary insights into a customer's finances and personalised financial management tools that add real value to customers' daily lives: 86 per cent of our surveyed banking executives expect advances in analytics and increasing availability of data to drive a resurgence in Personal Financial Management Services as banks use their unparalleled insight to help customers manage their money better.

As banks hoover up more data about their customers, there's the potential to use these same technologies to help customers manage all aspects of their lives: 83 per cent believe it will be common within five years for banks to offer data analytics-based services to help customers manage their lives, not just their finances, more effectively.

The timeframe in which our respondents expect it to be common for banks to provide data analytics-based services that enable customers to manage their lives, not just their finances, more effectively:

Within 5 years	Within 10 years	Never
83%	16%	1%
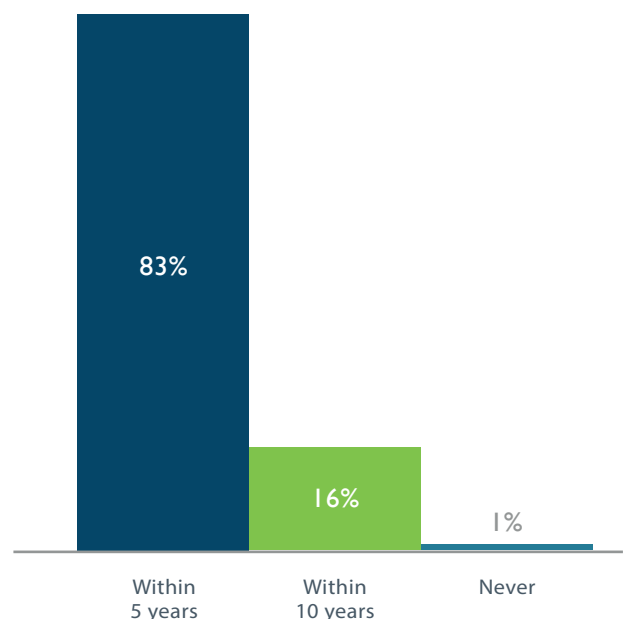
[3]Accenture, June 2016

Machine learning: the next step

Smart machines are no longer the stuff of science fiction: they are already revolutionising healthcare, powering Netflix playlists and managing customer service interactions. By increasingly simulating human thought processes, smart machines can now mine videos, photographs and social media content for meaning. The combination of machine learning and an ever-expanding data universe creates previously unimaginable opportunities to understand customers and interpret and anticipate their needs. Eight out of ten of our respondents expect the use of machine learning to interpret unstructured data to be pervasive in banking within five years; indeed, over half (52 per cent) expect this to be the case in just two years.
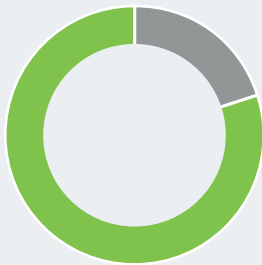
Eight out of ten of our respondents expect the use of machine learning to interpret unstructured data to be pervasive in banking within five years

over half (52 per cent) expect this to be the case in just two years.

And this is only the beginning: within five years, six out of ten expect it will be commonplace in banking to use machine learning to adapt to signs of customer emotion through voice and facial recognition. Even complex roles involving high levels of empathy will gradually be ceded to smart machines: by 2027 eight out of ten expect the use of AI-powered bots as personal financial advisers to be pervasive.

