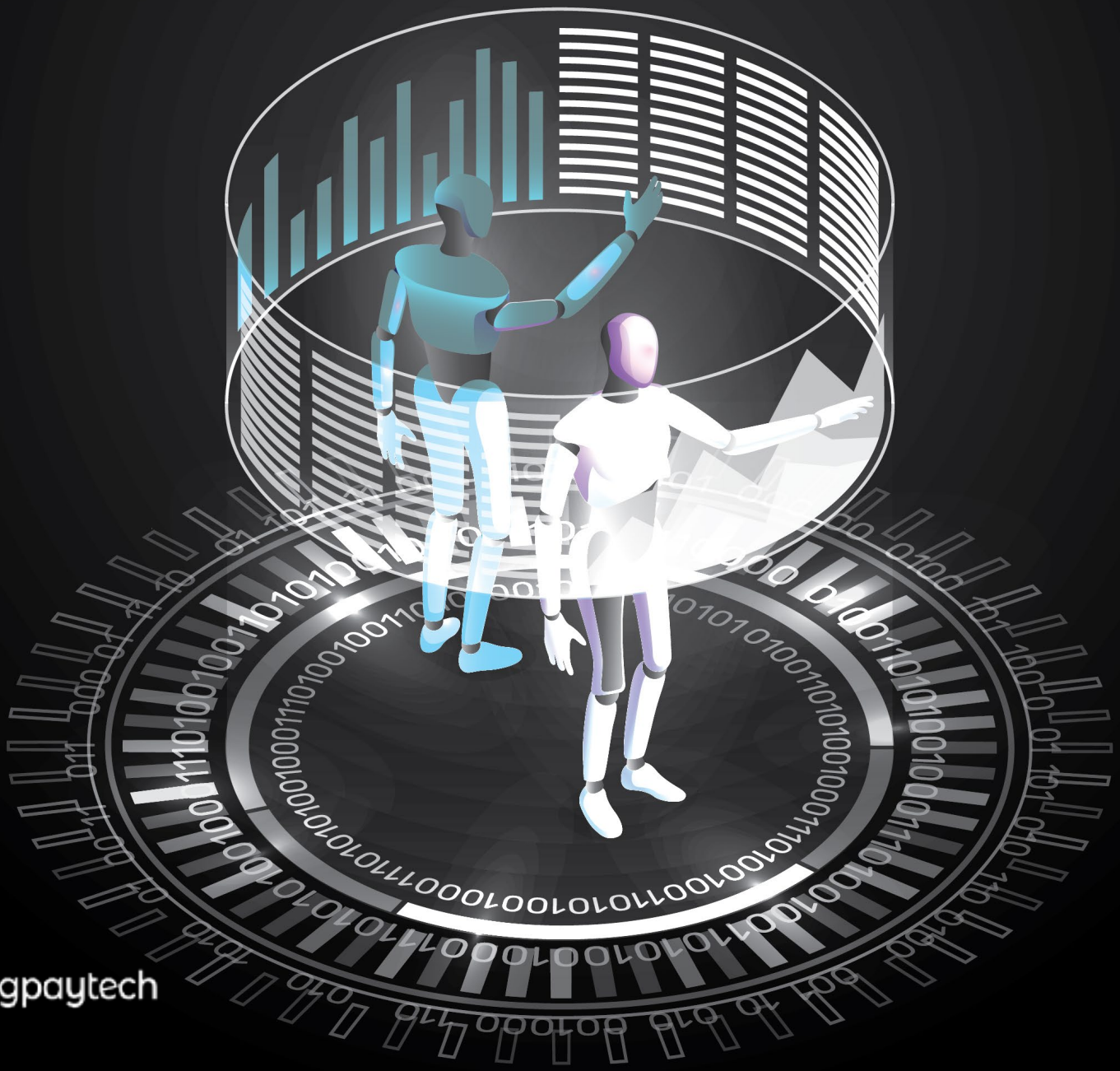
Agpaytech's Research
25th July, 2023

