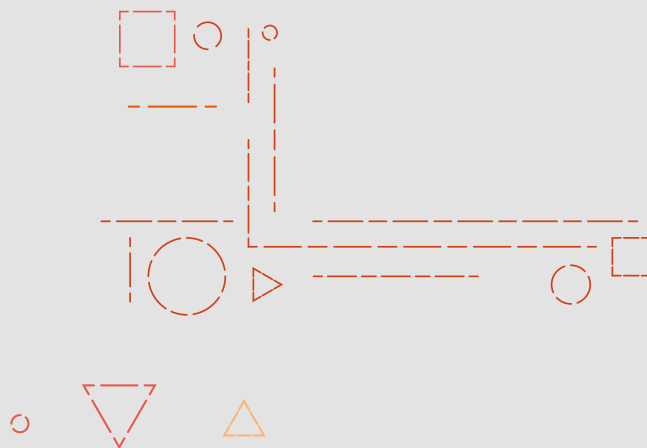


Open Finance

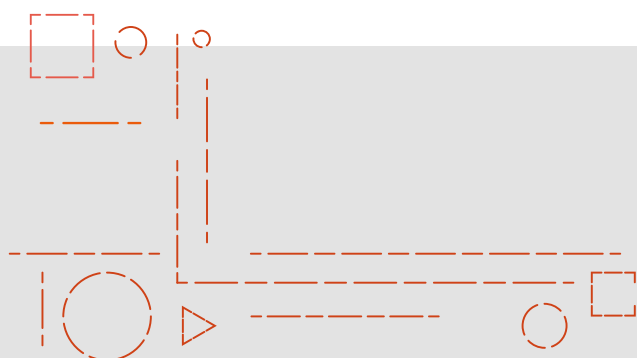
Genesis of a Revolution



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Foreword

The financial services industry stands at the precipice of a transformative era: the journey from open banking to open finance – a paradigm shift that is set to redefine the very core of the industry. As it did with PSD2 and open banking, a concept of which the EU can credibly claim to have been at the origin, European Union legislation will once again be a driving force behind open finance. This report delves deeply into the forces shaping this evolution and the consequential opportunities, and challenges, that lie ahead for Europe's financial services sector. I would like to take this opportunity to thank the team at PwC Luxembourg for their excellent work in helping to bring this report to light.

Five years ago, the concept of open finance might have seemed a distant vision. Yet, today, its unfolding in real time is evident. Europe's financial sector is uniquely positioned to lead this transformation, spurred by a confluence of regulatory foresight, technological advancements, and demographic shifts. Regulatory frameworks such as the Financial and Data Access framework, Payment Services Directive II, and the Payment Services Regulation are not merely compliance measures, but catalysts for innovation and adaptation. As always, however, a core challenge will be to ensure that the EU creates the necessary regulatory guardrails without stifling innovation or undermining European competitiveness. This is certainly not a given. As the recent Letta and Draghi reports have underlined, complex and excessive regulatory frameworks, which can lead to overlapping rules and over-reporting, have acted as a significant barrier to EU competitiveness.

If Europe gets it right, however, open finance has the potential to become an essential competitive advantage for its financial services sector. It can encourage institutions to transcend traditional banking and insurance models, to move towards a seamless and integrated system where customer-centricity and data-driven services become benchmarks of excellence. This report envisions a future where financial services are no longer siloed but interconnected, enabling unprecedented access to financial products and tailored advice across banking, asset management, and insurance sectors.

As the competitive landscape shifts in response, the institutions that thrive will be the ones viewing open finance as an opportunity to redefine their relationships with customers, harness the power of data, and deliver services that are not just inclusive but aligned with the needs of a digitally native generation. The insights provided herein are not just a roadmap but a call for all stakeholders to collaboratively foster an ecosystem that is robust, innovative, and above all, consumer-oriented.

The path ahead is challenging but equally promising, and it is through informed insights, strategic foresight, and collective action that the European financial services industry will not only adapt but lead the way in a new era of financial services.

Tom Théobald
CEO, Luxembourg for Finance

Acknowledgements

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Executive Summary

Half a decade ago, we peered into the future and foresaw the European financial sector gravitating towards “amazonisation”, where seamless, integrated services would become the norm. Today, that vision is taking shape. The financial sector is yet again undergoing a fundamental transformation, and this time, it is the transition from open banking to open finance. With this transition, the fragmented age of financial services is entering its twilight—one that should be fully realised by the end of this decade. In its place, a new era is emerging. In this era, data will flow freely, with customer consent, powering a more interconnected and client-centric ecosystem. This transformation will redefine how banking, asset and wealth management, insurance, and payments are delivered, as institutions adapt to a seamless and data-driven financial landscape. The industry must adapt now—or risk being left behind—as open finance redefines competitive advantage.

However, for open finance to deliver any true value to the economy, three critical forces will shape its adoption: regulatory frameworks, demographic changes, and technological advancements. The Financial and Data Access framework (FiDA) will be the foremost driver of open finance in the EU, supported by two additional regulatory pillars: Payment Service Directive III (PSD3) and the Payment Services Regulation (PSR). Together, these regulations will make open finance mandatory, advance data monetisation, lower barriers of entry, and diminish the role of traditional intermediaries such as banks and brokers. At the same time, demographic shifts are ushering in a younger, tech-savvy generation that demands more seamless, digital solutions—further spurring the rise of open finance. Technological enablers such as APIs, cloud computing and AI are also major drivers of open finance, with APIs playing a crucial role in its evolution. The convergence of these drivers will further lead a transition even beyond open finance to open data.

Open finance will redefine the future of various industries within the financial sector. While payments and banking, already accustomed to open banking, are expected to experience a smoother transition, asset and wealth management (AWM), along with insurance, will also be integral to the new era open finance. No industry will be left untouched as this transformation unfolds.

Open finance will herald a universally instant economy

For the payment industry, we envision a future where open finance creates a universally instant economy. Here, real-time transactions will become the norm and advanced APIs will make this possible.

Open finance will create new revenue streams through data monetisation

In the banking industry, data monetisation will become a significant revenue stream for financial institutions that hold customer data and, with client consent, provide it to third parties. Banks, as the primary financial institutions for many clients across Europe, are particularly well-positioned to benefit from this trend due to their extensive access to customer data.

Open finance will create holistic advice and management solutions

In the AWM industry, data sharing through open finance will allow industry players to provide clients with an overall view of their investments, even if these are with different advisors and include products from various asset managers. These one-stop shops will offer real-time, optimised asset allocation advice and the best products suited to their allocations. This trend will enhance transparency and comparability within the industry at an unprecedented scale, driving further consolidation and leading to the accelerated extinction of those asset managers that will be unable to adapt and provide a distinctive value proposition. We expect the extinction rate to double compared to previous trends.

Open finance will expand insurance distribution markets

In the insurance industry, open finance will enable insurers to expand their footprint beyond traditional markets by partnering with FinTechs, insurtechs and other innovative players. These partnerships will allow insurers to easily integrate their products with the non-insurance offerings of their business partners, providing a broader and seamless customer experience for their clients.

Our recommendations

Open finance will herald a revolution so profound that industry players will be compelled to reshape their business models. We are truly at the genesis of a revolution, and open finance will unlock significant opportunities for innovation, enhanced customer experiences and competitive advantages. For this reason, we outline some key considerations that will position the European financial sector to navigate the evolving landscape:

Strike the right strategic balance

As open finance becomes increasingly entrenched, financial institutions need to be deliberate about their strategy of adoption. Whether they pursue the role of participants or creators of B2C or B2B platforms—or integrate with TPPs to offer their services—the ideal strategy is to match the strategy to the institution's specific needs and market context.

Adopt a robust data governance framework

To guard against the risk of data misuse in an era where data flows more freely, with client permission of course, financial institutions and TPPs must prioritise both data security and ethical data use. We emphasise the burden of care that data receivers must uphold in data usage and handling. We also urge financial institutions to go beyond mere regulatory compliance to build comprehensive data protection strategies.

Anticipate intra-industry competition

As customer data becomes more accessible, financial institutions can more easily offer specialised services within and beyond their respective industries. Given this reality, it is crucial for financial institutions to anticipate the rise of all-in-one service providers and develop strategies to address this shift.

Leverage cross-border API integration

Although open finance remains a growing trend, many solutions remain confined to national markets. However, if open banking is any indicator of how widespread open finance will soon be, then it is important for financial institutions to tap into the global potential of open finance now. It is therefore essential to begin the open finance transition now, to fully leverage cross-border opportunities in the future.

Anchor your customer base and pursue new prospects

With the advent of open finance, there is the potential of incumbent financial institutions being relegated to mere product providers while large data aggregators usurp established customer relationships. To get ahead of this, financial institutions should leverage the opportunities created by new regulations and strengthen their connections with customers by thoughtfully offering personalised, high-value solutions.

Introduction

In the last few decades, the world of finance has navigated waves of disruption—be it online banking, the rise of FinTechs, or the introduction of open banking which allowed third parties to access once-guarded bank data. Now, we are entering the next paradigm of disruption. The age of open finance is here, and it is set to rewrite the rules of the financial services sector.

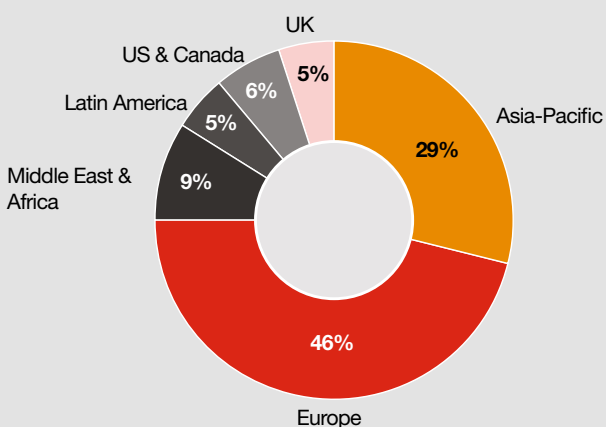
As customer expectations evolve and data becomes the new currency, open finance is not just another step in the sector's evolution—it is the genesis of a revolution. The boundaries that have long separated the financial sector will crumble, and in their place will rise a new ecosystem where the old silos of banking, insurance, asset and wealth management (AWM), and payments no longer exist as standalone entities. This revolution will give rise to a seamless ecosystem where a new breed of players delivers the full-spectrum of financial service offerings, all under one roof.

This is a call to action for the entire financial sector. The future will not be kind to legacy players who fail to adapt, as they risk losing their most prized asset—client relationships. In this new paradigm, firms that do not evolve will fade into irrelevance, relegated to mere manufacturers of commoditised financial products. The days of locking clients into isolated offerings are over. Financial institutions will be forced to play in a marketplace where clients demand integrated, personalised advice across all their financial needs. Those who fail to adapt in this new space will find themselves edged out of the relationship, with clients opting for newer, more dynamic entrants that embrace openness and interoperability. This change is not theoretical. It is happening now, and it's about to shake the very foundations of the financial sector.

Globally, decision-makers are already waking up to the new reality: open finance is no longer optional – it's a must have.¹ We are talking about a future where banks are more than just places to hold deposits or get loans, where insurers go beyond selling insurance policies, and where asset managers do not solely manage portfolios. Rather, these industries will merge into a unified network, offering bespoke financial solutions powered by data and technology. This is the future: a world where institutions don't just sell products but offer holistic solutions that optimise their clients' entire financial well-being.

Nonetheless, the discussion around open finance would not be possible without the introduction of the Payment Services Directive II (PSD2) in the European Union in 2018. Its implementation was an attempt to drive the financial sector towards a more open and competitive landscape, aligning with the broader goals of regulators. By mandating that banks share customer data with trusted third parties, it not only transformed the industry but also reflected the intention to pave the way for a more integrated, customer-centric financial ecosystem. Now, open finance builds on these principles, extending data sharing to a wider range of financial services and creating an integrated ecosystem. Other regulatory initiatives in the European landscape, such as the Financial Data Access framework (FiDA), the Payment Services Regulation (PSR), and the upcoming Payment Services Directive III (PSD3), will play a crucial role in shaping the future of open banking and open finance.

Figure 1: Global API product usage in 2023



Sources: PwC Global AWM & ESG Research Centre; Kontomatik

At the heart of the transformation lie open Application Programming Interfaces (APIs). This technology is what makes it possible to securely share data across financial institutions, FinTechs and third-party providers (TPPs). The days when financial institutions held client data as if they were closely-guarded secrets are over. In today's era of open finance, data is no longer kept under lock and key—it is openly shared across platforms, with client consent, fostering collaboration and innovation. APIs' popularity within Europe has soared, especially with the rise of open banking (Figure 1). As open banking evolves into open finance, APIs will play a crucial role in extending data-sharing beyond banking. The number of API calls² is projected to grow from 102 bn in 2023 to 580 bn in 2027, growing at a compound annual growth rate (CAGR) of 54.4%.³

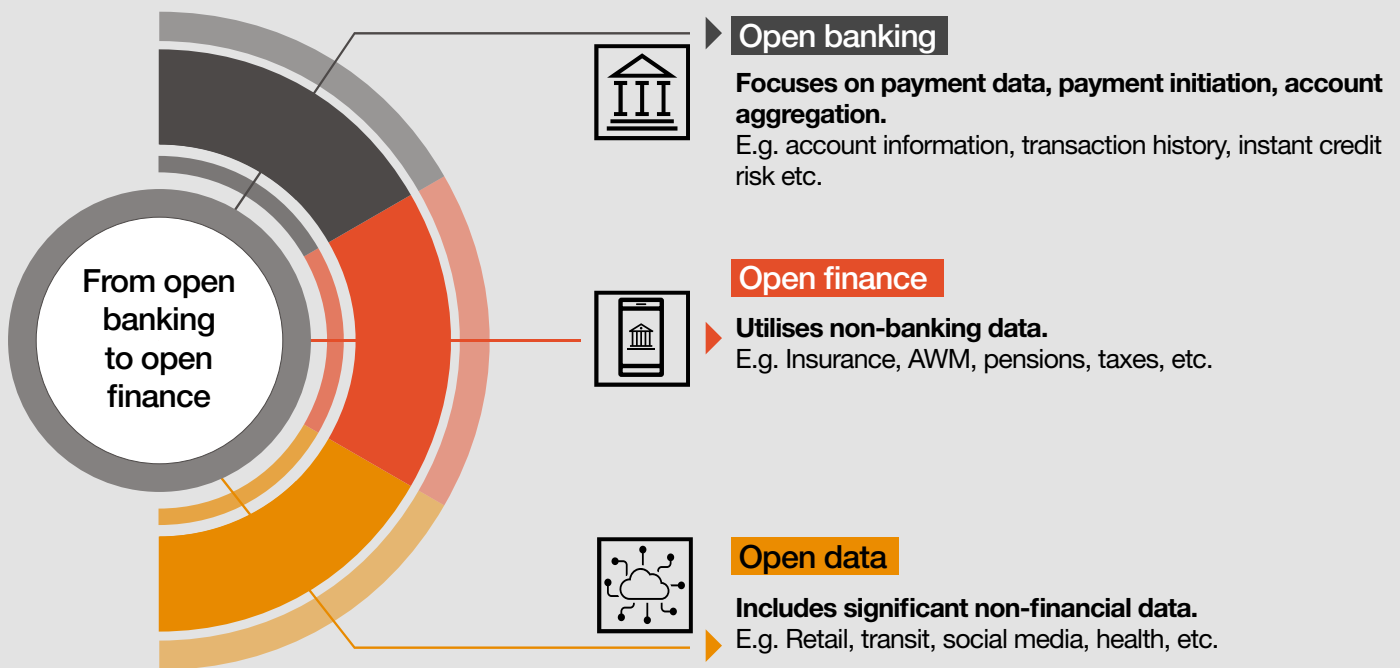
1. According to a Finastra survey from late 2023, nearly one in two (48%) global financial institutions consider open finance as a "must have" for their businesses. Additionally, 85% of respondents acknowledged that it is fostering greater collaboration in banking.

2. API "call" is how systems communicate with one another to exchange information securely and efficiently, often in real-time. A higher volume of API "calls" indicates a strong level of integration and interaction between financial institutions, TPPs, and various platforms.

3. Statista. Number of open banking Application Programming Interface (API) calls in 2023, with a forecast for 2027. June 2023.

The entire economy is moving towards an era of open data, where financial and non-financial information blend to create customised and innovative business models. This broader exchange allows businesses to combine financial data with non-financial data. This future isn't just open – it's interconnected.

Figure 2: The evolution of open banking, open finance and open data

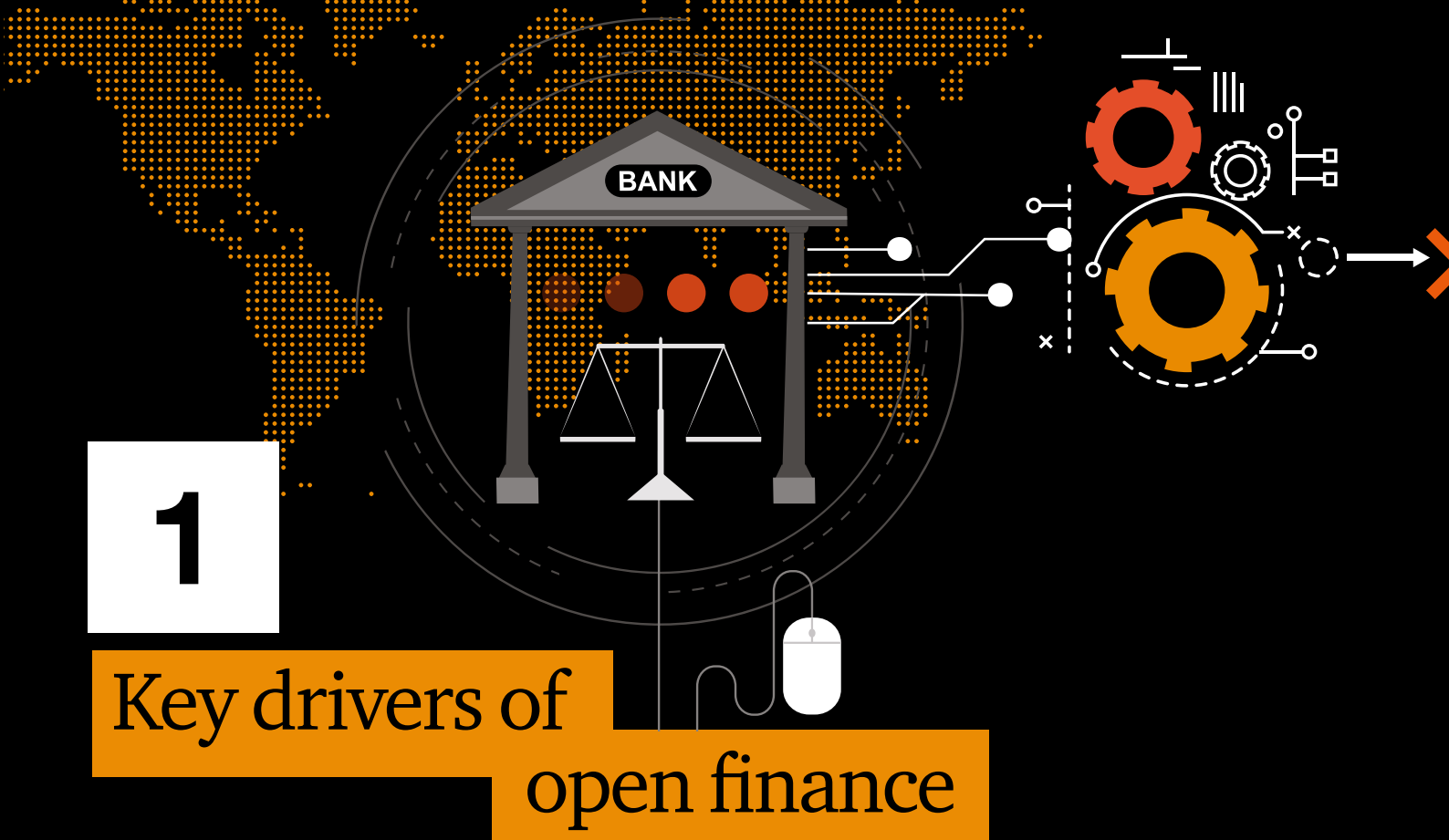


Source: PwC Global AWM & ESG Research Centre

However, the potential of open finance is contingent on an environment that enables it. Data privacy and security concerns remain paramount as sensitive financial information is shared across multiple platforms. Additionally, regulatory frameworks must keep pace with rapid technological advancements and evolving consumer expectations. Collaborative efforts among stakeholders—including banks, FinTechs, regulators, and consumers—are essential to address these challenges and foster a safe and inclusive open finance ecosystem. If the success of the open banking market—which is now on a trajectory to hit USD 123.7 bn by 2031, up from USD 13.9 bn in 2020—is any indication, open finance represents a revolution within the financial sector.⁴

This is more than just a technological shift; it is a fundamental shift in how financial firms interact with their clients. While some may see it as a threat, it is, in fact, a tremendous opportunity for firms seeking success and long-term growth amidst an increasingly tense macroeconomic environment. These firms will be those that build deep, lasting relationships with their clients by offering them open finance-led solutions that serve their best interest. Adapt or be left behind—the choice really is stark.