The timeframe in which respondents expect the following uses of machine learning to become pervasive in banking in order to reduce costs and/or improve the service to customers
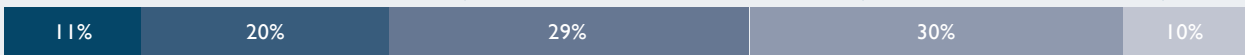
Continuous improvement of robotic automation

18%	33%	35%	12%	2

Bots as personal financial advisors

4%	18%	31%	27%	20%
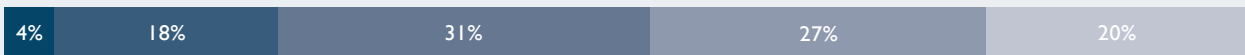
To enable machines to adapt to signs of customer emotion through voice and facial recognition

11%	20%	29%	30%	10%

To interpret unstructured data (e.g. social media postings or correspondence from the customer)

13%	38%	29%	13%	7%

To make individual recommendations based upon other similar customers

24%	34%	27%	7%	8%

■ Within 1 year ■ Within 2 years ■ Within 5 years ■ Within 10 years ■ Never

It seems the compelling cost benefit and superior customer experience of smart machines will be increasingly hard to resist: seven out of ten agree that predictive analytics and machine learning will become the most powerful means through which to win the banking customer over the next five years. In less than a decade the banking industry and its current half-a-million-strong workforce will look very different: 86 per cent believe that intelligent, self-improving algorithms will have become the core of banking services by 2025.

CHAPTER TWO:
TOWARDS THE ANALYTICS-BASED BANK

Personalised experiences and products powered by advanced analytics and machine learning will be key to wooing customers in this new era of extreme competition. Yet too often analytics projects fail to live up to the hype: one multi-sector survey found fewer than four out of ten (38 per cent) organisations had seen significant bottom-line benefits from their analytics projects and just one-third reported a significant improvement in the customer experience[4]. In fact, another survey showed that, when businesses had invested heavily in order to fully reach analytical maturity, almost 9 in 10 were gaining a significant return but, of those that were still at medium-level analytical maturity, just 1 in 3 saw the same returns[5]. There are many reasons for this underwhelming return on moderate investment: poor quality data, too much data, systems bottlenecks and inefficient management of analytics projects.

Banks do have a chance to overcome the hurdles and join the analytics arms race before the gap between the "haves" and "have nots" becomes too wide to bridge. Yet, worryingly, our survey reveals an alarming disconnect between where banks acknowledge they need to be in five years' time to remain competitive, and where they are now. According to our research, just one in four respondents (27 per cent) said their organisation is making extensive use of even the most basic form of analytics – descriptive analytics, used to understand what customers are doing. And that drops to 17 per cent when it comes to predictive analytics – a powerful tool that predicts customer behaviours, enabling organisations to anticipate next steps and transform the user experience.

1/4 of our respondents said their organisation is making extensive use of descriptive analytics