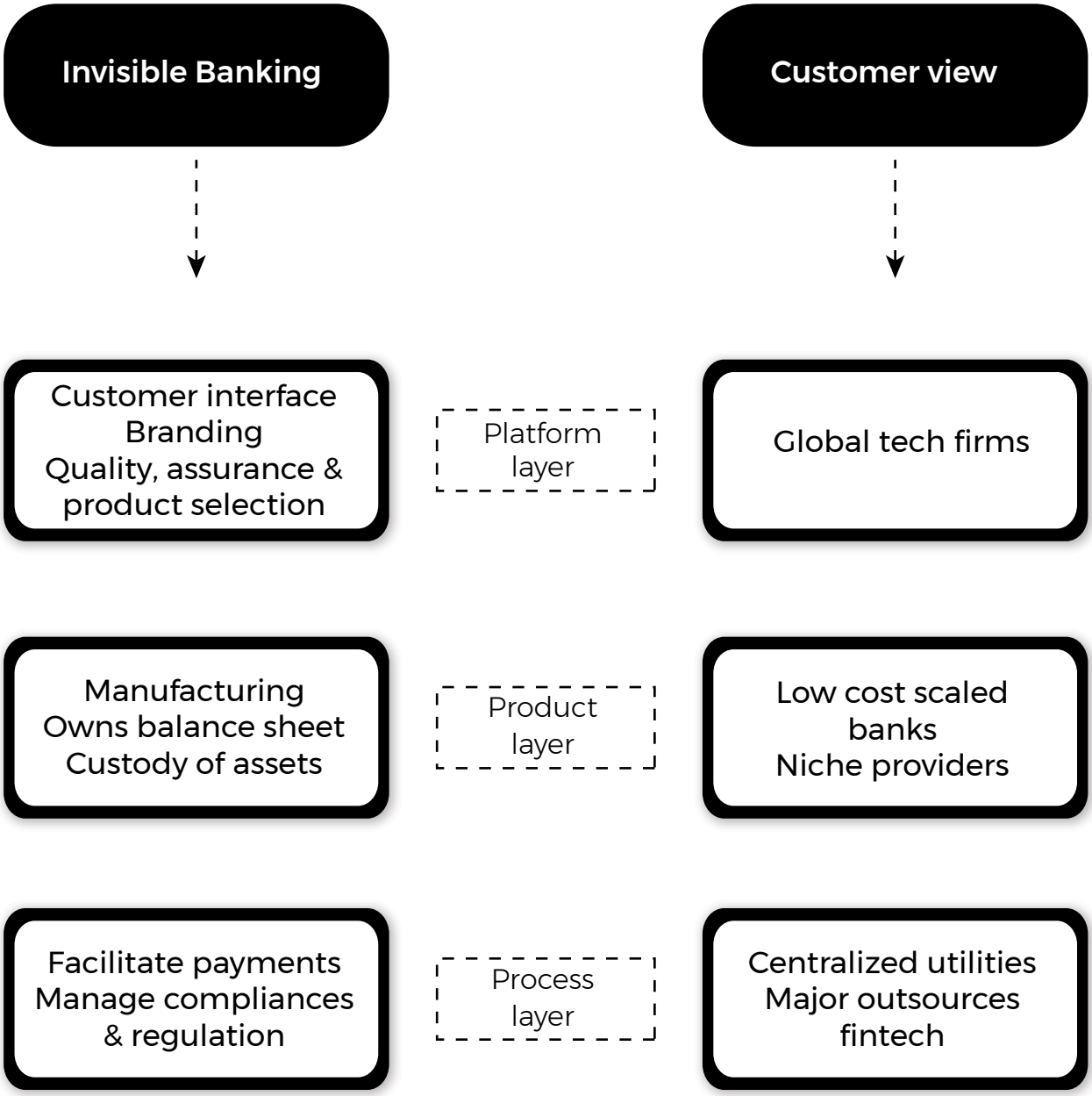
Invisible Banking: Finding Success for the Future of Payment