4. Allied Market Research. Open Banking Market Expected to Reach \$123.7 Billion by 2031. August 2022.



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Key drivers of open finance

Open finance is being propelled by three main drivers: Regulatory frameworks, demographic changes, and technological advancements.

Regulatory frameworks

Regulations will play a key role in pushing financial services players to share data and adopt open finance. They will determine the implementation of open finance by providing a structured mechanism to facilitate data sharing between financial institutions and TPPs. This will ensure consumer protection, enhance competition, promote innovation, and mitigate data privacy and security risks, thus fostering trust among consumers and businesses.

Jurisdictions such as the EU, the UK, Australia, the US, Brazil, India, the UAE, and Nigeria are paving the way towards an open financial system with a variety of regulatory frameworks.

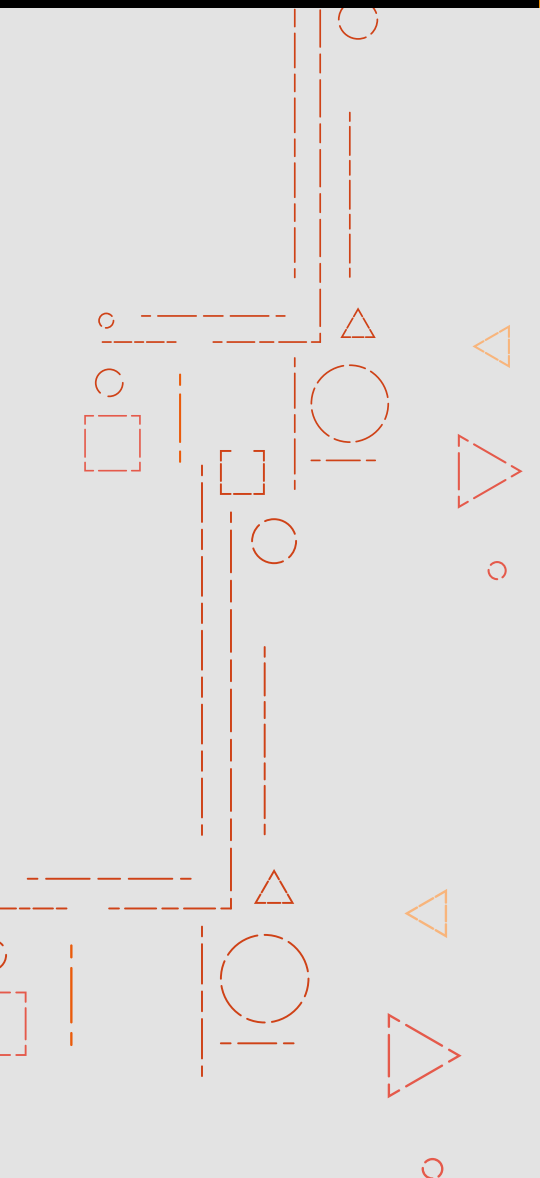
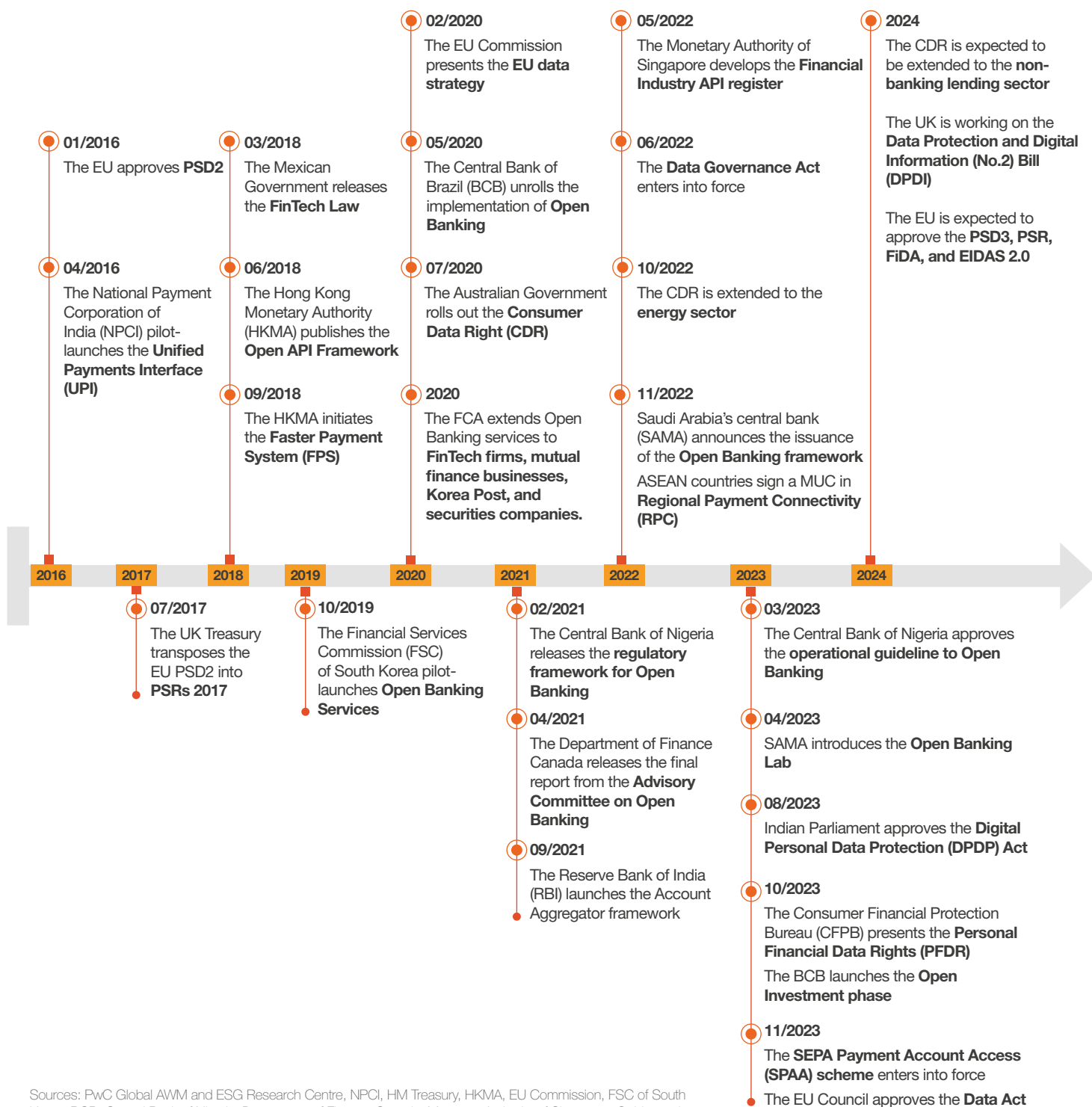




Figure 3: Global regulatory overview from 2016 to 2024



Sources: PwC Global AWM and ESG Research Centre, NPCI, HM Treasury, HKMA, EU Commission, FSC of South Korea, BCB, Central Bank of Nigeria, Department of Finance Canada, Monetary Authority of Singapore, Gobierno de Mexico, Australian Government, RBI, EU Council, EU Commission, CFPB, FSCA, Central Bank of Nigeria, SAMA, BCB, UK Government, BOT, Indian Parliament.

EU regulations are breaking down the barriers to open finance

EU regulatory initiatives will require many institutions to adopt open finance sooner than they might have otherwise. For this reason, regulation remains the key driving force of open finance in the EU, rather than market forces. Regulations have already paved the way for open banking in the EU, and the Union is spearheading the transition to open finance.

FiDA will be the main piece of regulation that will drive open finance in the EU, aiming to expand the principles established by PSD2 across a broader array of segments within the financial sector, including non-life insurance, pensions, AWM, loans, savings, and credit. PSD3 and PSR, which update and build upon PSD2, will also play an instrumental part in the broader regulatory evolution on the European landscape. Together, they continue the drive towards open finance, simplifying and expanding data sharing across the financial sector.

The EU's open finance regulatory framework		
FiDA	PSD3	PSR
<p>Establishes a standardised mechanism for data sharing within the financial sector.</p> <p>Financial institutions are obliged to share customer data with authorised TPPs⁵ via financial data sharing schemes (FDSS).</p> <p>All financial institutions in the EU must join at least one FDSS that represents a significant portion of the market for a product or service. The data sharing terms (including compensation) of this scheme must be agreed upon by the member institutions.</p> <p>Financial institutions must obtain consumer consent to share their data and may only use it for purposes agreed upon with the consumer. Institutions must also delete data once it is no longer needed.</p> <p>If financial institutions fail to set up an FDSS that sufficiently accomplishes FiDA's goals, the European Commission may step in to create one.</p>	<p>Expands on PSD2.</p> <p>Financial institutions must create a permission dashboard where consumers can opt in or out of data sharing.</p> <p>The legal distinction between payment institutions and e-money institutions is eliminated.</p>	<p>Turns PSD2 into a regulation.</p> <p>Regulates the relationship between banks and payment institutions.</p> <p>Implements Strong Customer Authentication (SCA) requirements and other data protection measures.</p>

The EU framework will have four main impacts on the financial services industry.

<p>1</p> <p>Open finance will become mandatory</p> <p>Financial institutions in the EU will be required to share data with one another on client consent. This will accelerate the adoption of open finance and spur greater competition and innovation within the financial services industry. Consumers will also have the right to know how their data is being used.</p>	<p>2</p> <p>Data monetisation will become more widespread</p> <p>By requiring that parties to an FDSS agree on data sharing terms, financial services companies can demand that they be compensated for sharing their customer data with other firms. This will make data monetisation easier and more widespread.</p>	<p>3</p> <p>There will be fewer entry barriers to the industry</p> <p>The widespread availability of financial data means that many financial services companies will be able to offer services traditionally exclusive to certain sectors of the financial services industry. For example, non-banks will be able to offer credit arrangements more easily by using bank customer data.</p>	<p>4</p> <p>Traditional intermediaries will become less prevalent</p> <p>As data sharing becomes widespread, traditional intermediaries like banks and brokers will become less important for product distribution.</p> <p>It will become easier for financial services companies to reach each other and their clients.</p>
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Regulation will be needed to establish open finance in all jurisdictions

In jurisdictions where open finance is being driven by markets, rather than regulatory forces, TPPs and banks can create individual API platforms in any manner they choose. However, a lack of standardisation will prove challenging when integrating with other financial centres or platforms.

Nevertheless, a market-driven approach does not mean that regulators or policymakers are absent from the open finance

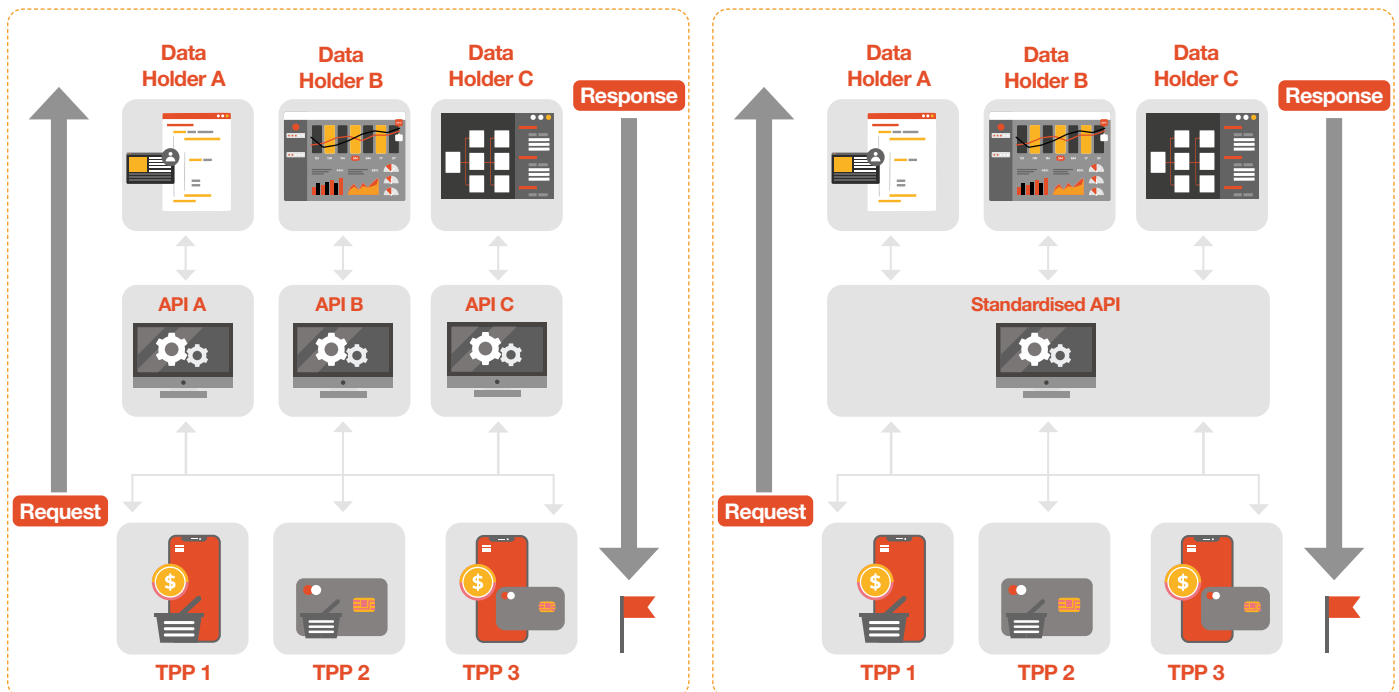
transition process. Rather, policymakers allow the private sector to create open finance or data exchange solutions, and then create regulatory frameworks around them to support their integration into the wider economy. For instance, in North America, API standards set by the Financial Data Exchange (FDX), a nonprofit standards-setting organisation, have been widely adopted by open finance platforms in the United States and Canada.

Regulatory frameworks on standardisation will soon emerge

As open finance evolves, regulatory frameworks will continue to adapt to ensure data security, privacy, and interoperability between different financial services. We expect global efforts to standardise data formats and APIs to gain momentum. Such standardisation is crucial for achieving seamless interoperability, making it easier for various financial institutions—such as payment providers, banks, insurers, and wealth managers—to integrate and collaborate with TPPs. This harmonisation will reduce friction in cross-border transactions and enhance the

global financial ecosystem’s overall user experience. With standardised APIs and data formats, new entrants can more easily connect with existing financial networks and offer their services to a broader audience. This openness will foster competition, leading to more innovative financial products and services.

Figure 4: Standardised APIs will drive the implementation of open finance



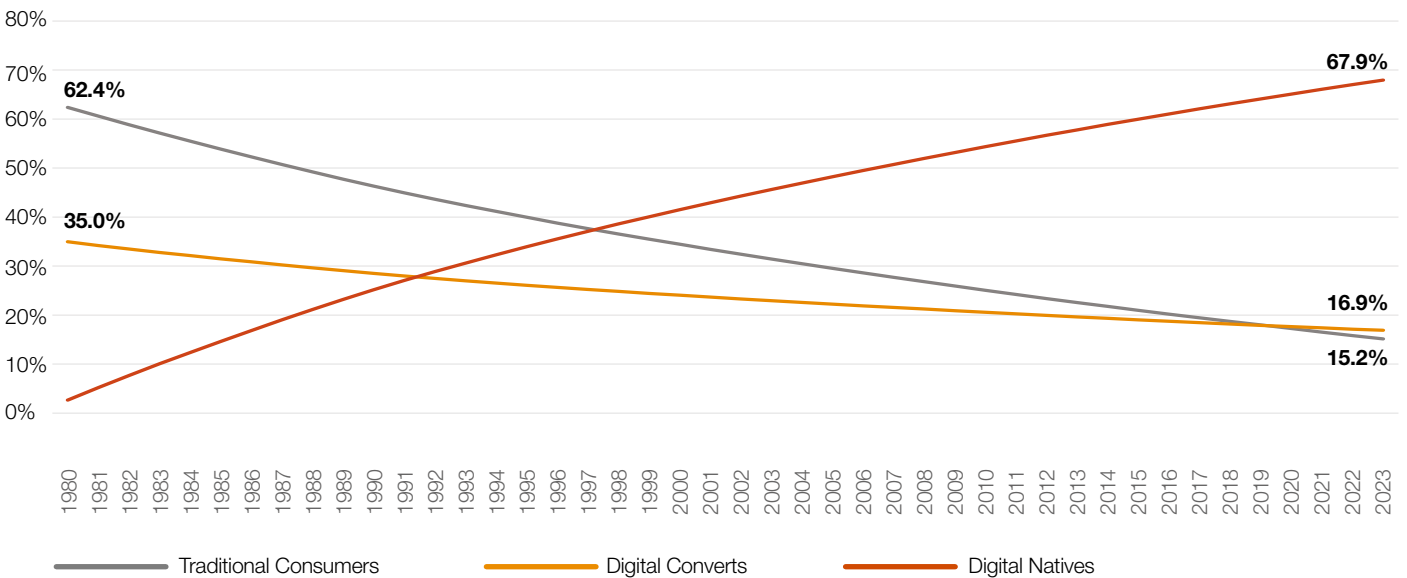
Source: PwC Global AWM & ESG Research Centre

Demographic changes

The demographic shift, as Gen Z and Millennials become an increasingly larger portion of financial services consumers, is another significant driver of open finance. These younger

generations are tech-savvy and expect convenient digital solutions, creating enormous demand for open finance-powered products.

Figure 5: Percentage of global population by digital category



Note: Digital natives refers to Generation Alpha, Gen Z, and Millennials. Digital converts refer to Generation X. Traditional consumers refers to Baby Boomers, the Silent Generation, and the Greatest Generation.

Sources: PwC Global AWM & ESG Research Centre; United Nations

Digital natives, those born after 1980, are key to the future success of open finance as they are more open to data sharing than previous generations. More than 50% of digital natives are not only willing to share their personal data but will allow their data to be sold to TPPs if they are provided with more value in exchange.⁶ It is anticipated that by 2029, Millennials will have the largest portion of disposable income of any age group, while Baby Boomers and Generation X's share of global wealth declines progressively.

The financial services sector is therefore trying to attract these more digitally-minded consumers by increasing their technology-based product offering. Taking the UK as an example, a study carried out by Moneyhub in late 2023 found that digital natives are already a significant tranche of open banking payments users. Indeed, 29% of 16 to 24-year-olds and 26% of 25 to 34-year-olds make payments using open banking solutions—compared to just 13% of people over the age of 55.⁷ Many Gen Z and Millennials also claim that they are willing to switch to other financial institutions if they believe they offer a better service. This will drive the race to create customer-centric open finance solutions.

The increasing demand for open finance from younger generations is not just because they prefer tech-based solutions. It is also driven by the fact that Gen Z and Millennials are investing more than their parents and grandparents did at their age, giving them greater exposure to financial markets. For instance, in the United States, 37% of Gen Z were estimated to own stocks as per a poll conducted in early 2024.⁸ Furthermore, 45% of Gen Z members had invested in the stock market by age 21, significantly more than Millennials (31%), Gen X (14%), and Baby Boomers (9%).⁹

Independently of the expected surge in demand that younger generations will have for open finance solutions, digital natives also offer financial institutions the possibility of collecting larger amounts of data, making new products possible. Young people do not often have the same amount of traditional financial data as older generations, but through their digital footprints, they will provide vast amounts of alternative data that could be used to create new financial solutions. For example, banks are able to leverage large amounts of consumer data that will be available under an open finance ecosystem – especially that of young consumers – to create accurate creditworthiness assessments on customers who otherwise do not have traditional data such as a credit or transaction history.

6. Euromonitor International, *Voice of the Consumer: Digital Survey 2023*, July 2023
7. Moneyhub, *One in five now make payments using Open Banking*, November 2023

8. The Motley Fool, *What Are Gen Z and Millennial Investors Buying in 2024?* January, 2024

9. World Economic Forum, *Speaking Gen Z: How banks can attract young customers*, November 2023

Technological developments

The emergence of new technologies is also propelling open finance solutions. These have expanded the horizon of what is possible in the financial services sector over the past decade, particularly data-sharing technologies and AI which are redefining how consumers and businesses interact with financial services. As technology creates new possibilities, proactive and creative financial services players are designing new solutions and innovative products.

The upswing in technology use that open finance will create, will eliminate the need for traditional intermediaries such as banks or brokerages for many financial industry players. Rather, these will be replaced by technological intermediaries like API, cloud, or AI providers. Technology companies and FinTechs will therefore gain more prominence and market power within the financial services sector.