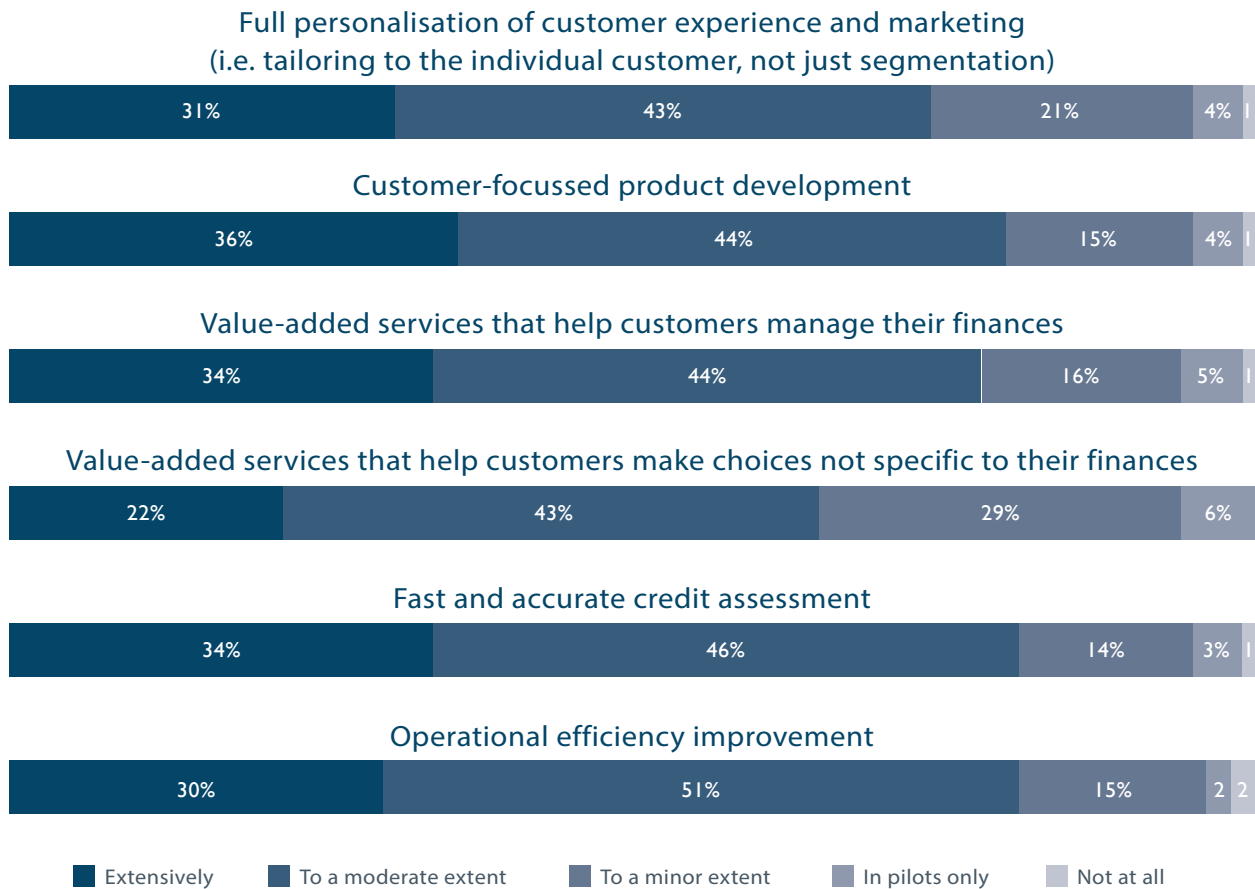17% say their organisation is making extensive use of predictive analytics

Less than 20% of our surveyed banks make extensive use of predictive data analytics to power improvements in the customer experience and operational performance

Like many organisations, banks have yet to restructure in order to optimise the outputs of data analytics. They are not alone: one study found that many proposed analytics projects fail to pass proof of concept because they are founded on technical rather than business needs, with poor understanding among data scientists of what customer insight the business requires significantly limiting the effectiveness of customer analytics. This finding certainly resonates with our surveyed banks. While two-thirds have a dedicated team of data scientists within their organisation – a troubling statistic in itself, which raises questions about the one-third who either don't have one or don't know about its existence – only one in five make extensive use of its talents.

Too many organisations are dabbling in predictive analytics – typically under a third of our surveyed banks make extensive use of predictive data analytics to power improvements in any one of customer experience, product development, credit assessment or operational performance. And the use of analytics is patchy and inconsistent: used extensively for some purposes but stuck at pilot stage elsewhere. As a result, the outcomes are underwhelming, with less than half reporting a significant improvement in any single area as a result of predictive analytics.

The extent to which organisations are using predictive data analytics for the following purposes:

Full personalisation of customer experience and marketing
(i.e. tailoring to the individual customer, not just segmentation)

| 31% | 43% | 21% | 4% | |

Customer-focussed product development

| 36% | 44% | 15% | 4% | |

Value-added services that help customers manage their finances

| 34% | 44% | 16% | 5% | |

Value-added services that help customers make choices not specific to their finances

| 22% | 43% | 29% | 6% |

Fast and accurate credit assessment

| 34% | 46% | 14% | 3% | |

Operational efficiency improvement

| 30% | 51% | 15% | 2 | 2 |

■ Extensively　■ To a moderate extent　■ To a minor extent　■ In pilots only　■ Not at all

Banks are aware that the expanding data universe is passing them by. Our surveyed banks show most comfort using transaction data, which 83 per cent of our respondents described as very useful in deepening their understanding of the customer, and their own app usage data, cited by 63 per cent. Yet when it comes to data from external sources, banks find themselves blindsided: just half said social media was very useful in deepening their understanding, and this falls to 40 per cent for data from the Internet of Things and 34 per cent for GPS data. Those banks that have yet to tap these data sources for detailed insight into a customer's lifestyle, preferences and real-time behaviours will increasingly lose ground to better informed rivals.

