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Embracing technology to shape the future of digital banking



Finextra

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01

Introduction

There has been a tidal wave of transformation- the pace of it is accelerating, technology is proliferating, customer behaviour and expectation is advancing all the time; the banking industry is in flux and it is an exciting time but also a challenging one. It is really the time.

To successfully navigate this evolving landscape, financial institutions must stay attuned to the changing needs and preferences of customers and embrace emerging technologies to adapt and rethink their existing business models.

There are a few business models that have been developed and discussed over the years. Open banking has ushered in new platforms as well, acting as aggregators of banking services and connecting different players in the ecosystem. Given the trajectory in the last couple of years, with digitalisation efforts in banking services having been accelerated by the pandemic, there will be yet more banking models to form. The digital experience can be much developed; new platforms, marketplaces and ecosystems will undoubtedly be created, and payment methods, which ultimately underpin financial services and commerce, are likely to undergo further evolution too. We will explore the current landscape of models and what factors may influence further evolution.



02

The network effect: piecing together new models

APIs have been instrumental in the establishment of new banking models, driven in part by the introduction of PSD2 and mandated APIs for banks to share data. They have provided the foundations for open banking services, new approaches and, hence new operating models for banks, such as Banking-as-a-Service, Banking-as-a-Marketplace and other incarnations of platform banking, which all make use of APIs to create a broader offering or network for the customer.

It is helpful when exploring new models that have emerged to think of the use cases and the key elements differentiating banks and financial services organisations in the ecosystem (i.e., the banking licence and customer base Vs. the agility of a newly created fintech). Because the model definitions themselves are often interchanged. They have, however, created new lines of revenue for banks through partnerships with fintechs and other players by harnessing technology, and are defined through ownership of the customer relationship.

Competitive 'as-a-service' models bring the customer relationship into focus

In brief, through APIs bank services can be rented to fintechs or non-financial providers for their customers, in which case they retain the customer relationship. Or banks can lease services from fintechs and non-financial providers to offer to their own customer base.

Neobanks without a licence can avail of licensed banks' compliance framework and resilience by 'renting' these services. This is known as Banking-as-a-Service (BaaS) and sometimes also known as white labelling, an example being supermarket banking products in the UK- Marks and Spencers (white labelled HSBC products). German bank Fidor is another example, providing full banking services to Solaris.

Treezor via Société Générale was one of the first to embrace this concept in Europe, taking advantage of incoming PSD2 API mandates. The firm made use of Société Générale payment service to deliver a "One Stop Shop" to its client base of fintechs and subsequently also other banks.



The non-bank, which can also be a non-financial organisation, retains the customer relationship. This can work in the other direction as well, however, where a licensed bank can grow their service offering by providing products from other banks or fintech providers, with or without a licence (although usually without). For example licensed banks pulling in and offering standalone currency exchange services. Licensed bank Starling, for example, uses Wise.

Established banks may also avail of a fintech provider's service simply in order to launch a product quickly. In all these cases, the organisation availing of the service retains the customer relationship.

Platform banking and marketplaces are shaping new experiences

In some cases banks build a platform and through APIs, fintechs or other non-financial organisations connect into the bank infrastructure in order to develop banking products and services on the infrastructure. Building the platform is an expensive endeavour, which is borne by the bank and, hence, only appeals to such banks that are agile or 'digital' enough to make it worth their while. This is often known as Banking-as-a-Platform, and banks again become able to increase their offering quickly, being the clients of the developers, who in turn get to market their services to a large base while the bank retains its customer relationship.

Société Générale also ventured into a platform model of sorts, by acquiring neobank Shine, which catered to small businesses. Venturing into different models can soon beget more models and how a marketplace environment could easily be forged off the back of this.

Banking-as-a-Marketplace is an established recent new model and refers to the extension of banking services into other sectors and retail products and services. Here, the established bank invariably retains the relationship or the brand, and again, via APIs, can pull in external services that are related to a particular theme or segment, the first product of which usually the bank provides, thus creating a marketplace. For example, this could be drawing in insurance services from another provider in a marketplace for homebuyers, who have taken a home loan from the established bank.

Newer interpretations of these models will emerge as the industry evolves, and several different factors will play into this. The ever-expanding paradigm of data will drive insights and these will inform the increasingly digital-first real time services that changing society demands and expects; rapidly advancing technology will facilitate new infrastructures and enable new platforms with increased collaboration yet failproof resilience. And therein lies a further factor, that of regulatory adaptation, particularly around data ownership, privacy laws and protection. And of course this will always be the case- regulators don't develop technology, they create an ethical framework, their work will always be reactive to technological advances.