APIs will circumvent traditional intermediaries

APIs allow large amounts of data to be exchanged between financial players directly rather than via traditional intermediaries. The increased uptake of APIs will propel decentralised finance and broader open finance adoption, making the financial services sector more open, transparent, internally interoperable, and simpler for customers. Increased accessibility of financial services facilitated by APIs will increase competition within the industry, causing a scramble to innovate and enhance customer experience. Financial institutions will also begin investing in in-house API capabilities to reduce reliance on technology service providers.

Cloud solutions will enable efficient data aggregation

Cloud platforms complement APIs by providing scalable, flexible, and cost-effective infrastructure for implementing open finance solutions. This technology will allow financial institutions to store vast amounts of data securely and enhance their advanced analytics and machine learning models. The scalability of these platforms will also allow financial institutions to handle fluctuating loads without investing heavily in physical infrastructure. Institutions will be able to adjust their resources up or down during high-traffic events to handle data exchange peaks without disrupting services such as payment platforms or insurance offerings. Furthermore, cloud service providers' advanced data encryption methods bolster security, which will help the financial services industry comply with data security measures and maintain consumer trust.¹⁰

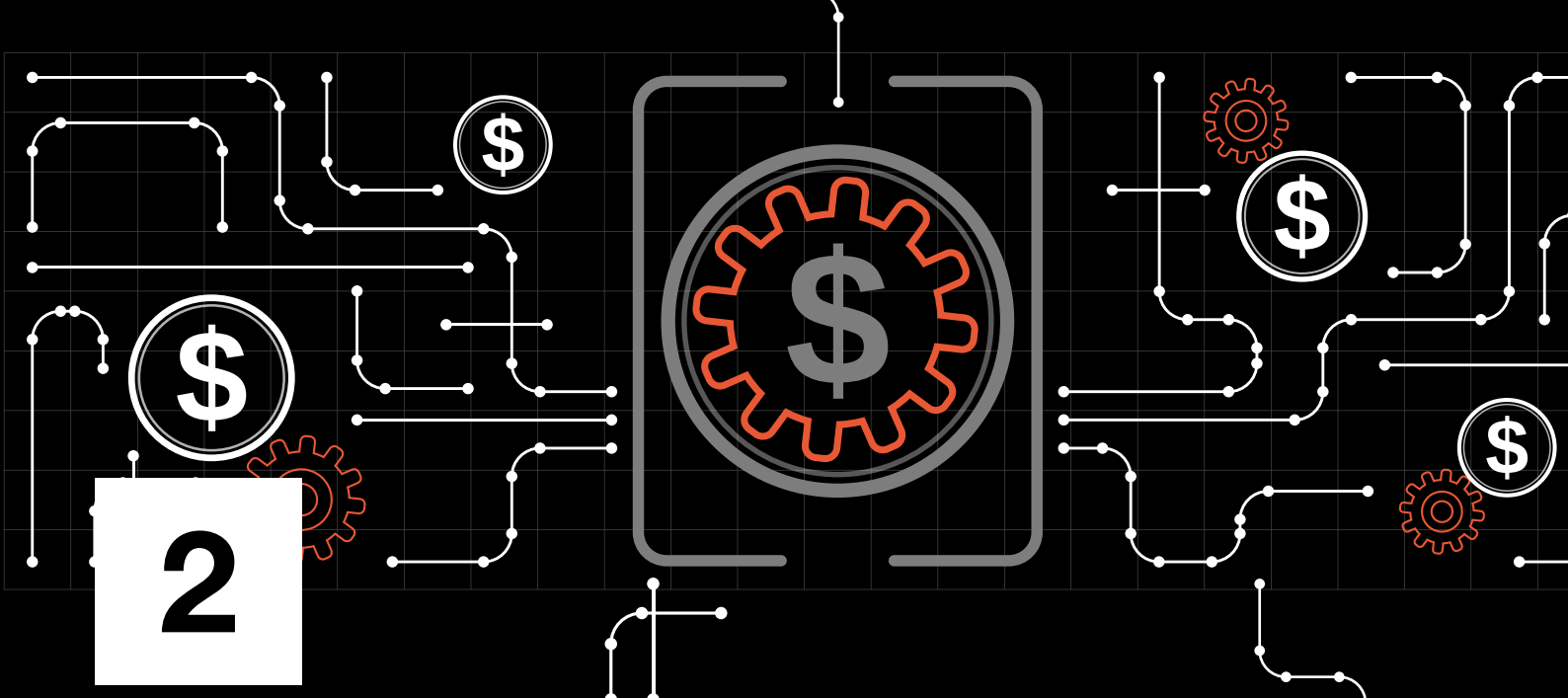
AI will allow financial institutions to create more data-powered solutions

The use of AI in open finance will enable financial services firms to provide customer-centric solutions and make informed decisions based on real-time data. AI will be a necessary tool to process the enormous volume of highly precise customer data that the financial industry will have access to under open finance. Without AI, the data will not be able to be effectively understood and converted into attractive financial products or solutions at scale. Furthermore, AI-driven systems will be used for enhanced AML and KYC operations by monitoring real-time transactions to detect suspicious activities and prevent fraud, thereby enhancing security in the industry and facilitating compliance with AML regulations. AI will also improve efficiency by automating repetitive tasks, increasing data analysis accuracy, and enabling real-time analytics and predictive modelling. These capabilities will enhance financial institutions' agility and responsiveness.

Generative AI (GenAI) will further facilitate the development of innovative financial products. Its ability to create content, analyse patterns, and predict outcomes will allow for unprecedented innovation, efficiency, and personalisation in financial services. GenAI can deliver highly tailored financial advice by analysing large amounts of data and adjusting recommendations based on immediate changes such as income fluctuations, expenses, and market conditions, while considering individual risk tolerance, risk profiles, and preferences.

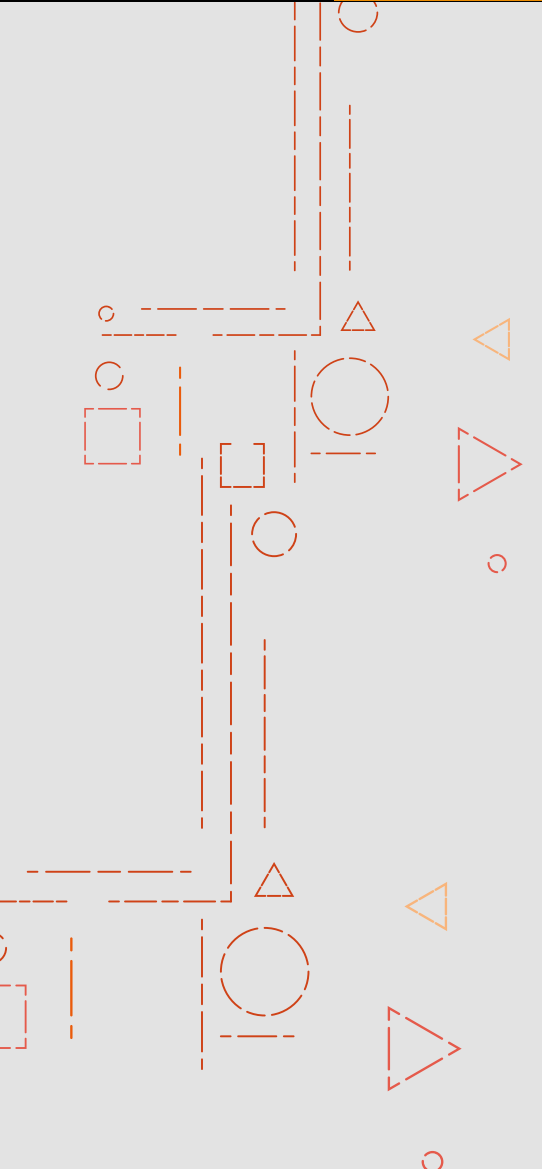
These drivers will impact how open finance will be adopted by the industry in the coming decades and how the players within each sub-industry will leverage the opportunities to enhance their business models.

10. TechTarget, *Cloud encryption*, 2024.



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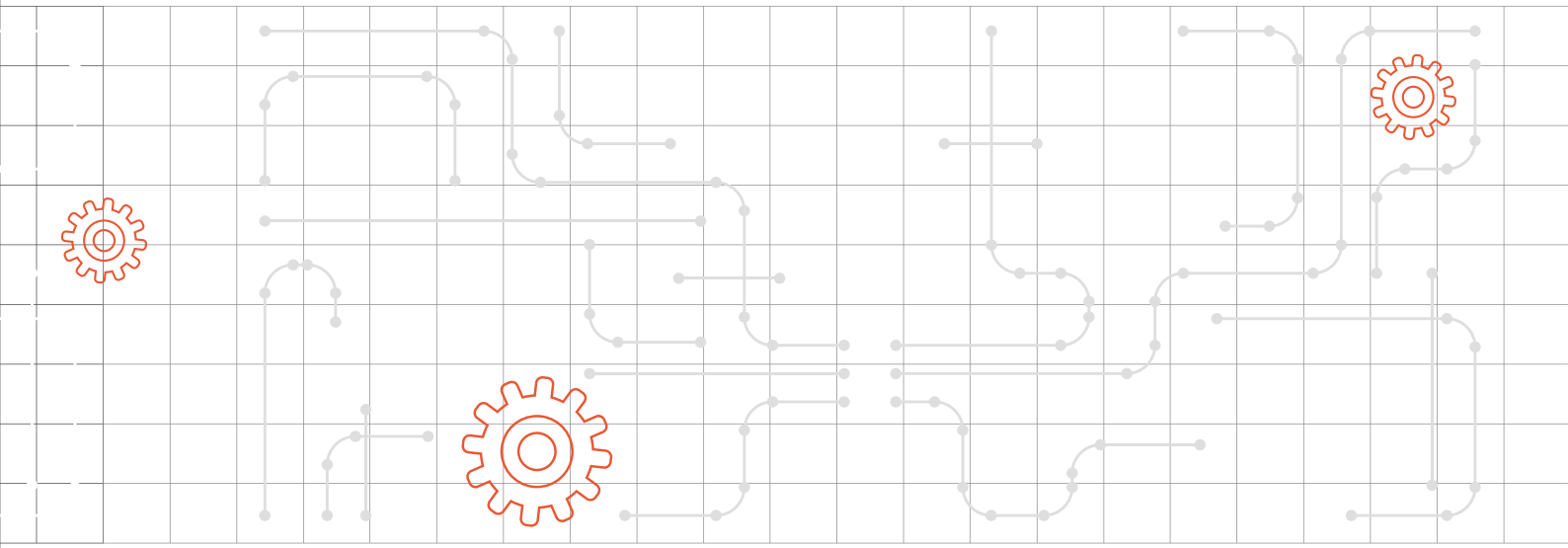
Open finance will redefine the financial services industry



We have transitioned from asking when open finance will happen, to how it will transform the different industries within the financial services sector. We assess the extent of this transformation across the payments, AWM, banking, and insurance industries. As data flows more freely and financial services become increasingly interconnected, the boundaries between these industries will blur, creating a more seamless and integrated ecosystem. With open finance, firms will be empowered to offer more personalised and comprehensive solutions to their clients. This shift will fundamentally transform how financial services are delivered, with innovation, transparency, and customer empowerment at their core. The future of these industries lies in their ability to leverage open finance principles to evolve and remain competitive in an evolving market.

Open finance and the future of the payments industry

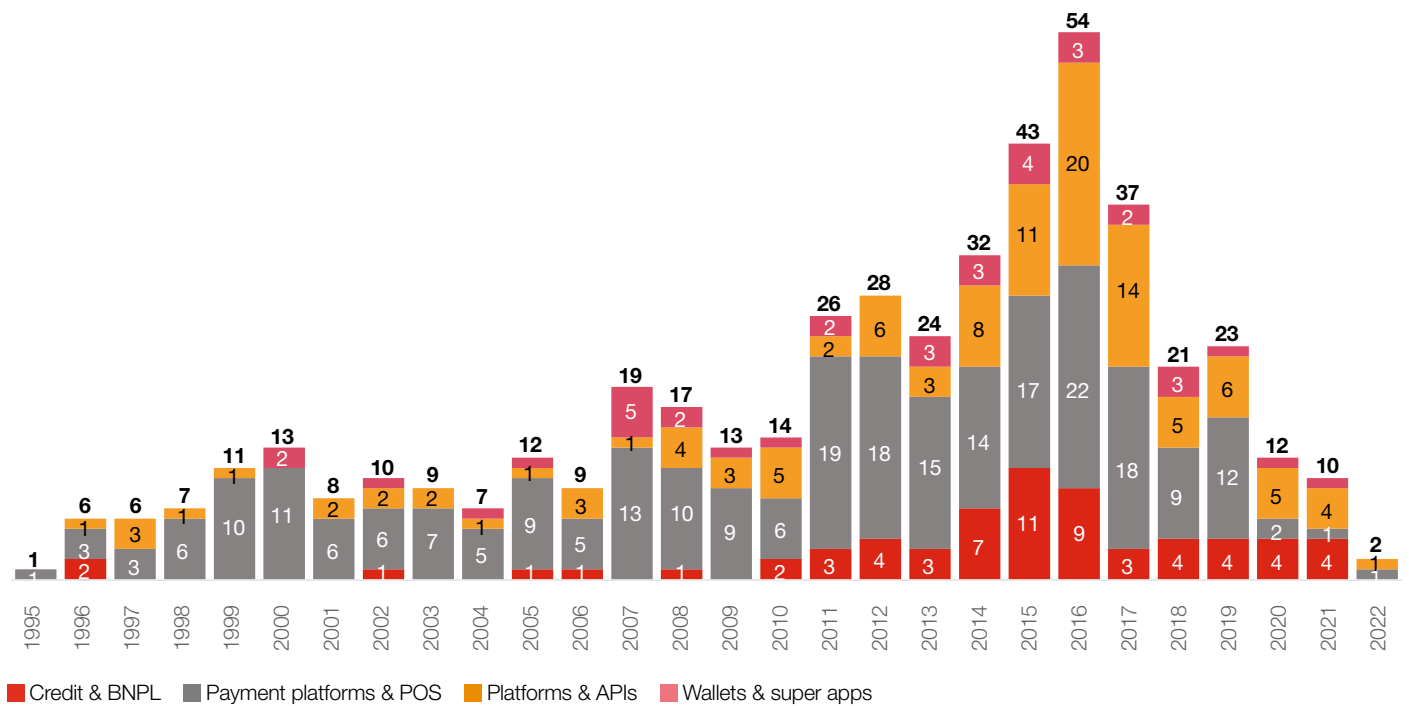
Payments services stand at the forefront of financial services in terms of open data adoption. Unlike other industries such as AWM or insurance, the payments industry has long embraced open finance and API-driven solutions. Benefiting significantly from open banking, the payments industry has experienced substantial growth, which has increased competition for the traditional banking sector. Data-sharing initiatives have expanded customer reach and fostered new operational models, allowing payment companies to offer services traditionally within the remit of banks, such as account-to-account (A2A) payments. The primary advantage of the payments industry lies in its ability to provide faster, cheaper, and more efficient services than traditional banking methods.



Open payment solutions are here

Open finance payments solutions are already available in a mature form. As illustrated in the following graph, the number of new payment FinTechs began to surge in the 2010s with the spread of data exchange technologies and open-banking-friendly regulations, peaking in 2016. Since then, the annual founding of payments FinTechs has declined, indicating that the market demand for new payments solutions has stabilised, with most open finance payment models already established.

Figure 6: Number of payment FinTechs founded by year, globally (selected segments)



Sources: PwC Global AWM & ESG Research Centre; Pitchbook

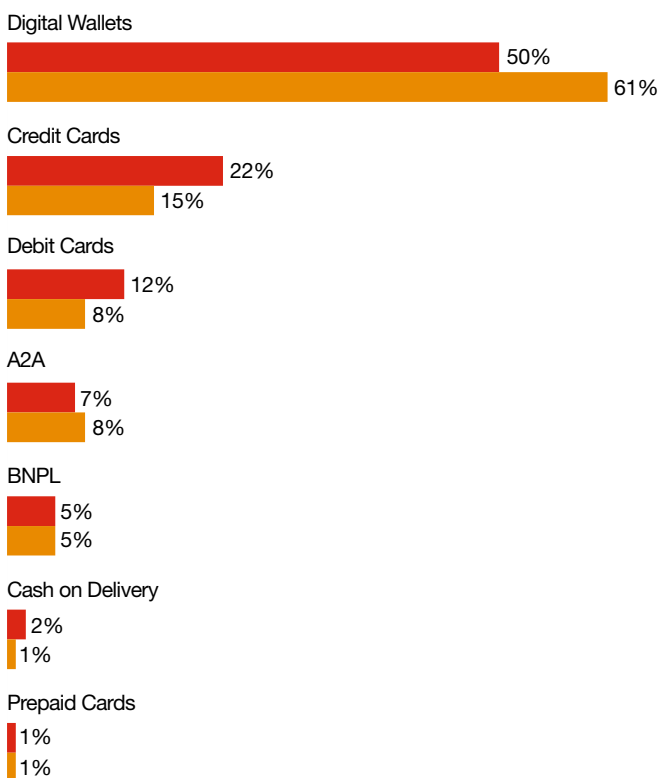
Open finance to enhance existing open payment solutions

In other financial sectors, open finance is expected to drive innovation. However, in the payments industry, the process of seamlessly transferring money is itself the product. Innovations under open banking, and those anticipated under open finance, will enhance the efficiency and user-friendliness of current models. Existing open data payment models will see wider adoption, increased efficiency, and personalisation as greater

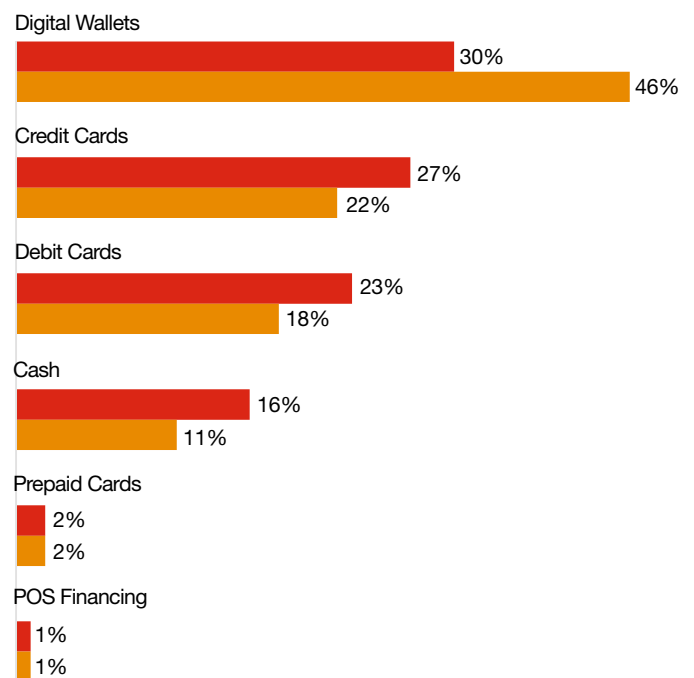
data availability enables more user-specific services. Moreover, the increased availability of financial data will simplify transaction authentication, facilitating secure payment issuance and receipt. As open finance progresses, payment models will likely continue to entrench themselves and expand their market presence. Consequently, as more industry players adopt open finance, they will rely on proven open payment solutions.

Figure 7: Global payment methods: e-commerce and points of sale (POS)

Global E-commerce payment methods



Global POS payment methods



■ 2023 ■ 2027f

Note: Digital wallets include pass-through wallets that facilitate card transactions, stored value wallets and mobile money wallets and includes global brands such as Alipay, Apple Pay, Google Pay, M-Pesa and PayPal as well as local and regional wallets.