The extent to which respondents feel predictive analytics has improved each of the following in their organisations:

Personalisation of customer experience and marketing

Massively	Significantly	Moderately	Minimally	No improvement
17%	36%	28%	11%	I 7%

Customer-focussed product development

Massively	Significantly	Moderately	Minimally	No improvement	We don't use
13%	45%	25%	8%	3%	6%

Speed and accuracy of credit assessment

Massively	Significantly	Moderately	Minimally	No improvement	We don't use
16%	38%	27%	9%	4%	6%

Operational efficiency

Massively	Significantly	Moderately	Minimally	No improvement	We don't use
15%	35%	29%	11%	4%	6%

The provision of value-added services to customers based on their own data

Massively	Significantly	Moderately	Minimally	No improvement	We don't use
16%	35%	27%	12%	4%	6%

■ Massively ■ Significantly ■ Moderately ■ Minimally ■ No improvement ■ We don't use predictive analytics for this purpose

Our respondents are clearly aware of this analytics deficit: three-quarters (76 per cent) agree that most banks lack the analytical capability to take full advantage of new data sources. Indeed, 65 percent think that most banks lack the analytical capability to take full advantage of even the account and transaction data they currently hold.

The good news is that banks not only recognise the deficit but are prepared to invest to close it: two-thirds of our respondents believe their organisation will need to significantly improve its sophistication in analytics if it is to maintain its market share over the next five years and almost seven out of ten (69 per cent) expect their organisation's investment in data analytics to increase significantly over the same time frame. Almost one-in-five go further, expecting this ramp up in spending to be massive. Furthermore, there's a clear sense of urgency, with eight of ten urging their industry not to allow the challenge of achieving a single customer view – something only one-in-four of our surveyed banks claim to have - to delay their adoption of advances in analytics.

76% agree that most banks lack the analytical capability to take full advantage of new data sources… and 65% think most banks are unable to make full use of the account and transaction data they already hold

Two-thirds of our respondents believe their organisation will need to significantly improve its sophistication in analytics if it is to maintain its market share over the next five years

How much do you expect your organisation's investment in data analytics to increase by in the next five years?