03

Shaping new experiences: key gamechangers and technology evolution

Embedded payments to enhance the customer experience

There are certain developments that have truly pervaded and been pivotal to the evolution of banking services and embedded payments are one such advancement. Embedded Payments are a fundamental part of changes in models and consumer behaviour. There has been huge momentum in the growth of embedded payments across Europe and the world. In an IDC research piece (InfoBrief), January 2022, it was predicted that 74% of consumer payments would be made through non-traditional financial institutions by 2030. This refers to embedded payments. These have become so entrenched in consumer habits (the very epitome of what innovation seeks to achieve- a seamless customer outcome), that brands everywhere are ploughing investment into incorporating payment mechanisms. By way of example, Apple Pay is embedded into myriad brands and has increased its footprint and popularity globally since it was launched. Many ecommerce retailers have reported increased conversion rates of up to 20% that they attribute to Apple Pay and according to a statista survey, Apple Pay users increased in four years from 67 million in 2016 to 507 million in 2020, an increase of 650%.

This trajectory shows consumers are embracing new banking and payments channels and the convenience and simplicity of superapps, where their lifestyle and social channels can be combined with their banking needs. Banks can take advantage of the opportunities here, leading to proliferated marketplaces and connected services across sectors; indeed the rise of the so-called superapp has demonstrated this kind of consolidation of service based around embedded payments. Most remarkably in Asia Pacific with the likes of WeChat, in which consumers' lives in large part can be administered through these apps, from banking to social life, work, leisure and everything in between – the convenience of so much accessibility in one mobile app has been met with pervasive popularity. Granted, China is a singular market and circumstances in many ways are vastly different in Europe. Yet the ubiquity of the mobile device and the fact that there is undeniable increased convergence of life's activity, consumerism, and communication on the phone points to the potential success of major superapps here in Europe. Banks could create superapps, building on current as-a-service models, white labelling their products. In the short term, such capabilities and opportunities are there for the taking.



Take Revolut. The financial app has gradually diversified its offering, recently launching acquiring solutions, QR codes and services for small businesses and employees; launched travel loyalty rewards, started accepting cryptocurrency and offering insurance through its app from other providers and is foraying into the BNPL trend that is fast accelerating.

As banks continue to compete and shape their own future models, the transition from physical to digital will be a challenge and a consideration. We can see the movement of money links together sectors within new banking models. And this convergence of financial services with commerce and consumer lifestyle services will require banks to harness new technologies to create the infrastructure to facilitate the emerging ecosystems.

Artificial Intelligence, Machine Learning, Data will enable innovation

AI and ML models and cloud infrastructure will have a huge part to play in bank journeys and are already making impacts in data processing and analytics, the creation of intuitive customer journeys and supporting ever-evolving anti-fraud strategies. Conversational intelligence and NLP is in its nascency but stands to be improved as banks develop intelligence around this.

Personalisation of services using these technologies will be a top priority for banks looking to differentiate themselves with a competitive offering as part of a refined model.

Digitisation of processes to enable this include more sophisticated use of data capture to evolve the maturity model, to understand what customers are doing when they log on to their bank, what they want to achieve and how, in turn, a bank needs to adapt and improve its digital services. This is made possible through the use of machine learning and often with the support of partners. AI, on the back of better understanding of customer behaviour, can be applied to predict and tailor services and products, as well as making key decisions, creating a unique and dynamic experience based on the individual.

While banks are using ML to automate processes more and more, the power of artificial intelligence has largely yet to be harnessed, whereby models are trained to learn and adapt in real time as they sift through reams of data.

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It means banks and stakeholders of all type need to up their cloud and AI game, in order to secure the end-to-end processes and risk provision in the context of multiple onboarding scenarios. Cost savings through automation will free up time to analyse activity and create AI-driven, dynamic services.

Another evolution within the AI landscape is the emergence of generative AI, the trend of which is expected to grow in the coming years. Banks are highly likely to explore and adopt this technology due to its potential to vastly improve current digital customer service enquiries by providing more personalised responses and recommendations based on context.

The metaverse promises new stomping ground for banks to support a thriving economy

As embedded payments have woven together new ecosystems, banking models and connected platforms, so AI will thread new environments coming to the fore based on augmented and virtual reality technologies, which will likely further inform and mould banking services and models.

The metaverse is something banks are beginning to experiment with. While it is very early days, and at this point something of a gimmick or a newfangled marketing tactic as far as banks go, it is something to behold and could well define future banking experiences. Augmented reality could be the crucial bridge between the physical and the digital; could provide the human consultative experience that previously would have been delivered face-to-face in a branch for some of the more considered financial transactions, e.g. a mortgage deal.

The sheer investment being directed into the metaverse by banks and technology companies is worthwhile to note in order to intuit its potential effect on shaping new banking services and, hence, service models. It is indisputable how the concept is gaining ground and emerging into the mainstream from its origins as a niche (yet longstanding) phenomenon in the gaming world. AI is the technology that will knit newly developed metaverse developments together. This direction will still appeal more to some banks than others, to those that want to capitalise on the concept of gaming and the appeal that holds for customers. However, beyond gaming, across the board, it is worthy of mention that banking investment in AI is in high numbers. There is a clear opportunity to evolve communication channels within this space. An August 2022 IDC report found banks worldwide were expected to spend an additional \$31bn on



embedded AI in existing systems. Some of this is likely to be driven by the anti-fraud effort, it also said, however once such steps are taken, further leaps with similar technology and infrastructure become easier. And opportunity abounds.