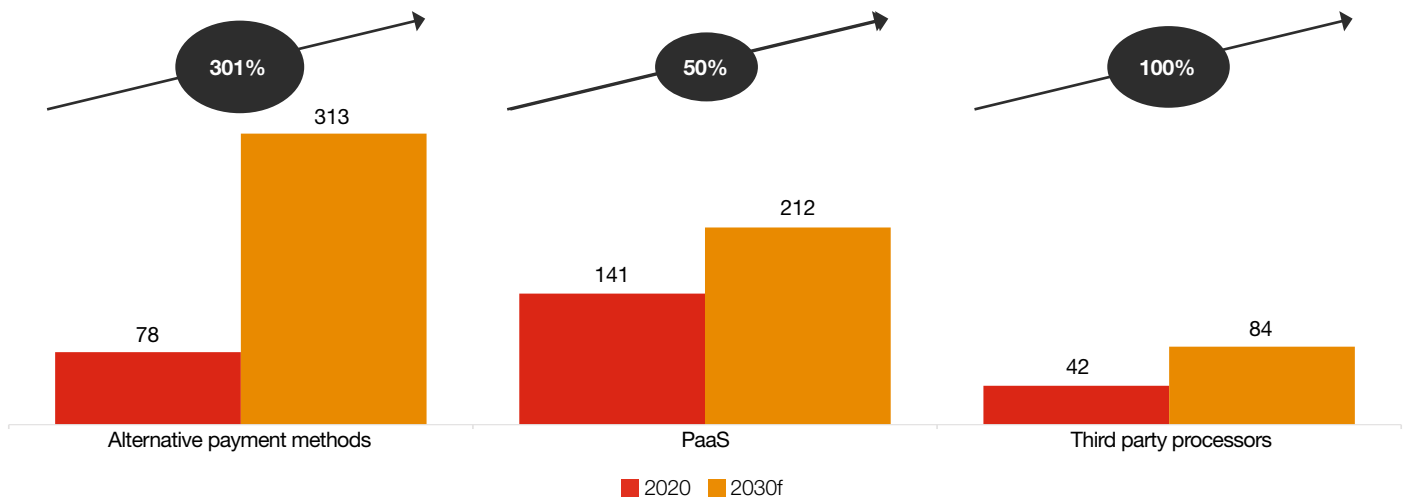
Sources: PwC Global AWM & ESG Research Centre; Worldpay's Global Payments Report 2024

Open finance to bolster the payments sector similar to open banking

The payments industry is poised for significant transformation under open finance, which will entail substantial revenue increases, as Figure 8 below demonstrates. However, the industry is also facing intense competition from a broader range of financial industry players, including FinTech startups, traditional banks, card networks, and super apps. This heightened competition will drive consolidation in payment usage, with customer preferences playing a

critical role in shaping market dynamics. To thrive amidst this competitiveness, institutions must focus on meeting and anticipating customer needs and making seamless and integrated payment experiences essential. As the industry evolves, select payment solutions are also gaining traction by aligning closely with these changing customer expectations. This alignment not only reinforces their importance but also highlights the promising growth projected for these solutions.

Figure 8: Projected increase in revenue for selected payment methods from 2020 to 2030, including percentage increase (USD bn)



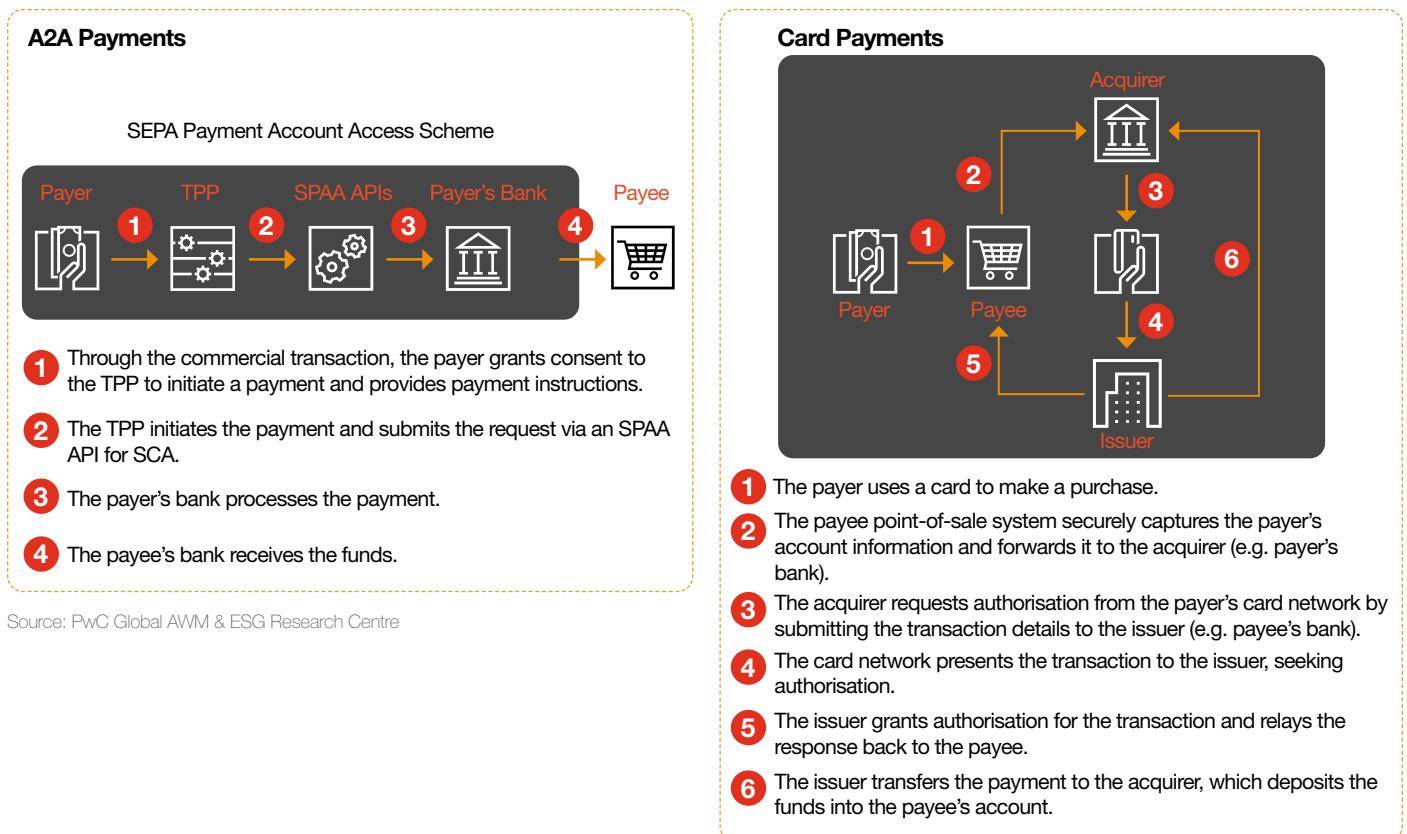
Sources: PwC Global AWM & ESG Research Centre; Research and Markets

Account-to-account payments (A2A) to gain popularity

Despite their existence prior to open banking, A2A payments gained mainstream traction with the advent of regulated third-party financial service providers. Regulatory developments such as the SEPA Payment Account Access scheme (SPAA) invite any EU bank or regulated FinTech to offer A2A payments and data services via APIs, benefiting merchants and consumers alike.

Open finance data sharing will further expand A2A models, enabling common APIs for payments between service providers and fostering an interconnected ecosystem of instant payment apps. Strong customer authentication measures and standardised APIs will facilitate seamless payments across platforms.

Figure 9: Account-to-account payments emerge as a compelling alternative to the card payments landscape



Source: PwC Global AWM & ESG Research Centre

Mobile and digital wallets to extend their growth through open APIs

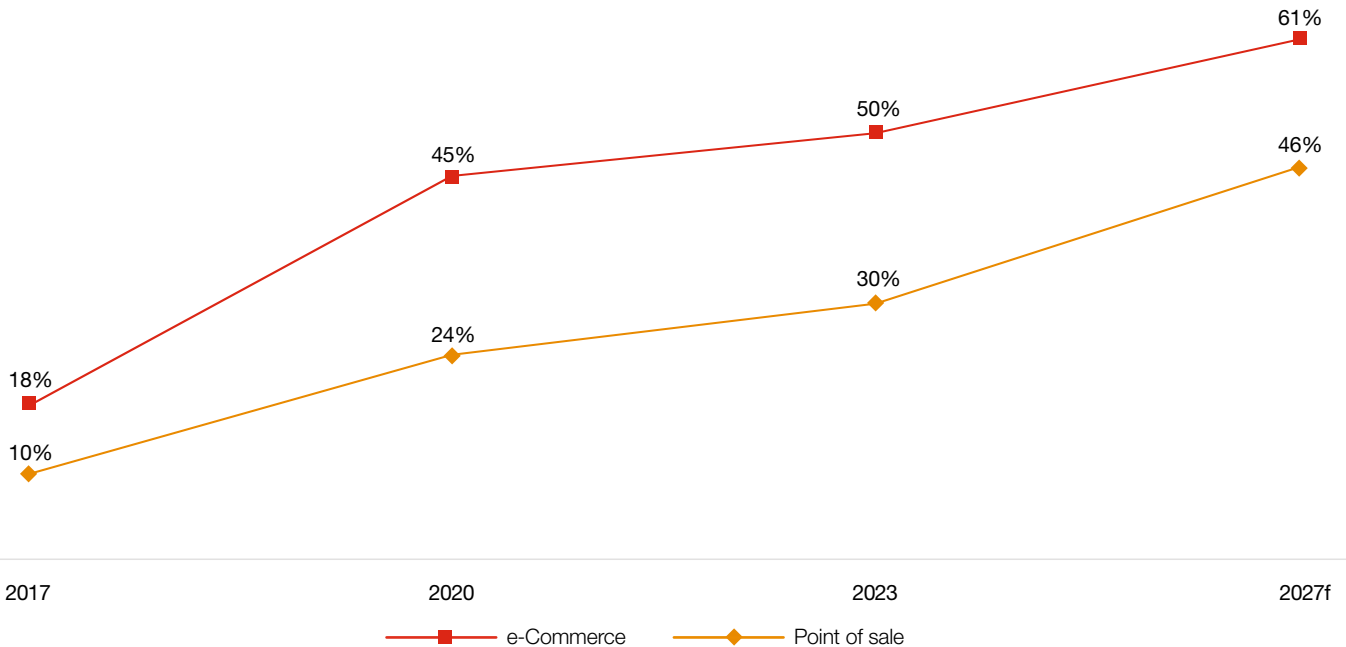
Digital wallets —inclusive of pass-through wallets, stored value wallets, and mobile money wallets— continue to dominate the global e-commerce landscape, accounting for 50% of total transaction value in 2023.¹¹ As the fastest-growing payment method in e-commerce, digital wallets are projected to grow at a CAGR of 15% through 2027.¹² The integration of open finance functionality into digital wallets allows users to top up their wallets with just a few clicks, without incurring additional costs. This combination of convenience and security is driving their popularity among consumers and businesses alike.

A notable example of this application is seen with Apple. In November 2023, Apple enhanced Apple Pay in the UK by integrating an open API architecture. This update allows users to access real-time account and transaction information directly within the digital wallet, eliminating the need to switch to banking apps. By merging digital wallets with open payments, customers are provided with up-to-date information about their account balances, enabling them to make more informed financial decisions.

Payments as a service (PaaS) to become the standard

PaaS options have become more common at points of sale due to open banking, increasing market exposure and direct consumer contact. The widespread adoption of open finance will likely make this model even more prevalent. With younger consumers driving demand for digital payment solutions, businesses must adopt PaaS to remain competitive. In 2023, 53% of US consumers used digital wallet payment solutions predominantly, with Gen Z and Millennials leading this trend.¹³

Figure 10: Digital wallets share of global transaction value 2017-2027f



Sources: PwC Global AWM & ESG Research Centre; Worldpay's Global Payments Report 2024

11. Payments Cards & Mobile, *Digital wallets lead a new era in global payments*, March 2024

12. Statista, *Mobile payments with digital wallets*, April 2024

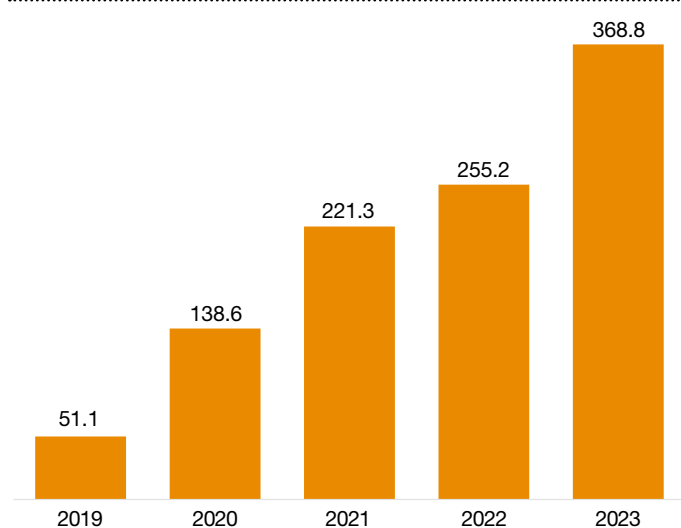
13. Forbes, *53% Of Americans Use Digital Wallets More Than Traditional Payment Methods: Poll*, August 2023

Buy now, pay later (BNPL) solutions will become more personalised

Open data solutions have fuelled the expansion of BNPL services, allowing consumers to split payments into interest-free instalments, making high-value purchases more accessible. BNPL providers use APIs to access detailed transactional data, enabling better customer credit and risk assessments. This data can also be monetised within an open finance ecosystem, providing additional revenue streams.

By leveraging consumer data, BNPL providers can offer user-specific credit rates, allowing merchants to make informed decisions and reduce interest costs for low-risk clients. Despite higher interest rates in recent years, declining rates are expected to boost BNPL demand among merchants and consumers.

Figure 11: Global merchandise volume by selected BNPL platforms (USD bn)



Sources: PwC Global AWM and ESG Research Centre and BIS

Variable recurring payments (VRPs) to become an alternative to direct debit

Variable Recurring Payments (VRPs) offer a flexible alternative to direct debit and credit cards by allowing consumers to set up repeat payments of varying amounts securely and easily. Unlike direct debits, VRPs let users set payment limits, modify transactions easily, and provide a clear view of authorised subscriptions. Banks on the other hand, cannot provide such comprehensive list of subscriptions paid by card, and while they can show subscriptions paid via direct debit, there is no limit on potential future payments. With its flexible, fast, and secure pay-by-bank model, we expect VRPs to become a viable alternative to direct debits in the coming years.

Integration with internet of things (IoT) and wearables

As IoT and wearable devices become more common, payment solutions integrated with these technologies will emerge, offering new ways for consumers to conduct transactions seamlessly and securely. With open payments, using a wearable device for transactions simplifies daily activities such as purchasing refreshments or snacks at an event where carrying a purse or wallet is impractical, buying a quick coffee or daily groceries, and paying for access to transit systems. Wearables like wristbands or rings will enhance convenience for these routine consumer activities.

A universally instant economy

We envisage a future where real-time transactions become the standard, enabled by significantly advanced APIs that make instant universal payments possible. This shift will transform the financial landscape, making instant transactions the norm for businesses and consumers alike. The efficiency and convenience of real-time payments will enhance user experiences, drive innovation, and set new expectations for speed and reliability in financial transactions worldwide. Current market trends highlight the need for this change, with 32% of respondents across the Netherlands, Finland, Germany, the UK, Spain, and France expecting to receive payouts within five minutes or less. Additionally, 21% of those who regularly use pay-by-bank or A2A solutions consider 60 seconds a reasonable time to receive a payout.¹⁴

14. Brite Payments, *Instant Economy Payment Insights: Uncovering trends in online payments 2024*, January 2024

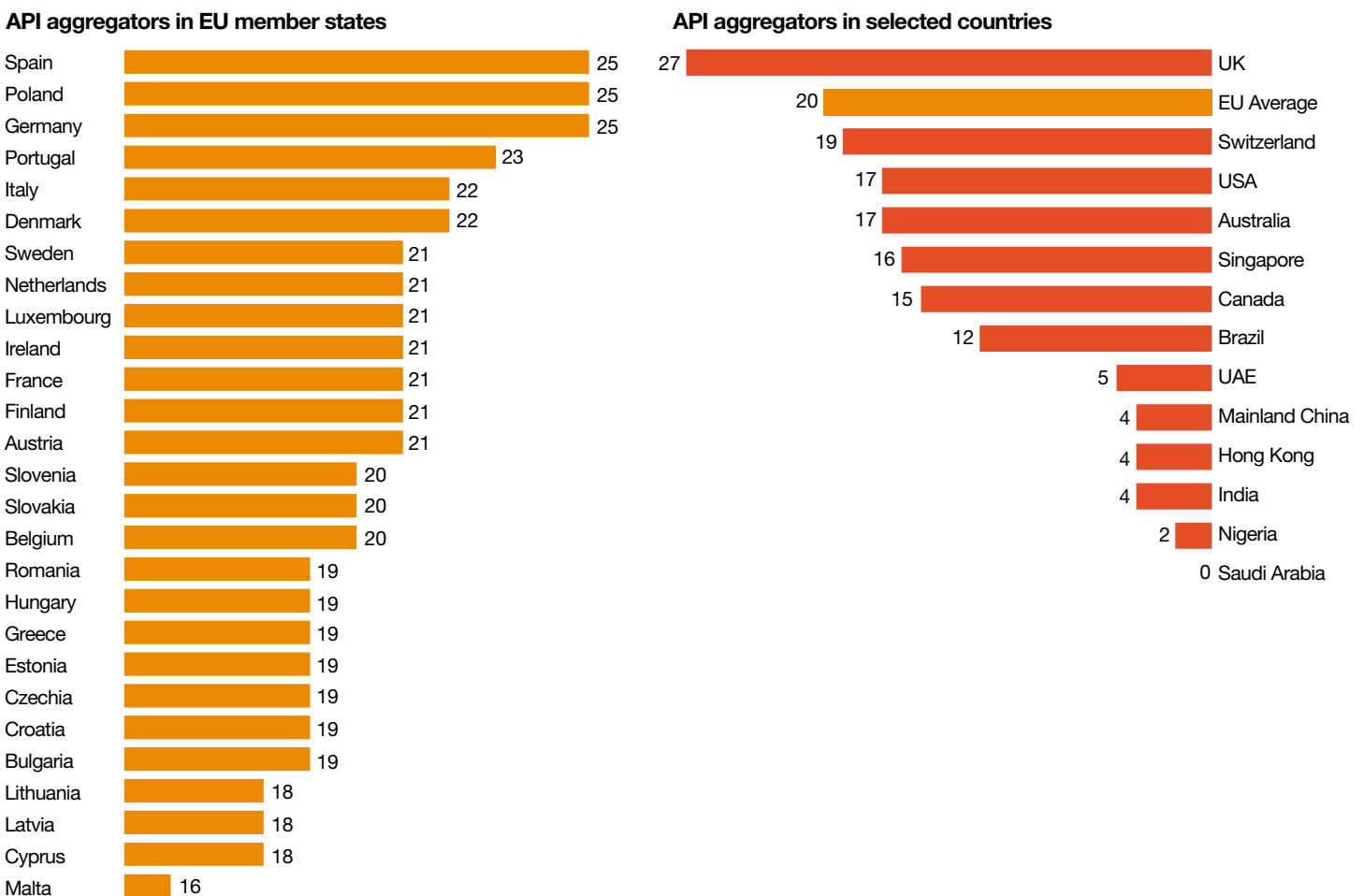
Open finance and the future of the banking industry

The banking industry, with experience stemming from PSD2 and other global open banking regulations, is well-positioned to lead the way in open finance adoption. Many banks have already implemented APIs, familiarised themselves with the concept of open data, and addressed challenges related to data standardisation and cybersecurity among others. As open finance builds on the foundation laid by open banking—which primarily facilitated third-party access to banking data and customer-initiated payments—the banking industry finds itself at a pivotal moment.

Banks leading the way

For years, banks have developed robust systems to securely manage vast amounts of sensitive data, from transaction histories to personal identification information. This has equipped them with a strong foundation to manage the complexities of data sharing and integration in the open finance era. Furthermore, the longstanding relationships banks have built with their customers provide a strong basis for trust, making consumers more comfortable sharing their financial information with established banks rather than newer FinTech entities. This trust is reflected in the increasing number of banks adopting open banking practices, as shown by the relatively large number of API aggregators across EU member states, which facilitate secure data sharing between banks and TPPs (Figure 12). This trend underscores the growing importance of open banking as a key driver of innovation and customer-centric services in the banking industry.

Figure 12: Number of API aggregators in EU member states and selected countries



Sources: PwC Global AWM and ESG Research Centre; Open Banking Tracker

A strategic opportunity for banks

Banks that proactively engage with open finance are well-positioned to leverage their extensive market reach and access to consumer data to create comprehensive financial service platforms. These platforms, supported by data exchange standards like those in FiDA, could evolve into one-stop-shops for financial products. Given their significant presence in both the broader economy and among financial consumers, banks are more adept at navigating the open finance landscape, which will become mainstream in banking far earlier than in sectors like insurance or AWM.

Open banking has already facilitated symbiotic relationships between banks and payment institutions, where banks contribute infrastructure and regulatory expertise, while payment institutions bring innovative solutions and customer-centric technologies. This growing interdependence is paving the way for a more interconnected financial ecosystem, setting the stage for future advancements in financial services.