- Massively 19%
- Significantly 50%
- Moderately 25%
- Minimally 5%
- Not at all 1%
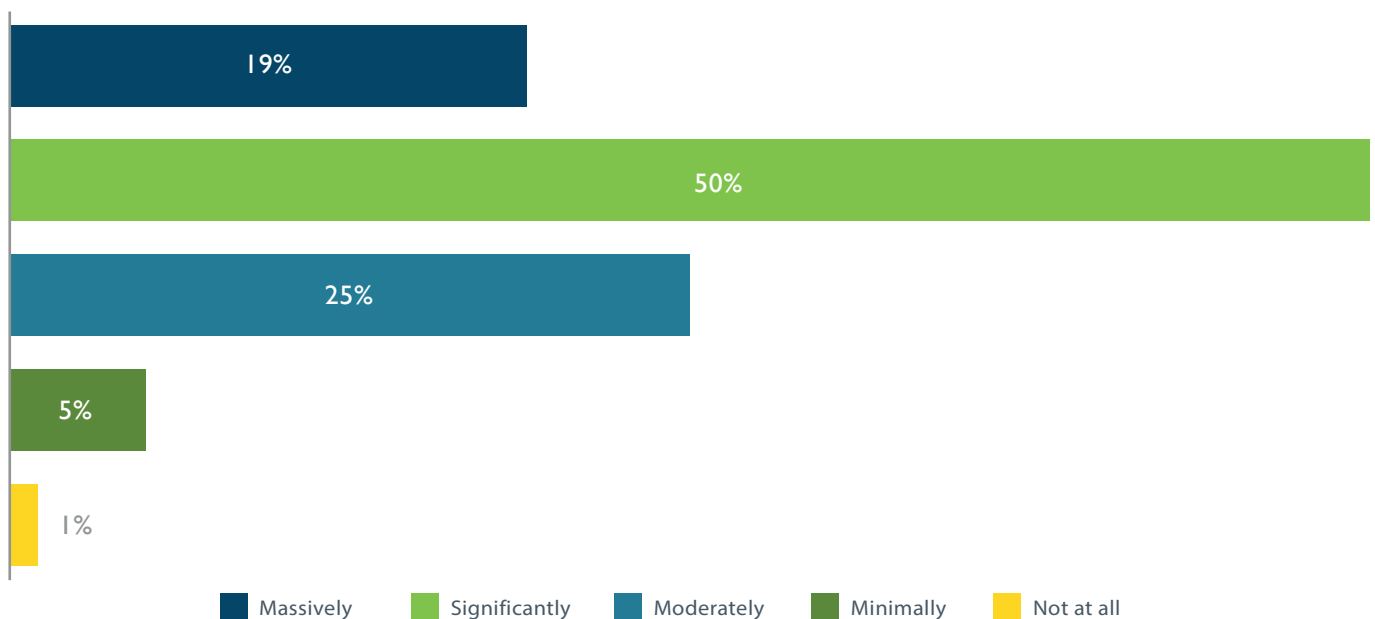
This spend cannot come too soon: digital-first challengers are leveraging analytics and AI to erode the inbuilt head start made by incumbent banks. A failure to act now would be to recklessly squander this head start, creating an opening for nimble competitors which may never be closed.

EARNIX VIEWPOINT

For those of us working on the frontline of the banking revolution, it is no surprise to find so many banks struggling to launch analytics projects that make real impact. Our survey confirms that too many are stuck in the starting blocks, struggling to get to grips with predictive analytics as the talents of data scientists are frustrated, transaction and account data goes under-utilised and analytics capabilities are impeded by calcified legacy systems and manual processes.

Technology has moved on, and it is now possible to extract meaningful and personalised customer insight by working with, rather than fighting against, what you already have.

We find yesterday's priority – rebuilding systems to capture the long-sought single customer view – has blinkered many to the new reality: it is possible to extract meaningful and personalised customer insight by working with, rather than fighting against, what you already have.

Earnix works with banks around the world to move analytics projects out of the lab and into production. The key is to embrace an agile digital-enterprise platform for the bank to build, deploy and maintain the analytics process, thereby overcoming the limitations posed by legacy data, systems and processes, enabling hyper-collaboration across the business and driving simplification and agility to transform the customer experience. Our consultants help banks identify the early wins that can put real momentum behind the analytics reboot of their organisation, generating significant and measurable benefits within weeks and laying the ground work for ongoing improvement and transformation towards the end goal of becoming a true digital bank.

This "start today" approach is highly recommended: our survey confirms that banks have a lot of ground to cover in the next five years if they are to retain the customer relationship in the era of open banking. Those that get an early start will be hard to catch as advanced analytics, machine learning and an expanding data universe further widen the gap between the analytics "haves" and the "have nots".

Avi Rubin, Director of Analytical Solutions, Earnix

Earnix

Earnix integrated customer analytics software empowers financial services companies to achieve optimal business performance through data science and predictive analytics. The Earnix analytical solutions drive superior product, pricing and marketing decisions, while ensuring alignment with changing market dynamics. Earnix combines predictive modeling and optimization with real-time connectivity to core operational systems, bringing the power of analytic-driven decisions to every customer interaction.

For more information visit:
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