AI models will ultimately provide the infrastructure and means for the metaverse, including developing hugely advanced NLP, analysis of text and image, and augmented reality tools. These combined technological developments will enable real-time voice translations in different languages, allowing people to interact and collaborate in either a professional or gaming setting. For banks, such new capabilities can represent a key link in bolstering digital services and providing highly nuanced and intuitive personal offerings.

Younger and digitally native consumers are likely to spend more and more time in the virtual world and harnessing the metaverse could provide a novel and immersive experience in which banks can deliver services, retain and grow their customer base. To achieve this, banks can harness AI to automate back-end processes, enabling a greater focus on providing a more seamless front-end experience, and enhanced onboarding, from new customer right through the lifetime journey. As banks partner increasingly with tech companies, and draw upon external fintech services as well as leasing out their own in the current milieu of as-a-service banking, the trajectory of service banking and new models will likely be shaped by AI, virtual and augmented reality to create new hybrid banking models

The additional hook the metaverse presents for financial services is that it will always need a payment system, an economy, and because the potential for the growth of the metaverse is so vast and yet so likely, given the powerhouses that are pushing it, so the potential for an entire parallel virtual society lies in wait for banks to serve as they do 'in real life'. Why wouldn't they get ready for that?

In July 2022, Citi Bank published an analysis of the metaverse, in which it estimated its worth to be between \$8trn and \$13trn by 2030. And it hedged its bets on what form money is likely to take, but that given the current trends in the crypto ecosystem, there would likely be a combination of crypto, fiat and central bank digital currencies, and stablecoins.

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CaixaBank digital services platform, Imagin, brought imaginLAND to Decentraland in April 2022, featuring a concert and other immersive experiences users can tune into. So it's early days for banks in terms of utilising metaverse space for actual service provision and more about being seen to be au fait with the current zeitgeist.

Central banks' digital currency forays provide context for banking digital model development

A development that retail through to central banks and many players in between are courting, digital currency is likely to become more commonplace and as such organisations are preparing themselves. The European Commission issued a proposal for regulations on crypto-asset markets in September 2020 (MiCAR) and this is currently under review by co-legislators The European Parliament and the European Council.

Cryptocurrencies have been notably volatile and unstable and in the main used for speculative personal gain. As the European Parliament states, the private sector's response in tackling the instability of cryptocurrencies was stablecoins. These are digital tokens that achieve stability by being linked to national currencies, an asset such as gold, or a pool of assets. Stablecoins are then differentiated further in large economies between either public stablecoins in the form of Central Bank Digital Currencies (CBDCs) or by simply being regulated. According to the Bank for International Settlements, 86% of central banks are considering issuance of a digital currency.

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That all being said, and with increasing adoption of AI, cloud infrastructure, focus on resilience and the building of new digital experiences for the end user, banks are alert to the emergence of crypto and digital currencies and its potential role in their emerging future models.



04

Outlook

The convergence of technology advancement within a real time digital-first world and the opening of financial services through APIs means banks have already adapted their models to provide relevant services to their customers. Commerce, lifestyle, marketplaces and financial services are blending and merging continuously and combining the physical past with the digital future is a hugely challenging but exciting arena for financial organisations at present.

Technology will underpin the new patchwork structure of services that banks will weave together in their different interpretations of competitive offerings. The end user journey is ultimately the prize- a slick and comprehensive experience in banking will lead to loyal and satisfied customers. The onset of the metaverse is such that financial services will inevitably play a part, and into this plays crypto and digital currency, to underpin any virtual economy.

In the short term, banks can and are pushing the boundaries of current as-a-service and marketplace models into the superapp realm, taking advantage of embedded payment technology and consumer appetite for the convenience and connectivity of mobile channels and platforms. Banks globally are utilising ML to automate processes, to refine the customer journey by understanding better the preferences and habits, and cloud infrastructure to bolster speed, resilience and functionality. AI can be used both to understand customer behavior and preferences better and to create more dynamic and personalised services. This will play out more in the medium term as well.

As banks get to grips with the technologies available to them, not only will regular services be digitised but the whole offering can become a dynamic and highly bespoke experience for the end user. The latter comes with the harnessing of AI to adapt, learn and make decisions on the spot in the unfolding greater digitalisation of the industry, and indeed society as a whole. The advent and growth of CBDCs and stablecoins will bolster digital banking services and it is yet to be seen to what extent these will impact the monetary and regulatory environment.

Longer term, virtual and augmented reality within the metaverse environment has the potential to bring together these developments to create a truly personal experience infusing a human touch.



Equally, regulators globally need to not only stay abreast but rather get more proactive regarding emerging technologies, and general digitalisation in an anthropological sense. Hence it would seem likely for there to be increased collaboration across sectors and governments worldwide to understand and create frameworks in which digital lifestyles may flourish.

The key for banks will be to understand and grow with their customer base - and while they need to use technology to do this, they can use the same technology to inspire customised services and products.



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