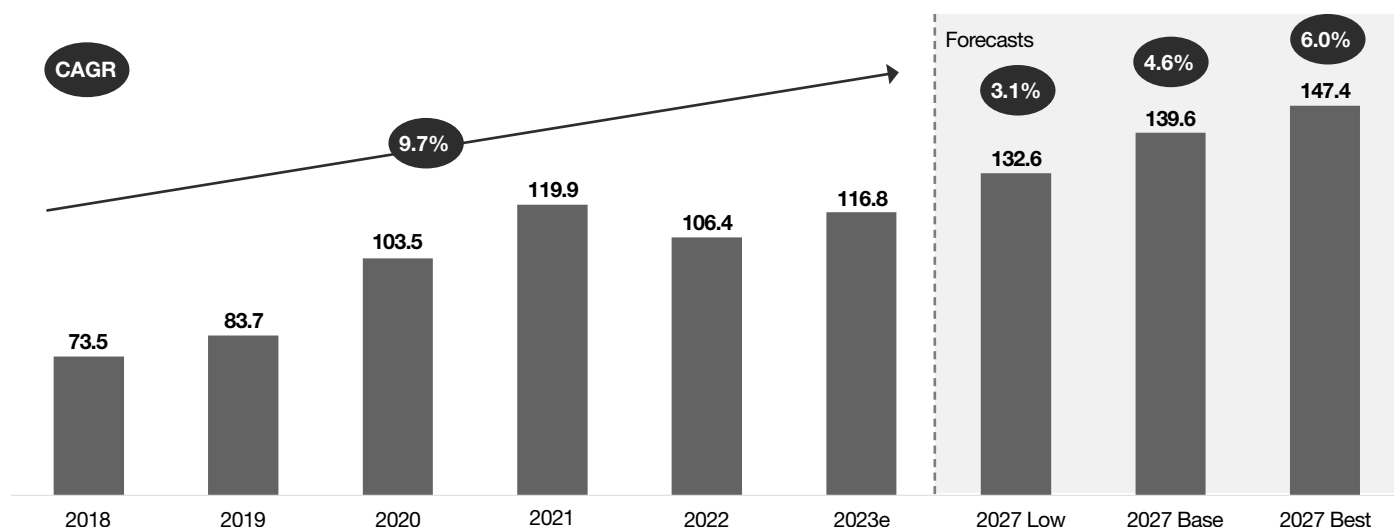
A future open finance model could see banks taking a leading role in the “platformisation” of financial services, potentially creating one-stop platforms where various financial services—from loans and insurance products to investment funds and mortgages—are available on a white-label basis.

Open finance will transform user experience

In response to increasing competition, regulatory shifts, and evolving customer preferences, banks are strategically pivoting towards customer-centric engagement banking. The expectations of digital-native demographics, particularly the demand for instant, personalised, and innovative services, are driving this transformation. Therefore, with open finance, banks can offer more tailored solutions and recommendations, strengthening customer relationships and boosting loyalty¹⁵. Private banks, traditionally key partners to High-Net-Worth Individuals (HNWIs), are increasingly adopting FinTech solutions to meet the growing demand for faster, more efficient services. By leveraging open finance and bank data, FinTechs will deliver personalised financial solutions and real-time insights, enhancing client experiences and enabling more strategic wealth management.

Small and medium-sized enterprises (SMEs) are also poised to benefit significantly from the transparency and accessibility of data across the financial industry, potentially redefining their banking experience. Open finance streamlines access to financial services, empowering SMEs to make informed decisions through comprehensive financial insights presented in a “dashboard” format. By integrating various financial data sources, SMEs will better understand their cash flow, financial health, and creditworthiness, which will enhance financial planning and access to credit. Historically underserved by larger banks, SMEs stand to gain the most from open financial data, fostering innovation, growth, and financial inclusion.

Figure 13: Global Assets of HNWIs/UHNWIs (USD tn)



Sources: PwC Global AWM and ESG Research Centre; Credit Suisse, OECD, IMF

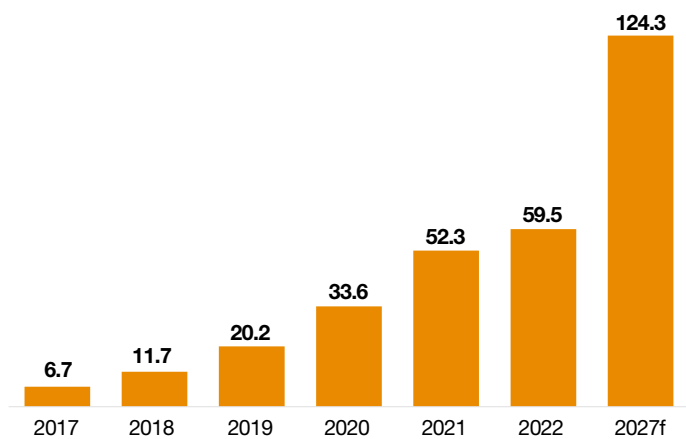
15. According to the FINASTRA Financial Services State of the Nation Survey 2023, 39% of financial decision-makers prioritise “improved customer services and personalised experiences.”

Neo-banks: pioneers of agile and innovative banking

Since the advent of open banking, neo-banks have experienced rapid growth in its adoption and usage. This trend suggests that while traditional banking may face challenges, embracing open finance could enhance their prospects in a data-driven financial system.

Open banking has strengthened the relationship between the banking and payments industries, particularly benefiting neo-banks, while direct customer interactions in traditional banks have begun to decline.¹⁶ These neo-banks are adopting more sophisticated, data-driven business models with direct consumer engagement, while traditional banks focus on integrating multiple APIs rather than developing customer-facing applications for open banking or open finance.

Figure 14: Number of Neo-Bank Users in Europe (mn)



Sources: PwC Global AWM & ESG Research Centre; Statista

Through open banking, neo-banks have introduced tailored solutions to a previously stagnant financial market, which mainly served traditional banks. By utilising APIs to integrate and analyse data from multiple financial sources, neo-banks offer customised financial products and services, such as personalised savings plans, real-time spending insights, and instant loan approvals.

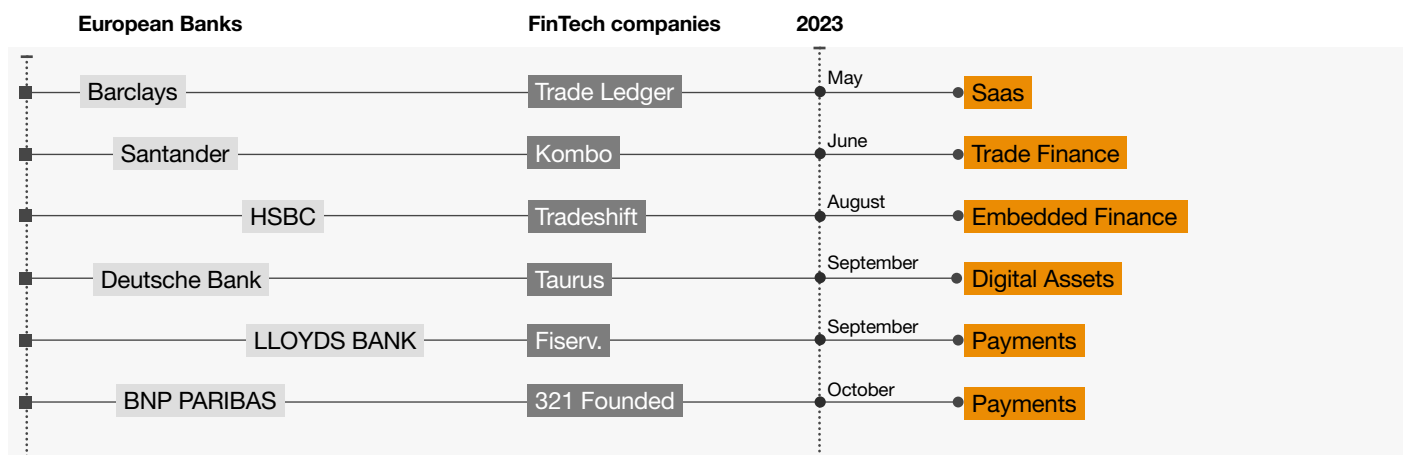
This model allows for a more agile and innovative approach to banking, enabling neo-banks to quickly adapt to customer needs and market changes. The transparency and data-driven decision-making inherent in open finance will further enhance risk assessment and competitive pricing, attracting a diverse customer base and promoting financial inclusion. As neo-banks continue to evolve, their reliance on open finance principles will drive further advancements in digital banking, setting new industry standards.

Traditional banks will increasingly lean towards strategic partnerships to stay competitive

In response to these industry changes, traditional banks are increasingly exploring or forming strategic partnerships with FinTech firms to stay competitive. Embracing innovative services beyond traditional payments and adopting Banking-as-a-Service (BaaS) models, which leverage API infrastructure, is crucial for sustaining innovation. This approach fosters creative service development and seamless connections among various stakeholders.

Open finance presents both challenges and opportunities for traditional banks. While non-bank financial institutions may encroach on products historically unique to banks, comprehensive open finance regulations like FiDA require all financial institutions to participate in data-sharing schemes and APIs. This levels the playing field between banks and non-bank financial entities, forcing all players to adhere to the same rules. Traditional banks that therefore embrace data exchange will be better equipped to navigate the transition to open finance and leverage its potential benefits.

Figure 15: Partnership of large European Banks with FinTech companies in 2023



Sources: PwC Global AWM & ESG Research Centre; Barclays, Santander, HSBC, Deutsche Bank, Lloyds Bank, BNP Paribas

16. Data from open banking platform facilitator Ndgit shows that 83% of its European PSD2 users are banks, yet 96% of API calls originate from TPPs.

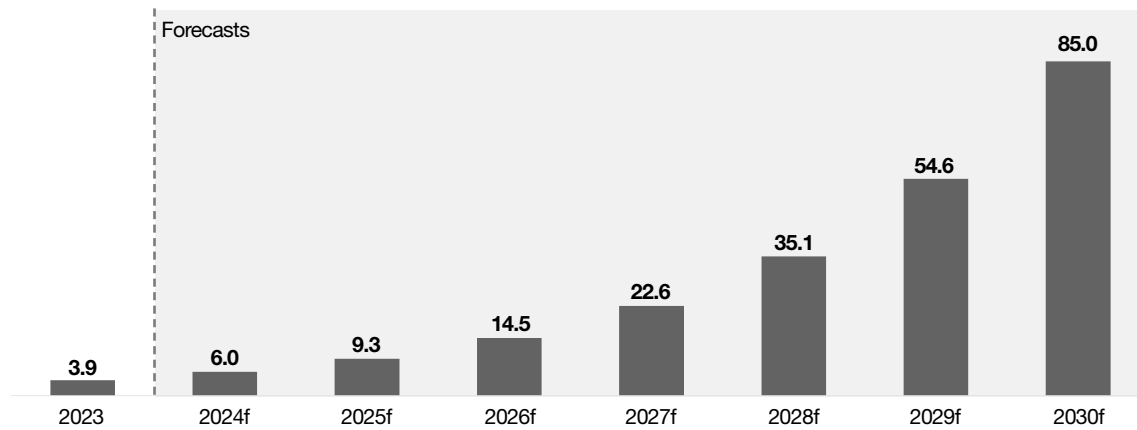
Open finance will drive financial inclusion

In the future, we anticipate greater financial inclusion and a more holistic overview of customers' financial status. FinTech innovations will play a significant role in providing affordable and accessible financial products to individuals and small businesses previously excluded from the traditional financial system. Concurrently, the shift from open banking to open finance will integrate additional services such as pensions, investments, and insurance, offering a comprehensive view of a consumer's financial health.

AI and machine learning will increasingly become indispensable

Advanced AI and machine learning algorithms will increasingly become essential in open finance development. These technologies will enhance fraud detection, risk management, and personalised financial advice, making financial services more secure and customer-centric. For example, AI systems could identify patterns indicative of identity theft or account takeovers by analysing transaction behaviour against historical data. Additionally, predictive analytics will enable banks to assess credit risk with greater precision, using machine learning models to forecast potential defaults based on a broader range of variables. Enhanced security and risk management will be vital as open banking expands and transactions become more complex.

Figure 16: Estimated value of GenAI spending for the banking sector globally (USD bn)



Sources: PwC Global AWM & ESG Research Centre; Juniper Research



Banks will be essential in the drive towards API standardisation

Banks are well-equipped to play a pivotal role in data and API standardisation considering their significant experience with open banking. Their early adoption of open APIs and secure data-sharing practices provides them with a foundational understanding of the regulatory, technical, and security challenges involved. This experience positions banks as key contributors to shaping standardised data-sharing frameworks and ensuring interoperability across the broader financial ecosystem.

Beyond their technical expertise, their longstanding relationship with regulators also gives them a strategic advantage in influencing the development of future standards. Their collaboration with regulators and FinTechs will be vital in establishing a unified data-sharing framework within the broader financial sector. By leading the charge in these efforts, banks foster trust among consumers, regulators, and other institutions. Trust is critical as open finance expands, since consumers need to feel confident that their data is being handled securely and responsibly across various platforms. As a result, banks' leadership in standardisation not only reinforces their own position but also builds the trust necessary for open finance to thrive.

Monetising access to data

We anticipate that data monetisation will emerge as a key revenue stream for financial services institutions that possess customer data and serve as providers of this data, with client consent, to data users. Given that banks are often the primary financial institutions for clients across Europe, they are exceptionally well-positioned to capitalise on this trend due to their extensive access to customer data.

Certain open finance regulations, such as the EU's proposed FiDA framework, are expected to formalise data monetisation by mandating that financial services companies be compensated for sharing data with TPPs, thereby establishing a robust data marketplace within the industry.

Looking ahead, we foresee the development of several data monetisation models, each varying in whether they generate continuous revenue streams or are based on individual data transactions. These models will also differ in how data is utilised by either the data provider or the consumer. Importantly, all forms of data monetisation will necessitate strict compliance with privacy regulations and the explicit consent of customers, as customer ownership of data remains a cornerstone of open finance.

We envisage the following data monetisation models:

Pay-per-request

This model involves charging fees for each data request made by a third party via an API. Financial institutions would generate revenue each time a third-party accesses customer data through their APIs. This approach offers scalability and flexibility, with fees potentially varying based on the type of data requested, frequency of access, or volume of requests.

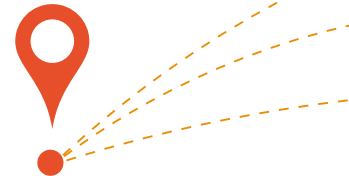
Data subscription

In this model, financial institutions would provide third parties with access to customer data through a subscription service. Subscribers would pay a recurring fee for continuous access to the data they require. This model offers a more predictable and stable income stream compared to the pay-per-request approach. Subscription tiers could be introduced, offering different levels of access or additional services based on the pricing plan.

Commissions on product and service sales

Financial institutions could also monetise their data by offering it to third parties, such as FinTechs, free of charge, and earning a commission when these third parties sell products or services based on that data.

We expect data monetisation to become a significant source of revenue in an industry increasingly dominated by open finance. However, the growing demand for transparency and data protection could place additional strain on resources, as traditional financial institutions would need to invest in data compliance and security measures. Failure to effectively address these challenges could result in a loss of market share and diminished profitability for these institutions.



Climate tech and open finance: A growing synergy

As open finance evolves, its support for the clean tech sector will likely increase by facilitating transaction data aggregation and access through APIs. This capability allows consumers and businesses committed to reducing their environmental impact to share financial transactions with specialised providers seamlessly. For example, companies like Doconomy can analyse and quantify the CO₂ emissions linked to each transaction. By providing detailed insights into the carbon footprint associated with individual spending patterns, open finance will enable users to make more informed decisions about their environmental impact.

The ability to measure and track carbon footprints through transaction data will drive innovative climate tech solutions. Businesses can use this data to create personalised carbon offset programmes or develop strategies for more sustainable purchasing practices. Integrating carbon footprint data into financial services will enhance transparency and accountability, further empowering individuals and organisations to take meaningful steps towards reducing their environmental impact.

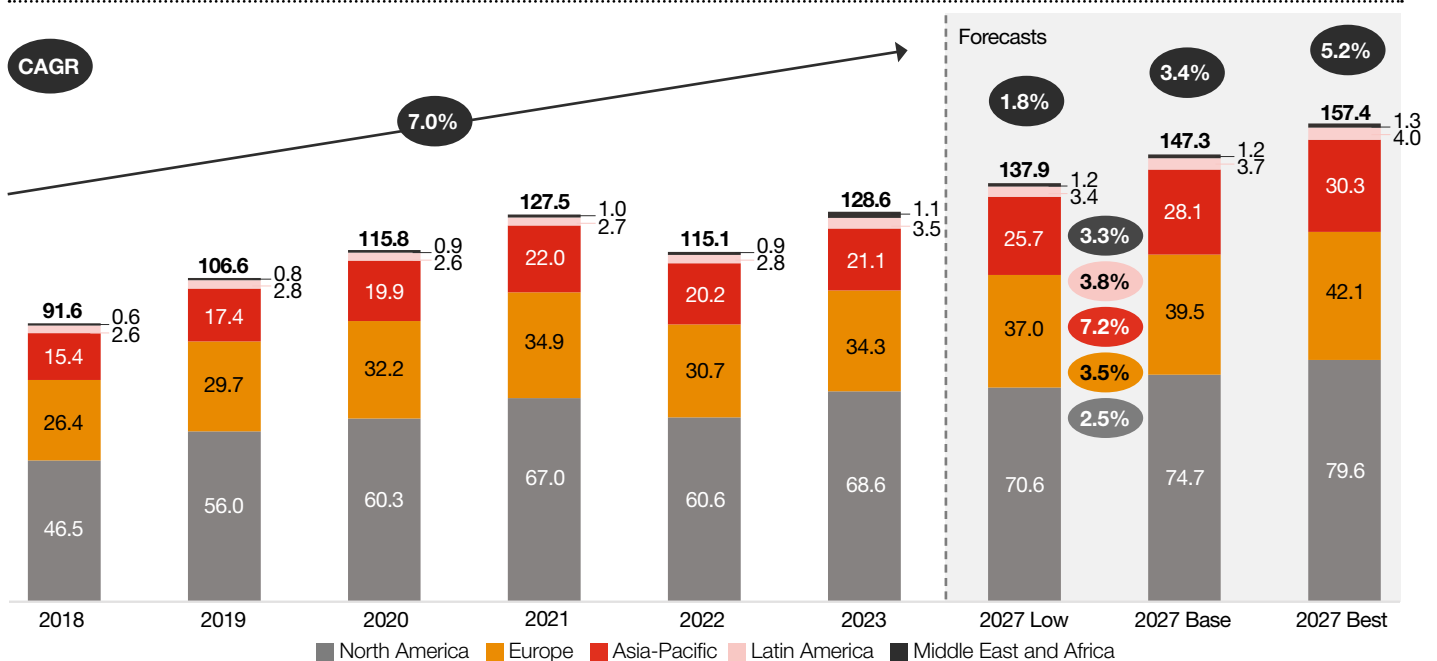
Open finance represents a significant opportunity for the banking industry, offering the potential to enhance customer experience, drive innovation, and improve operational efficiencies.



Open finance and the future of the Asset and Wealth Management (AWM) industry

The asset management industry has experienced robust growth over the past decades until 2022, driven by an almost zero interest rate environment, which led investors to allocate significant portions of their wealth to asset managers. However, the swift and strong rise in interest rates in 2022/2023 have changed the context in which asset managers need to survive and thrive. Although we will see moderate decline in interest rates in the near future, the zero-rate environment will not resurface in the coming years. Players within the industry will need to innovate to increase efficiency and revenues. The AWM industry is poised for revolution through emerging trends and business models with open finance playing a key role.

Figure 17: Regional breakdown of the total AuM (USD tn)

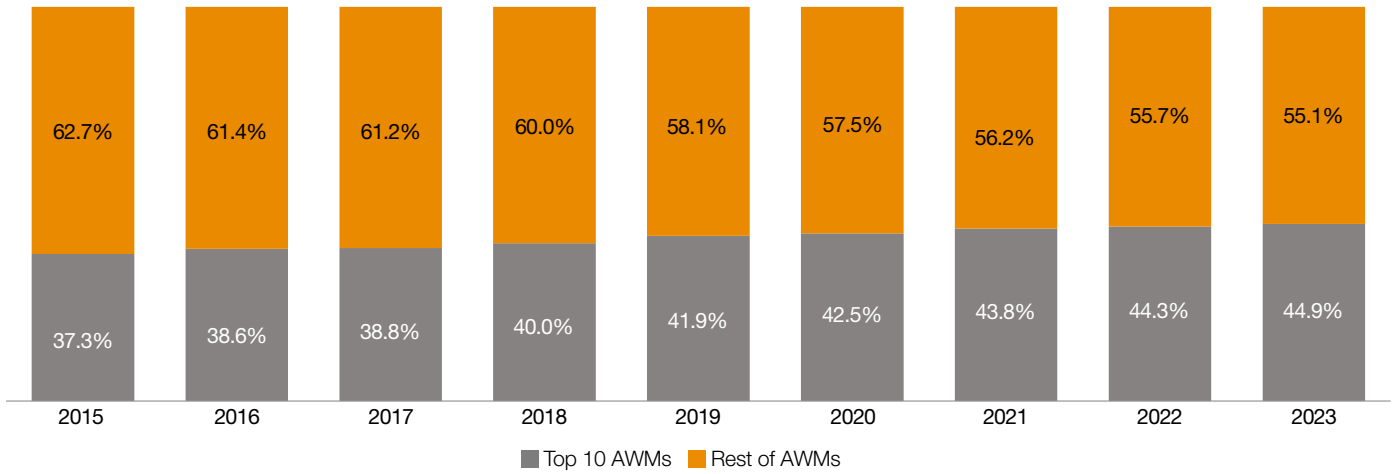


Source: PwC Global AWM & ESG Research Centre

Holistic advice and management will dominate the industry

The future of both retail and institutional wealth and asset management will be holistic and digital. Open finance will enable the creation and dominance of one-stop shops within the industry. Data sharing through open finance will allow industry players to provide clients with an overall view of their investments, even if these are with different advisors and include products from various asset managers. This will enable these one-stop shops to offer real-time, optimised asset allocation advice and the best products suited to their allocations. With real-time data sharing, the tedious process of collecting and comparing data through RFPs, currently used extensively by institutional investors to choose appropriate asset managers, will become obsolete. This trend will enhance transparency and comparability within the industry at an unprecedented scale, driving further consolidation and leading to the accelerated extinction of asset managers unable to adapt and provide a distinctive value proposition. We expect the extinction rate to double compared to previous trends. However, open finance will also pave the way for new entrants with business models suited to the new realities.

Figure 18: Asset concentration among the top 10 asset and wealth managers



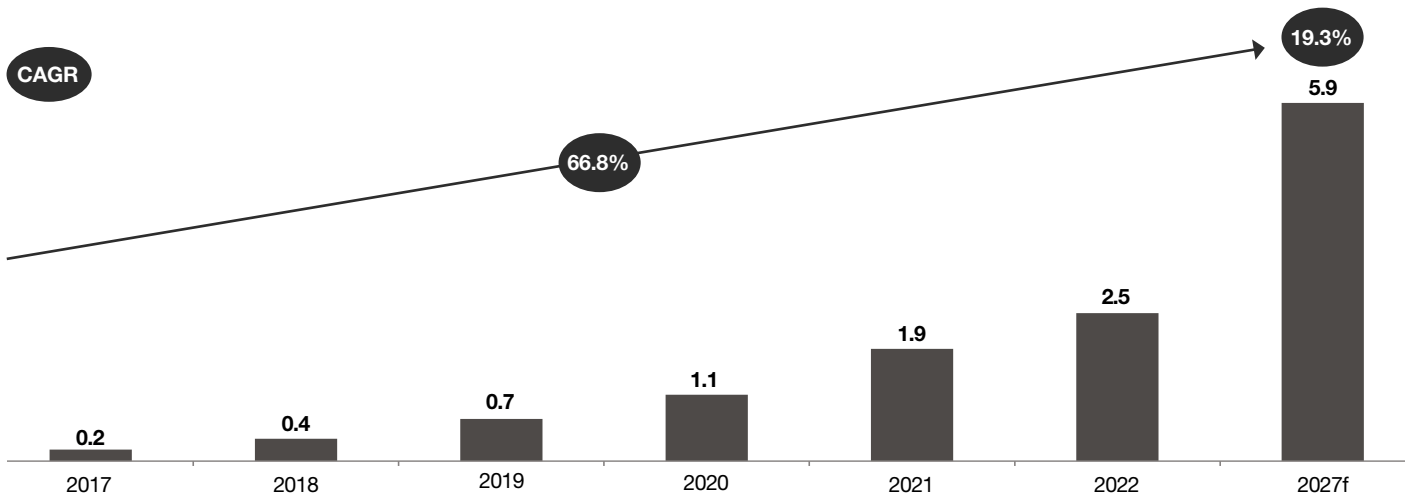
Source: PwC Global AWM & ESG Research Centre

The rise of robo-advisors

The creation of APIs for data sharing is set to improve accessibility and affordability for investors, democratising AWM services and promoting financial inclusion. While personal human financial advice will remain costly and unavailable to lower wealth segments, we expect open finance, coupled with the rise and sophistication of AI and data analytics, to lead to

automated and sophisticated investment advice and execution for these segments. Leveraging APIs and AI will also impact higher wealth segments of HNWI and UHNWI, allowing them to choose digital or human advice and interaction at their convenience, anytime, anywhere. This trend will contribute to a more rapid rise in robo-advisor AuM, as seen in Figure 19.

Figure 19: AuM of robo-advisors (USD tn)



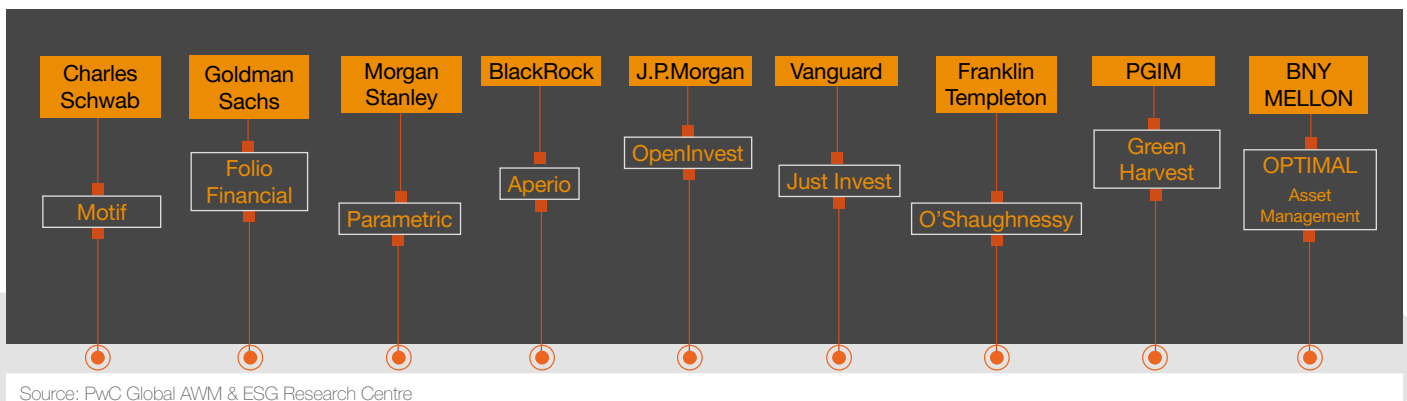
Source: PwC Global AWM & ESG Research Centre

Hyper-personalisation of products

There has been a rising demand from both institutional and retail investors for more personalised products tailored to their expectations. Failing to satisfy these needs will lead investors to seek direct investments within capital markets or through platforms such as eToro, where they can follow peers providing investment ideas aligned with their requirements. However, open finance will equip asset managers with better tools to

understand client needs and develop targeted products. We expect hyper-personalised products to take centre stage in the future. Direct indexing, which allows institutional investors and HNWLs to set up their own personal indices, is garnering increased interest, with asset managers acquiring specialised companies to provide such products and services.

Figure 20: Big players gear up to meet demand through acquisition of direct indexing firms



Source: PwC Global AWM & ESG Research Centre

Separately Managed Accounts (SMAs) have traditionally been the preserve of institutional investors and HNWLs. However, with the advent of open finance and new technologies, it is becoming increasingly feasible to offer SMAs more broadly, even to retail investors. We are poised to see an increase in both the prominence and scope of SMAs as open finance facilitates the development of SMAs for retail clients. These “funds for one” will be highly bespoke, tailored for individual investors, and will encompass a wide array of fractionalised assets.

Asset managers could offer SMAs, including thematic SMAs, Directly to Consumers (D2C) via platforms such as brokerage services. They may also seek to bypass intermediaries like brokers, providing SMAs and other asset types directly to advisor-FinTech firms. These firms, leveraging new technological capabilities, will assemble investment building blocks sourced directly from asset managers to offer to their clients.

Therefore, SMAs represent an area where the AWM industry can become more democratised, thanks to the principles of open finance.

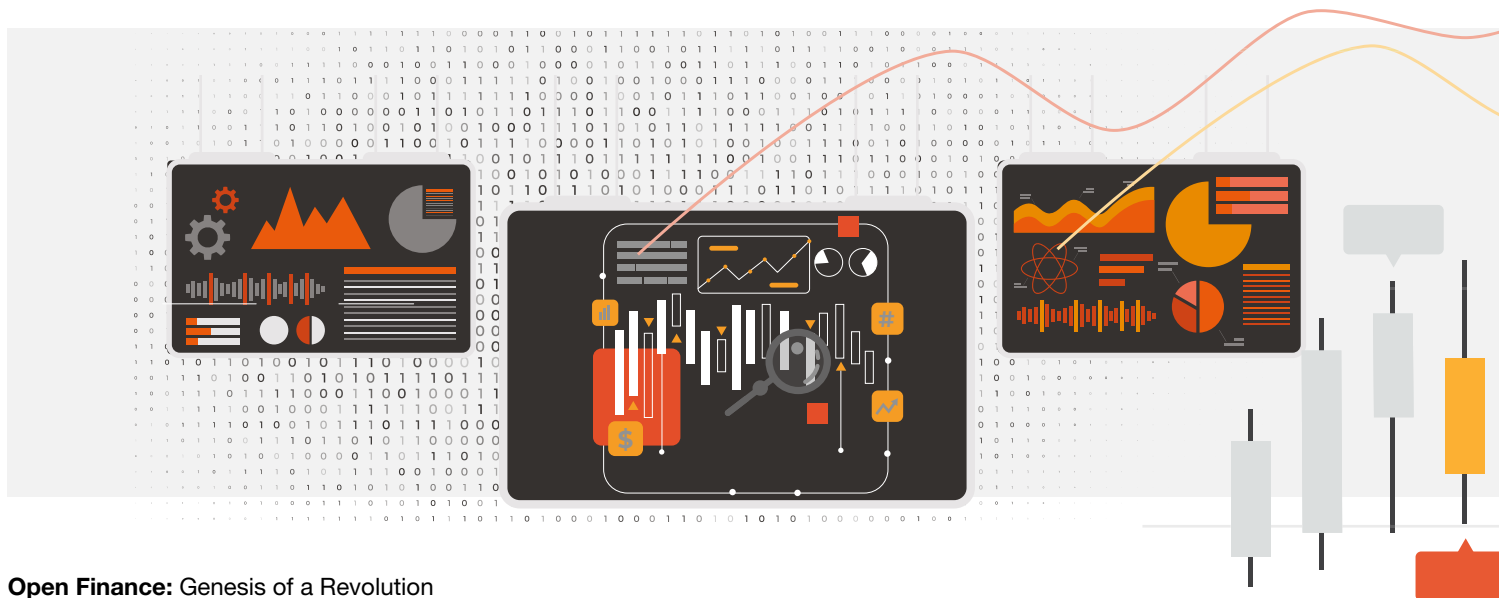
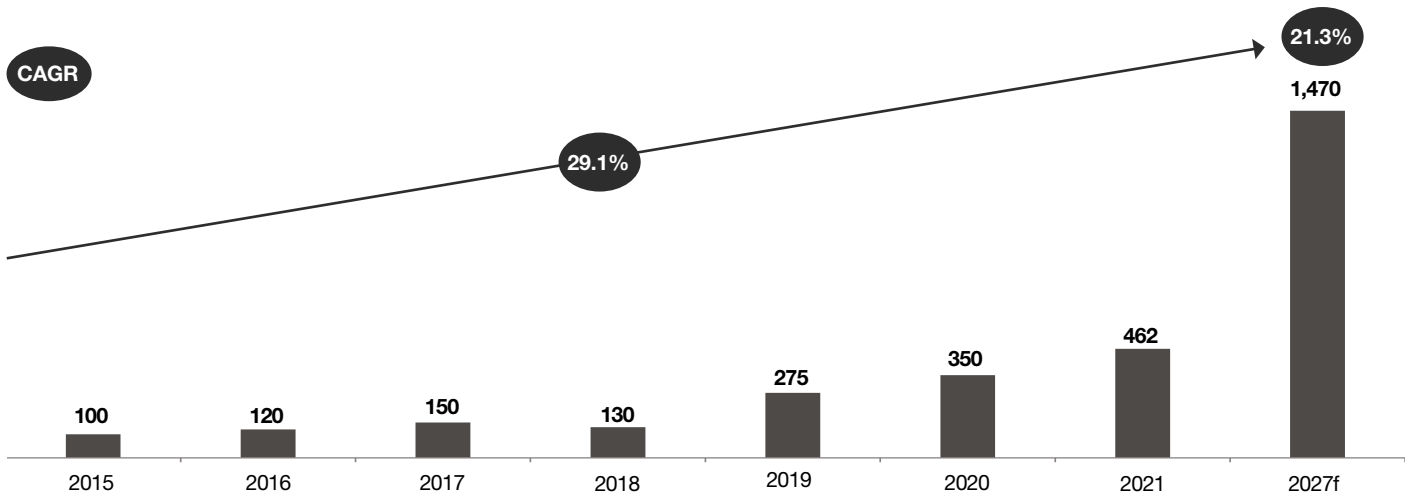


Figure 21: Forecasted direct indexing AuM (USD bn) to grow at 21.3% CAGR by 2027



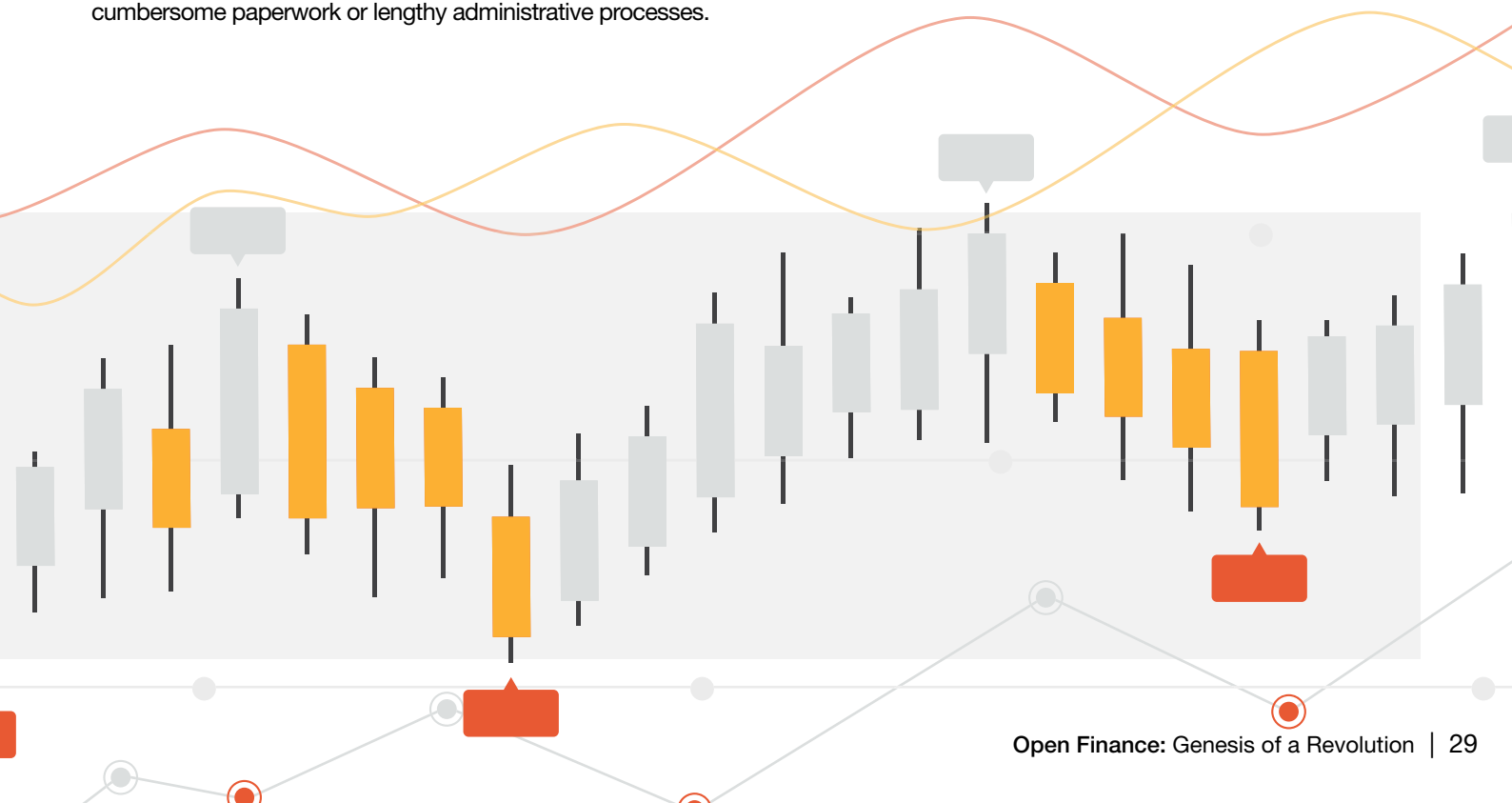
Source: PwC Global AWM & ESG Research Centre

Seamless account switching and management

As open finance evolves, the integration of APIs will revolutionise the way customers switch and manage accounts within the AWM industry. By leveraging advanced API technology, account aggregation will enable users to view and manage multiple financial accounts from different institutions through a single, unified interface. This capability will extend to brokerage, savings, and investment accounts, significantly enhancing the user experience and streamlining account management.

For example, clients will have the ability to transfer their retirement savings from one provider to another, reallocate investments across different portfolios, or consolidate multiple brokerage accounts, all without the traditional burden of cumbersome paperwork or lengthy administrative processes.

With this level of integration, customers will enjoy real-time access to account information, the ability to compare services with ease, and the flexibility to swiftly switch between accounts. This enhanced convenience, which allows for the management of all financial assets in one place, will not only elevate the customer experience but also empower clients to make more informed and agile decisions. As the AWM industry increasingly embraces open finance, the seamless switching of accounts through a single interface will emerge as a critical differentiator for firms, with customers gravitating towards platforms that offer this level of convenience and efficiency.



Proliferation of distribution

Open finance will lead to new channels of retail fund distribution for asset managers. Traditionally, asset management products have been distributed through banks, IFAs, and brokers. However, we expect the emergence and intensification of distribution channels via non-financial service players.

Within this distribution model, AWM products and services of an asset manager will be integrated into the interfaces of TPPs via APIs, allowing for a more seamless customer experience. This distribution channel will create new revenue streams for AWM firms by integrating their products into more points of

sale. Conversely, by embedding services provided by AWM companies, non-financial businesses can avoid the costs and regulatory burdens associated with offering highly regulated investment products themselves. This new distribution model will lead to significant opportunities for both AWM firms and non-financial players. We expect non-financial corporations, especially those with strong brand recognition, to integrate holistic AWM offerings, while AWM firms will provide more personalised products and services by accessing a wide range of customer data from these non-financial firms.

Figure 22: Current vs. future distribution models



Source: PwC Global AWM & ESG Research Centre

Asset and Wealth Management as a Service (AWMaaS)

With the advent of open banking, the Banking as a Service (BaaS) business model has thrived. This model uses APIs to allow start-ups or corporations to connect with existing banking infrastructure to develop their own banking products and services. We believe that with the progression towards open finance, we will also see the rise of AWMaaS. Players such as BlackRock and Amundi are already providing AWM expertise and technology within parts of the value chain (e.g., risk management) to other asset managers. However, this model will use APIs to offer complete asset management functionalities and digital infrastructure to new players who do not wish to invest in those IT capabilities and front, middle, and back-office processes. This will result in new entrants to the AWM industry, increasing competition. Whereas in the past, setting up an asset or wealth management company was a long, costly, and difficult process, AWMaaS will allow potential new players to easily and quickly set up AWM operations.

Nowhere to run, nowhere to hide

The movement towards more open financial ecosystems will result in higher product transparency and comparability, providing customers with the tools to make more informed choices. With access to comprehensive data on fees and performance across different AWM providers, customers will more readily identify better value propositions. This will make the value-for-money proposition even more critical in the industry than it already is. In recent years, fee pressure in the industry has come from regulators and, to some extent, investor demand. However, open finance is set to increase competitiveness and place further pressure on fees within the industry. We expect both active and passive TER to decline by 12% and 9%, respectively, by 2027.

Figure 23: Global TER of active investment funds (bps)

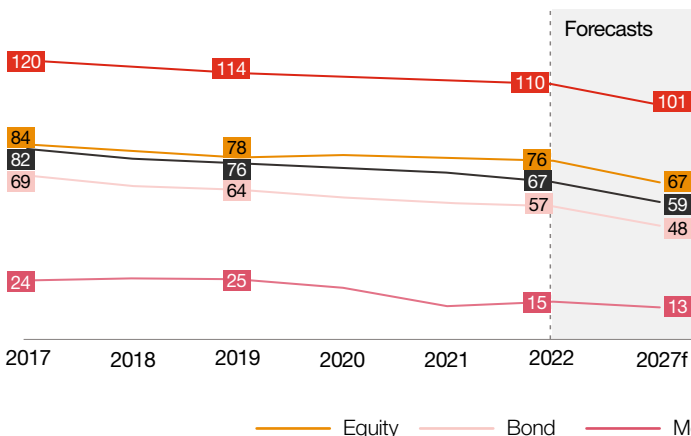
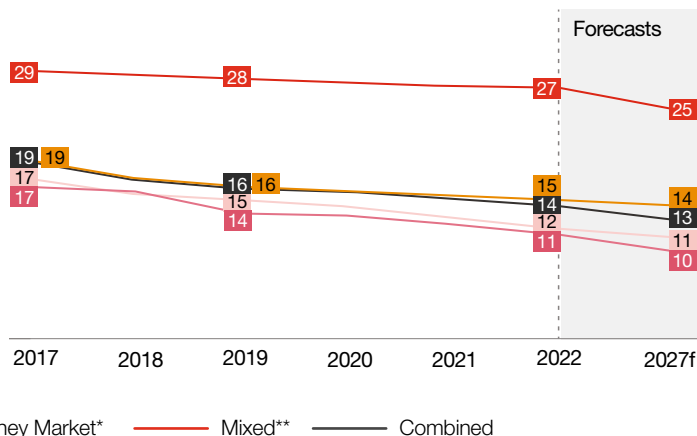


Figure 24: Global TER of passive investment funds (bps)



Note: Data includes mutual funds and ETFs domiciled in Europe, the US, (Middle East and Africa) MEA, and (Latin America) LATAM. TERs are based on their asset weight. *Data does not include passive money market funds domiciled in the US and **passive mixed funds in LATAM.

Sources: PwC Global AWM Market Research Centre, Lipper

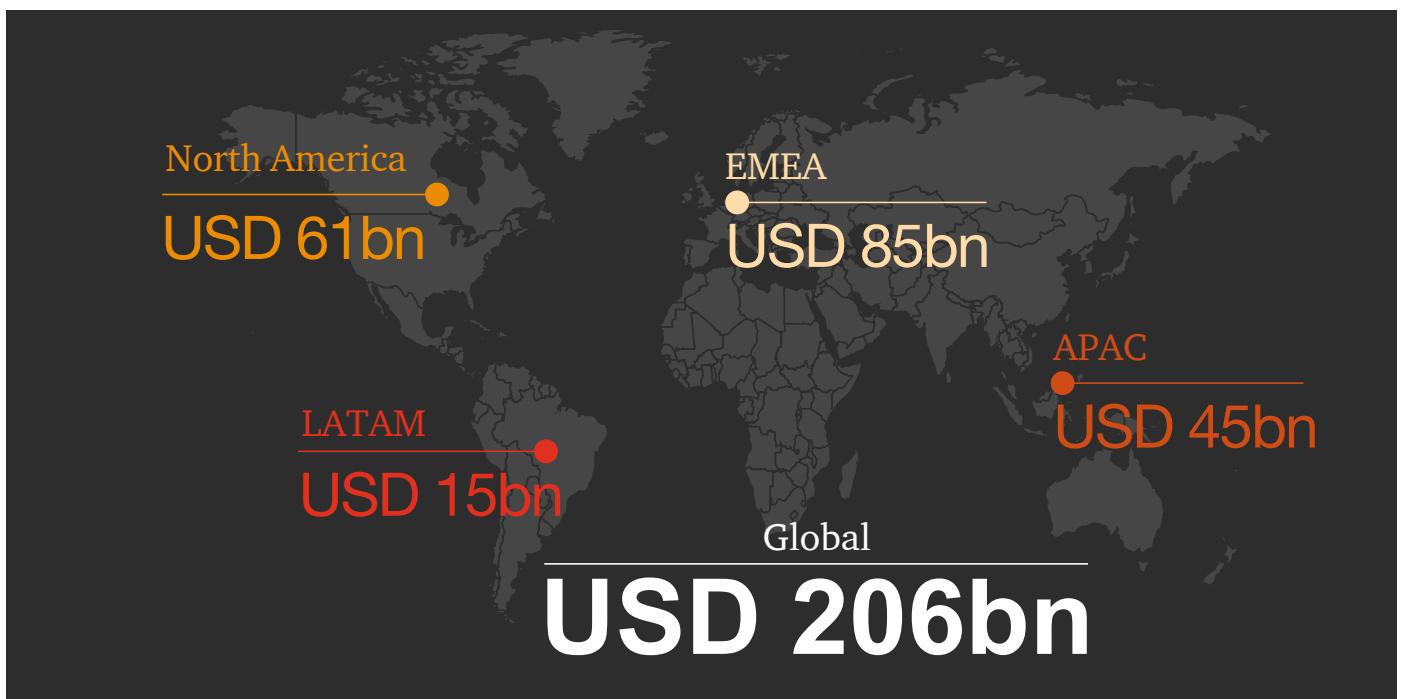
Increased efficiency

Open finance will not only increase competitiveness and innovation within the industry but also enhance the efficiency of current operating models. Data exchange between parties such as the asset manager and the custodian or client, which is currently cumbersome, time-consuming, and costly, will be streamlined through the automatic sharing of data via APIs.

Client Onboarding Made Easy

The implementation of open finance would allow AWM firms to streamline client onboarding by making Know Your Customer (KYC) and Anti-Money Laundering (AML) functions more efficient. This can reduce manual paperwork, potential errors, and delays linked to traditional data collection methods. Making customer due diligence faster would enhance the customer experience, making it more comfortable and streamlined. In the future, we expect clients to be able to be onboarded instantly, assuming they already have a relationship with another player in the financial system. Users' financial accounts could be linked instantly, meaning that new onboarding processes would only require the client to provide new information not yet disclosed to any other financial institution. The data-sharing capabilities of open finance tools would also help institutions comply with global AML regulations. Secure and real-time data exchanges between international financial institutions would ensure transaction monitoring and consistent compliance with relevant regulations. As their application becomes broader and more integral to KYC/AML execution, future models of open finance-driven KYC/AML functionalities could enable AWM institutions to develop and build custom products and in-house solutions with features such as monitoring alerts and searching or uploading evidence for an AML investigation. In this context, open finance would not merely serve as a plug-and-play tool but represent a fundamental technology on which firms could build their entire KYC/AML system.

Figure 25: Estimates for the total cost of financial crime compliance (2023)

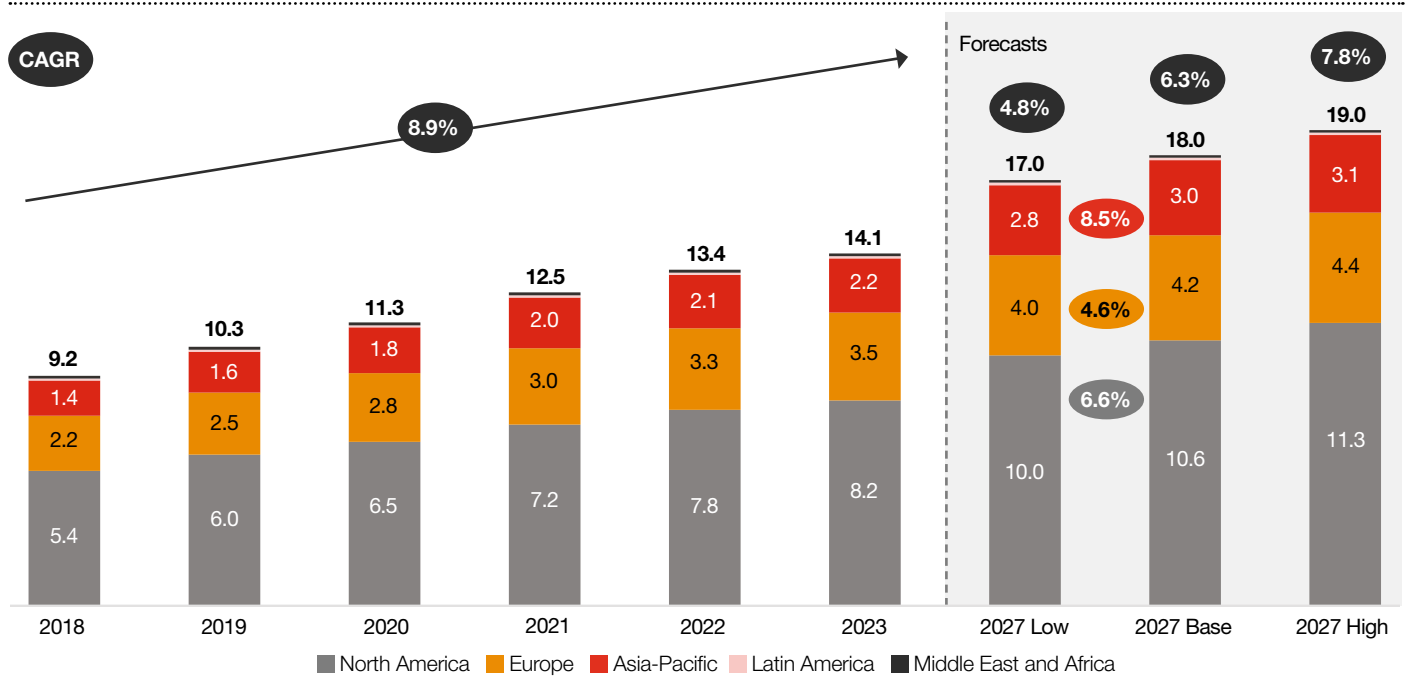


Sources: PwC Global AWM & ESG Research Centre, LexisNexis Risk Solutions

Enhancing ESG and Private Market Challenges

Both ESG and private markets are among the fastest-growing segments within the AWM industry. Private markets are set to reach USD 18tn by 2027, growing at a CAGR of 6.3%.

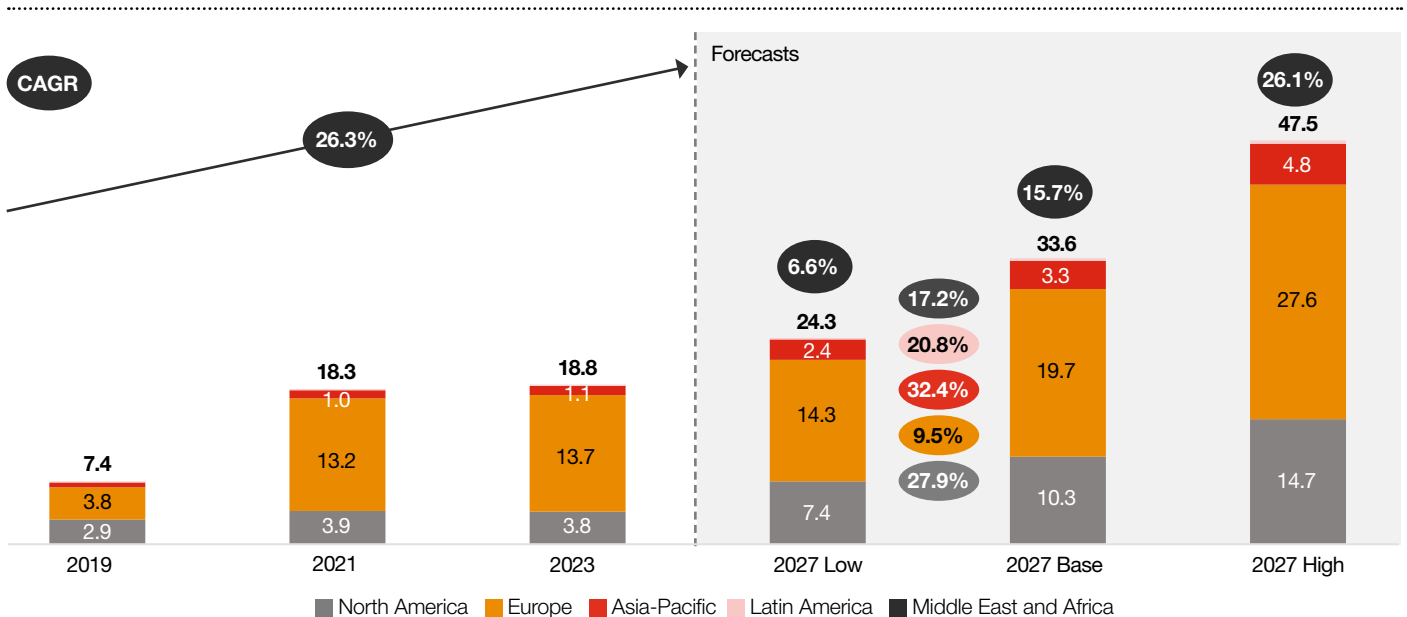
Figure 26: Global private markets AuM by region (USD tn)



Source: PwC Global AWM & ESG Research Centre

ESG, which has seen a tremendous growth since the beginning of this decade, is set to grow further at a CAGR of 15.7% to reach USD 33.6tn by 2027.

Figure 27: Global ESG AuM by region (USD tn)



Source: PwC Global AWM & ESG Research Centre

However, both areas grapple with the key challenge of data collection and quality from portfolio companies. Open finance will ease these challenges by providing real-time, automated data flow, which is less prone to flaws than when data exchanges involve human interfaces. Open finance will allow General Partners (GPs) to access a broader range of financial data, including information about private companies, investment opportunities, and historical performance, aiding them in conducting due diligence and making more accurate decisions about potential investments. APIs would also enable direct, real-time data flow to GPs' systems from portfolio companies, allowing them to make faster decisions and improve efficiency and performance. A significant advantage of open finance is the enhanced availability of data. By utilising open APIs to access third-party ESG datasets, financial institutions can better adhere to new regulations.

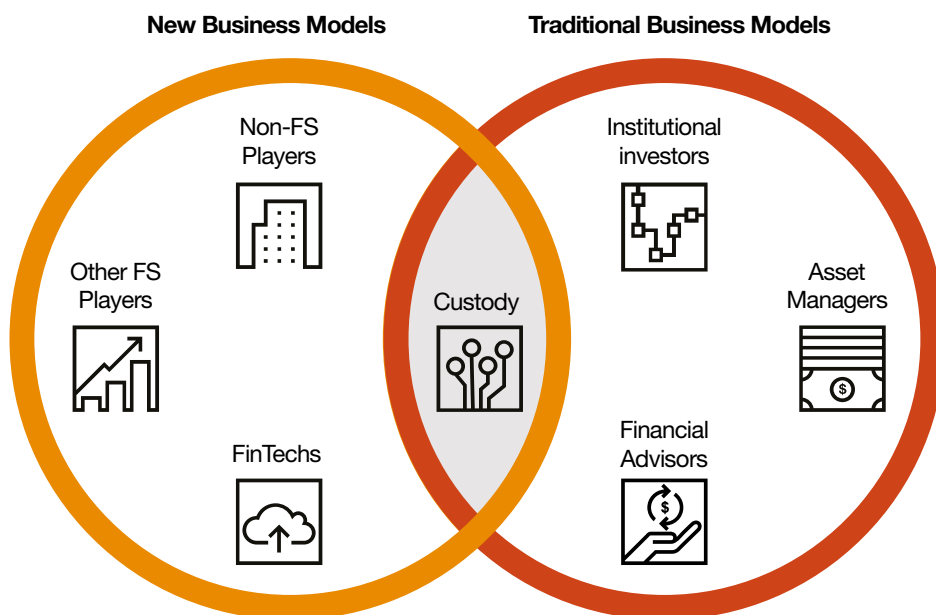
This improved data access allows them to gain a clearer understanding of their risks and standings, promoting an environment conducive for sustainable growth. Arguably, the majority of a company's ESG footprint lies within its supply chains. Having access to data across the value chain for companies and asset managers investing in those companies is crucial, as any changes within the value chain can significantly impact the ESG risk and rating of the company and investment. Ensuring traceability throughout these supply chains will help assess the carbon footprints, environmental impacts, and social impacts of products, services, assets, securities, and entire portfolios. Open finance will facilitate the accurate and faster delivery of this data, enhancing one of the key challenges faced by the industry and supporting the drive towards sustainability.

Putting it all together

Open finance will be a transformational innovation that can be leveraged to tackle the collaboration challenges that exist within the AWM industry. Indeed, open finance could foster an interconnected ecosystem where custodians, asset managers, FinTech companies, and other TPPs seamlessly share data and services. It would achieve this through the implementation of openly available APIs. This will allow asset managers and financial advisors to integrate position and transaction data into their portfolio management systems (Figure 27).

FinTechs and other TPPs would securely connect to custodians' APIs with ease, integrating data directly into their own software. This improved data flow would greatly enhance collaboration among all parties.

Figure 28: Open finance APIs provides a scalable integration of traditional and new business models



Source: PwC Global AWM & ESG Research Centre

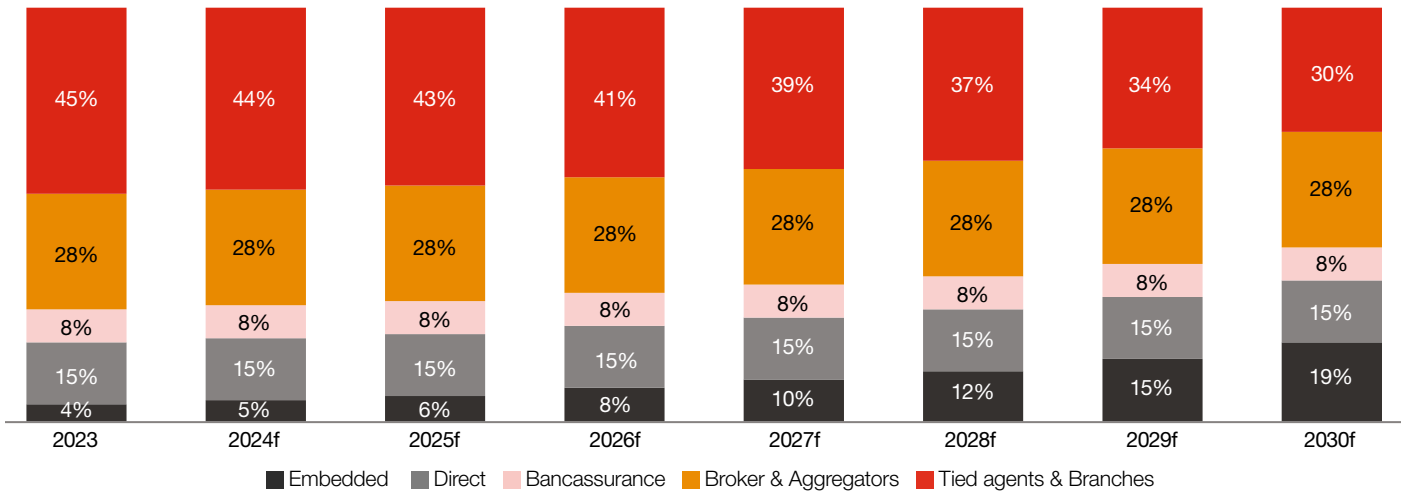
Open finance and the future of the insurance industry

Some traditional players in the insurance sector are at a critical juncture with the advent of open finance. The industry currently grapples with significant protection gaps, estimated to be around USD 350bn in Europe alone, representing approximately 25% more than the total market size. In simpler terms, there is a substantial disparity between what consumers require and what the insurance sector is able to provide.

This points to an underlying efficiency issue within the insurance industry. While it is already challenging to meet all consumer needs profitably, this coverage gap is widening, exacerbated by large-scale global trends such as climate change and ageing populations. The growing difficulty in insuring pensions for increasingly long-lived populations and providing coverage for properties against the rising frequency and severity of natural catastrophes is putting additional strain on the industry.

Open finance has the potential to help close these coverage gaps. For instance, TPPs offering embedded insurance often maintain closer relationships with consumers than many traditional insurers, making them more responsive to customer needs. The insurance sector can, therefore, harness these TPPs to enhance customer service. Although open insurance is expanding rapidly, it still constitutes a small portion of the overall industry. In 2024, embedded finance accounted for just 5% of Property and Casualty (P&C) insurance distribution channels. However, this figure is projected to rise to 19% by 2030, largely at the expense of traditional distribution methods such as agents and branches.

Figure 29: Property & Casualty insurance (P&C) distribution channels in the EU, with forecasts (%)



Sources: PwC Global AWM & ESG Research Centre; Munich RE

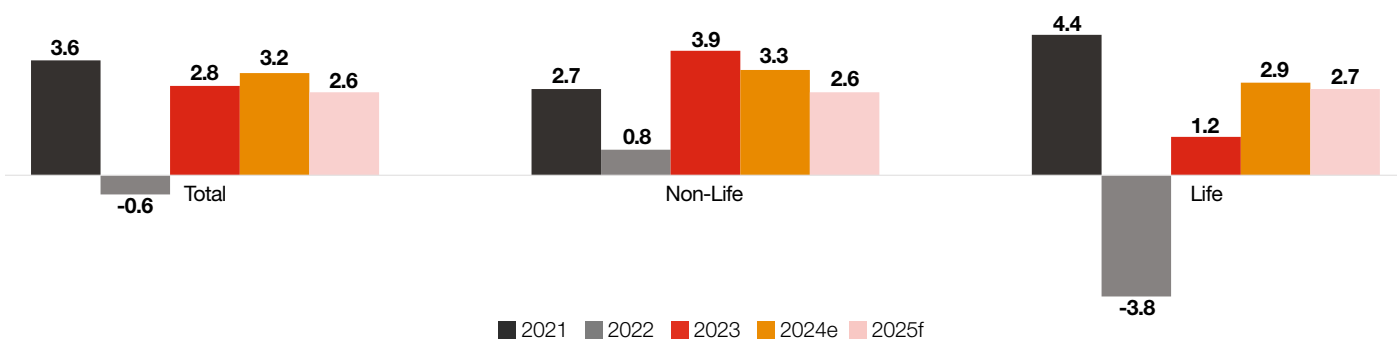
Open finance will unlock selected insurance and customer data that was previously siloed within individual organisations, allowing third parties to utilise this data to better serve customers. However, consumer data related to life insurance, insurance-based investment products, and sickness and health insurance are excluded under FiDA. Nevertheless, when the vast potential of open finance is combined with the enhanced analytical capabilities brought by AI, the scope for innovation within the insurance sector will expand significantly beyond current levels. Traditional players that fail to adapt to this new model may find their coverage gaps widening further and their market share diminishing, as newer entrants offer more customer-centric, data-driven solutions.

The insurance sector has shown robust performance in recent years, with the industry expected to grow by 5.5% annually

over the next decade. Global life premiums are projected to grow by 2.9% in real terms in 2024 and 2.7% in 2025. In the non-life sector, increasing rates, especially in personal lines, are expected to boost premium growth by 3.3% in 2024, although this is anticipated to moderate to 3% in 2025 as insurance prices stabilise and claims inflation decreases. In a mature and competitive industry, differentiation and customer-centricity will be key. Open finance will create opportunities for players to successfully navigate the changing tides in the coming years.

Open insurance aims to transform the sector by fostering transparency, boosting efficiency, and improving customer experiences through leveraging data flows. The adoption and application of open finance within the insurance industry are already underway, with major insurers exploring how to utilise large data flows being transferred across digital ecosystems.

Figure 30: Global real premium growth



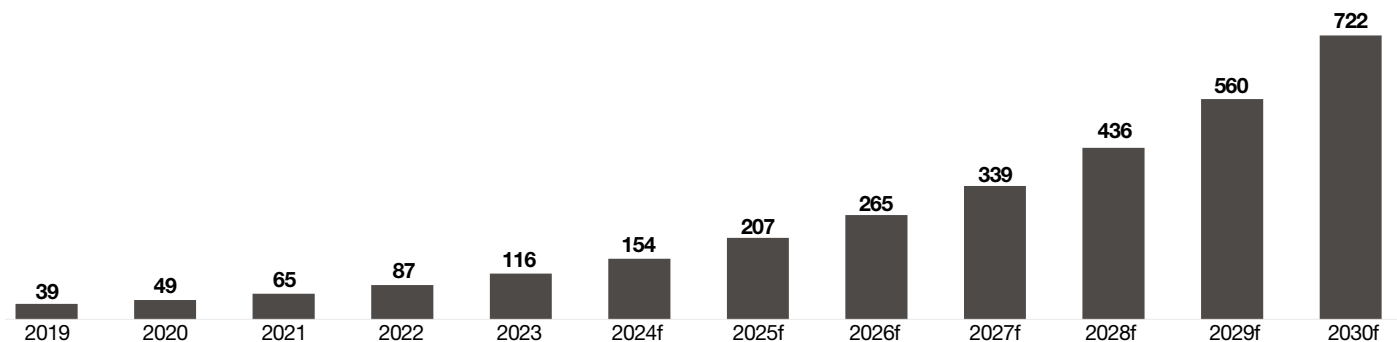
Sources: PwC Global AWM & ESG Research Centre; Swiss Re Institute, sigma 3/2024

Distribution beyond traditional markets

The concept of embedded insurance is well-established. Insurers have been selling policies through affinity relationships and business partnerships, such as offering insurance alongside other products or services during transactions. This segment is growing rapidly, with the embedded insurance market,

particularly in the P&C segment, growing by a 31% CAGR from USD 39bn in 2019 to USD 116bn in 2023. This trajectory is expected to continue, with the market projected to grow by a CAGR of almost 30% to reach USD 722bn by 2030.

Figure 31: Global embedded insurance market size in the P&C sector, with forecast (USD bn)



Sources: PwC Global AWM and ESG Research Centre; Simon Torrance

Embedded insurance operates through a seamless integration model, allowing insurers to offer products as an additional service during a purchase process. However, the current model faces challenges such as data fragmentation across different systems, leading to siloed and inconsistent customer data. The application of APIs will enable real-time data sharing and integration, allowing various industries to connect to providers of insurance data in real-time.

Also, as the demand for embedded insurance grows, scalability becomes a concern. The use of APIs will provide the flexibility and scalability needed to handle increased transaction volumes and penetrate new markets. Further, with embedded insurance models' seamless integration into various platforms allowing for easier and faster scaling, they would be able to leverage open insurance APIs to provide automated coverage as an add-on to product sales that are tailored to customers' specific needs. This will lead to the introduction of new services within the ecosystem that combine insurance products with value-added offerings from non-insurance business partners.

Open insurance will enable insurers to expand their footprint beyond traditional markets by partnering with FinTechs, insurtechs and other innovative players. These partnerships will allow insurers to easily integrate their products with the non-insurance offerings of their business partners, providing a broader and seamless customer experience for their clients.

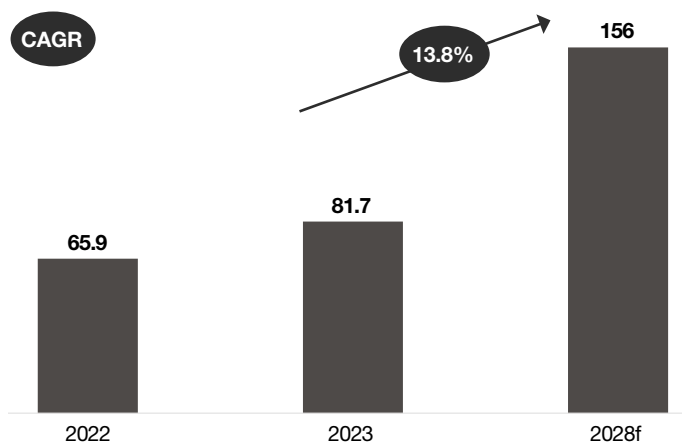
As insurers reach and attract new segments of the market through open insurance, this will create a "network effect" through which they will increasingly attract more potential business partners. In this context, early adopters of open insurance for this purpose will benefit significantly from a first movers' advantage.

Platformisation

Similar to embedded insurance, insurance platforms have been increasingly used within the industry. As of the end of 2023, the global insurance platform market was worth USD 81.7bn, and it is expected to grow by a CAGR of 13.8% to reach USD 156.0bn by 2028. This growth is driven by increasing customer expectations, demand for further digitalised services, and more personalised experiences.

Open insurance APIs stand to revolutionise the way insurers operate and engage with customers via these platforms. The data-sharing capabilities of open finance will allow insurers access to real-time data, enhancing underwriting accuracy, risk mitigation, and the development of innovative products. Current insurance platforms that support clients in comparing policies from numerous providers and choosing the right one are expected to extend their operations to offer more holistic advice across other financial products such as banking and asset management. Open APIs will enhance their operations by providing real-time access to client data, eliminating the need for manual input and resulting in a more seamless customer experience. Open-insurance-backed platforms will enable insurers to access data that facilitates tailored recommendations and proactive risk management solutions, potentially leading to improved customer satisfaction.

Figure 32: Insurance platforms market size with forecast (USD bn)



Sources: PwC Global AWM & ESG Research Centre; Markets and Market

Insurance-as-a-service

Launching insurance initiatives often involves significant costs and time, deterring many startups. Insurance-as-a-Service (IaaS) simplifies this process, allowing insurance companies and insurtechs to offer businesses the necessary tools to enter the market swiftly and economically. IaaS grants access to advanced technology and resources, facilitating a smoother and more efficient launch.

Businesses can now easily integrate with an IaaS provider through insurance APIs, made possible by the open finance ecosystem, allowing them to quickly launch and offer new or additional insurance products directly through their own website and brand. APIs also simplify the claims process by enabling quicker access to relevant financial data, reducing the need for extensive documentation and manual verification. For instance, in the event of a car accident, insurers can instantly verify the policyholder's financial and payment information, assess the claim against the policy in real-time, and initiate the payout process almost immediately, improving customer satisfaction and operational efficiency.

On demand insurance will thrive

Open insurance will support the development of on-demand insurance products that can be renewed or cancelled as needed. This model is particularly appealing for the gig economy, short-term, and high-value activities. This adaptability caters to the diverse needs of modern consumers and helps insurers provide targeted solutions in an increasingly agile market. Real-time data access will also enable continuous updating of insurance policies, ensuring they remain aligned with the customer's current situation and needs.



Enhancing operational efficiency across the insurance value chain

Utilising APIs and real-time data sharing will enhance various processes across the insurance value chain. Access to a wider range of data sources will facilitate quicker, more informed decision-making, leading to faster policy issuance and claims processing, reduced development and maintenance costs, minimised data duplication, and the implementation of automated straight-through processing, boosting transaction speeds and overall efficiency. Open insurance will foster a collaborative environment, allowing insurers to draw from their network of business partners' skills and resources, eliminating bottlenecks caused by legacy systems.

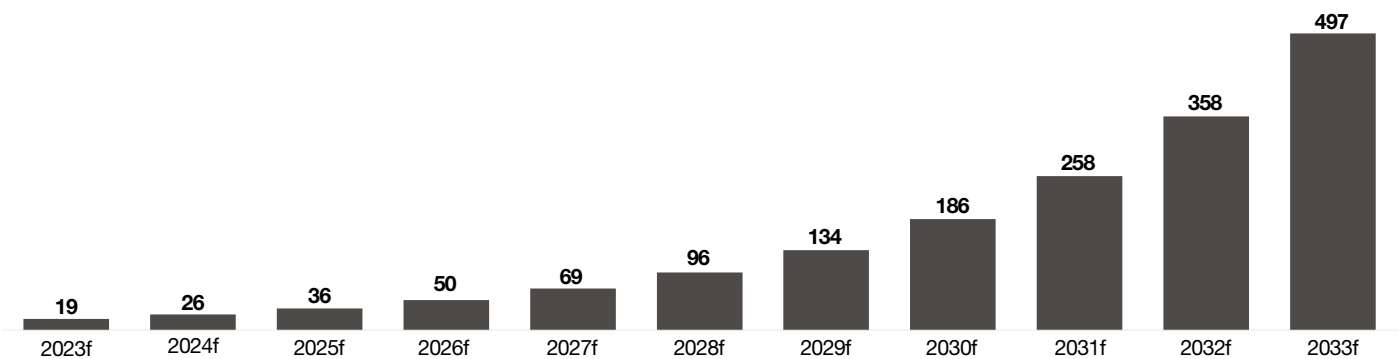
Ultimately, these advantages are likely to result in considerable cost savings in insurers' operations. Additionally, these operational efficiencies are expected to cascade throughout the insurance value chain, benefiting not only insurers but also their business partners and service providers.

Insurtechs to expand API adoption and drive open insurance innovation

The global insurtech market is projected to grow at a CAGR of 38.8% from USD 19 bn in 2023 to USD 497 bn by 2033.¹⁷

Insurtechs will play a pivotal role in driving the adoption and integration of APIs, fostering additional partnerships, creating innovative products, and developing new sales and distribution channels. By integrating into every aspect of the value chain, insurtechs have the potential to resolve numerous challenges faced by insurers, leading to higher adoption rates. The flexibility of standalone tech solutions will enable faster innovation and reduced time to market, enhancing the efficiency and responsiveness of the insurance industry. With the widespread adoption of APIs in banking, the insurance sector is likely to follow suit. Projections indicate that the number of open insurance users globally could reach 75 million by the end of 2024, with Europe potentially accounting for 50% of these users.

Figure 33: Insurtech market size 2023 to 2033f (USD bn)



Sources: PwC Global AWM & ESG Research Centre; Precedence Research

17. Precedence Research, *Insurtech Market Size, Share, and Trends 2024 to 2033*, June 2024





3

Challenges in open finance

Despite the widespread sentiment that open finance heralds a new era of financial innovation and customer empowerment, this innovation does not come without its challenges. The shift towards open finance will compel financial institutions, market participants, and regulatory bodies to navigate a host of challenges to unlock its full potential.

Risk of misuse of personal data

In an open finance environment, the information-sharing field is levelled, allowing personal and financial data to be shared more widely among different entities. This increased data mobility heightens concerns about the security of customer data. However, frameworks like FiDA specifically exclude certain types of sensitive data related to creditworthiness assessments of consumers, sickness and health insurance and life insurance products. While this reduces concerns around algorithmic discrimination or exploitation of behavioural biases in these areas, there are still security concerns related to other shared data such as personal identifiers, which must be properly managed to protect consumers.

The misuse of data can have serious consequences. Financial fraud and identity theft are some of the most immediate and damaging effects. Beyond that, breaches of privacy can lead to the erosion of consumer trust, which is crucial for financial institutions. To mitigate these risks, financial institutions must adopt robust data governance frameworks that ensure data is used ethically and securely.

Lack of standardisation

The long-term success of open finance will hinge on achieving a high degree of interoperability, enabling seamless data sharing among service providers across various sectors and countries. However, the absence of common industry or government-led standards creates significant operational challenges. Diverse data formats and APIs complicate the integration of financial services across various platforms, leading to inefficiencies, increased costs, and delays in service delivery.

Establishing industry-wide standards is critical to overcoming these barriers. In response, we have seen the emergence of data aggregators whose role will be instrumental in the operationalisation of open finance globally. Standardisation efforts should therefore focus on creating interoperable systems that facilitate smooth data exchange while maintaining high security levels.



Greater transparency and control

Consumers demand greater transparency and control over their financial data in an open finance ecosystem. They want to know how their data is being used, who has access to it, and for what purposes. Meeting these demands requires financial institutions to implement and adhere to transparent data usage policies and invest significantly in technologies that provide consumers with tools to manage their data preferences. Moreover, this increased transparency can create heightened pressure across the financial services industry to enhance value and competitiveness, as customers are now better positioned to compare services and switch providers based on their needs and preferences.

To address these pressures and build strong customer relationships, financial institutions should educate their consumers about their rights and the measures in place to protect their data. By doing so, they can foster trust and confidence in the open finance system, ensuring that customers feel secure and well-informed in their interactions with financial services.

Competition and disruptive market structures

Open finance promotes increased competition by lowering barriers to entry for new players, particularly FinTechs. While this can drive innovation and improve services for consumers, it also disrupts traditional market structures. Incumbent financial institutions will face pressure to adapt their business models and invest in new technologies to remain competitive. This influx of diverse offerings and varied service standards also creates competition risks if open finance leads to unequal access to data and sharing between financial institutions and TPPs or if the costs of setting up and running APIs and open finance services are unfairly shared.

This competitive landscape therefore necessitates a strategic shift towards collaboration rather than confrontation. We expect incumbent banks to partner with FinTechs to leverage their technological expertise, while FinTechs could benefit from the established customer base and regulatory knowledge of incumbents. Such partnerships can lead to the development of innovative financial products and services that enhance overall customer experiences.

High implementation costs

Implementing open finance initiatives involves significant costs for financial institutions. These costs include investing in new technologies, upgrading legacy systems, and training staff. Ensuring regulatory compliance also constitutes a significant cost burden requiring investment in legal and compliance teams who must maintain meticulous attention to detail and continuously monitor data sharing and financial transactions to meet established regulatory standards. Furthermore, the ongoing need for innovation to stay competitive adds to the financial burden.

To manage these costs, financial institutions must adopt a strategic approach that prioritises investments with the highest potential returns. We expect financial institutions to explore cost-sharing arrangements, such as joint ventures or consortiums, to spread the financial burden across multiple entities. A focus on scalable solutions can also help mitigate the impact of increased costs.

Customer selection

Open finance necessitates careful customer selection processes to ensure that services are tailored to the right individuals. Financial institutions must therefore balance inclusivity with the need to mitigate risks associated with offering services to high-risk customers. This challenge is particularly pronounced in lending and insurance, where accurate risk assessment is crucial.

Advanced data analytics and machine learning algorithms can enhance customer selection processes by providing deeper insights into customer behaviour and risk profiles. These technologies enable institutions to make more informed decisions, offering personalised services while managing risk effectively. Moreover, transparent criteria and clear communication with customers can help manage expectations and foster trust.

The journey towards a fully realised open finance ecosystem has its challenges. However, by addressing these issues proactively, financial institutions can gain significant benefits for themselves and their customers. Robust data governance, industry-wide standardisation, enhanced transparency, strategic collaboration, prudent cost management, fortified data security, and advanced customer selection processes are essential components of a successful open finance strategy.

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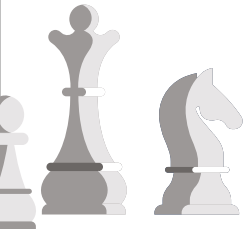
Embracing open finance: Strategies for success

As open finance becomes entrenched, it will transform the financial landscape beyond recognition. We are at the genesis of a revolution that will compel industry players to reshape their business models, leading to the decline of some incumbents and the emergence of new giants. The transition to open finance is set to unlock significant opportunities for innovation, enhanced customer experiences, and competitive advantage.

To fully harness the potential of open finance, financial institutions must adopt a strategic approach, addressing several critical areas. Below are key considerations for navigating this evolving landscape:

1. Strike the right strategic balance

Financial institutions have multiple strategic pathways available when implementing open finance. These include consolidating services or data on B2C or B2B platforms—whether they are participants or creators of these platforms—or offering their services through TPPs via embedded finance or Finance-as-a-Service (FaaS). While these models can be pursued concurrently to diversify operations, institutions must carefully evaluate when and how to consolidate services or integrate with TPPs. The optimal strategy will often be tailored to the institution's specific needs and market context. Effective navigation of these options is crucial for achieving success in open finance.



2. Adopt a robust data governance framework

If personal data is not secure and is misused, it not only compromises the integrity of the information but also misrepresents the consumer and undermines essential principles of consumer protection. To address this issue, financial institutions and TPPs must prioritise both data security and ethical data use within the open finance landscape. Implementing rigorous access controls, continuous monitoring for suspicious activities, and comprehensive encryption protocols are crucial steps in safeguarding sensitive information. We emphasise the burden of care that data receivers must uphold in the handling and usage of data. Although regulatory compliance is essential in mitigating such risks, financial institutions must also go beyond mere compliance to build comprehensive data protection strategies. These strategies must address the risks of inappropriate data handling or misuse and foster a culture of data privacy among employees.

3. Anticipate intra-industry competition

Open finance not only lowers barriers for new entrants but also enables established financial services companies to expand into service areas that were previously beyond their reach. As customer data becomes more accessible, banks, payment companies, AWM firms, and insurers can more easily offer specialised services within their industry. This development is likely to lead to the emergence of financial institutions capable of providing comprehensive service offerings within banking, payments, AWM, or insurance. Consequently, specialised providers may face challenges as they compete with full-service competitors.

4. Leverage cross-border API integration

Although the financial sector is gradually embracing open finance, many open data solutions remain confined to individual national markets. In contrast, other open banking solutions, such as account aggregation and embedded payments, are more advanced and widespread. The cross-border dimension of open finance presents an exciting opportunity for financial institutions to innovate and differentiate themselves. Future open finance ecosystems will need to accommodate international and cross-currency transactions and operations, requiring platforms that can navigate diverse regulatory environments.

5. Anchor your customer base and pursue new prospects

As new offers emerge, promising improved service and greater convenience, both consumers and businesses are likely to gravitate towards these innovations. This shift presents a real risk of marginalisation for firms, potentially relegating them to mere product providers while large data aggregators could usurp the established customer relationships. To counteract this threat, institutions must strategically leverage the opportunities created by new regulations and strengthen their connections with customers. By actively engaging with customers and offering personalised, high-value solutions, firms can ensure they remain a pivotal part of their customers' financial lives. This approach will help in retaining existing clients and also position incumbents as leaders in delivering tailored, high-value services.

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