Agpaytech

Executive Summary

Leading banks are pivoting and rebooting their strategy capitalizing on the pace of change and innovation and setting their course for the next decade. By 2030, banking will be invisible, connected, insights-driven, and purposeful. The progress in invisible banking is driven by advances in technologies such as the Internet of Things (IoT), Artificial Intelligence, Voice banking, APIs, and 5G; as well as transformations in user behavior, which demand solutions that are more streamlined and incorporated in our daily lives. The Embedded Finance phenomenon is correlated to the advance in invisible banking since it enables companies from different industries like delivery apps to embed finances in existing solutions. Banks can realign to compete in new arenas, organized around distinct customer needs. These arenas will expand far beyond the current definition of financial services, and they will also be hotly contested by a wide range of tech giants, tech start-ups, and other nonbanks. And irrespective of the model approach this will be shaped by a few common factors. Such factors include the ability to generate revenue in new, indirect ways. Secondly, the capacity to provide value-added services going beyond banking, and thirdly the effective use of partnerships.


Invisible Banking
Customer view
Customer interface
Branding
Quality, assurance &
product selection
Platform
layer
Global tech firms
Manufacturing
Owns balance sheet
Custody of assets
Product
layer
Low cost scaled
banks
Niche providers
Facilitate payments
Manage compliances
& regulation
Process
layer
Centralized utilities
Major outsources
fintech

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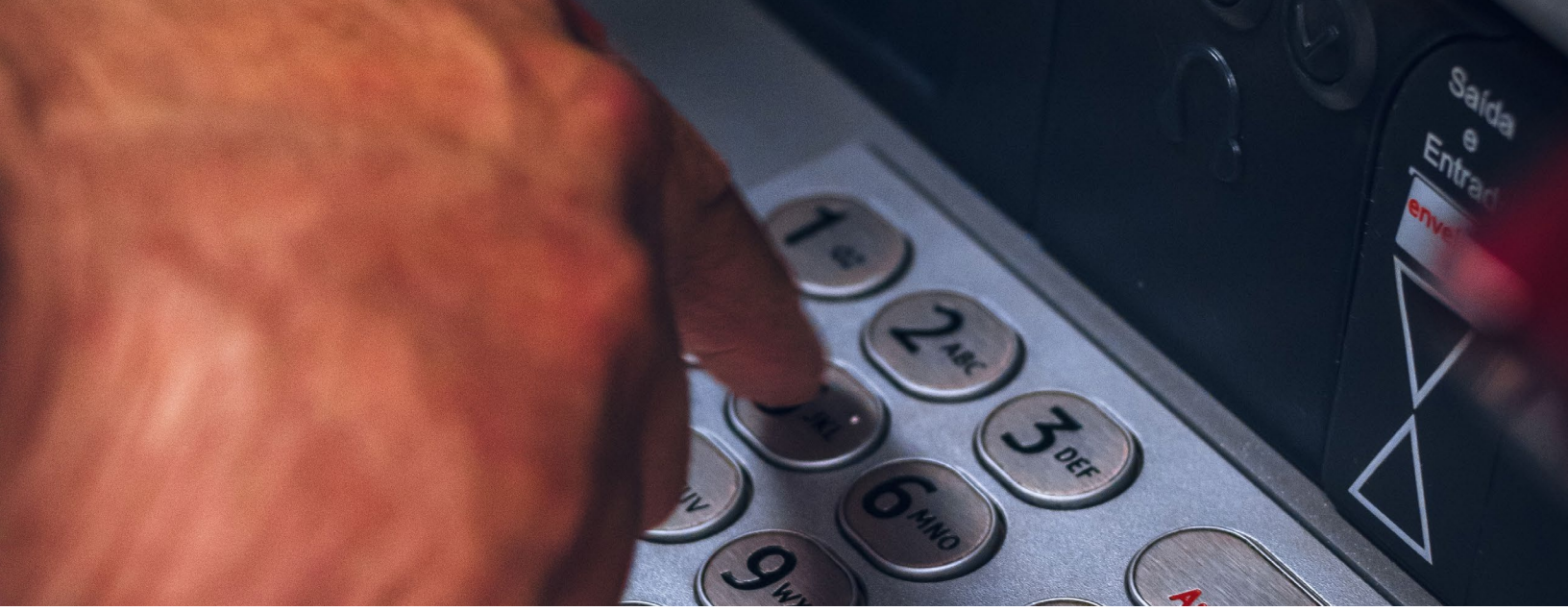
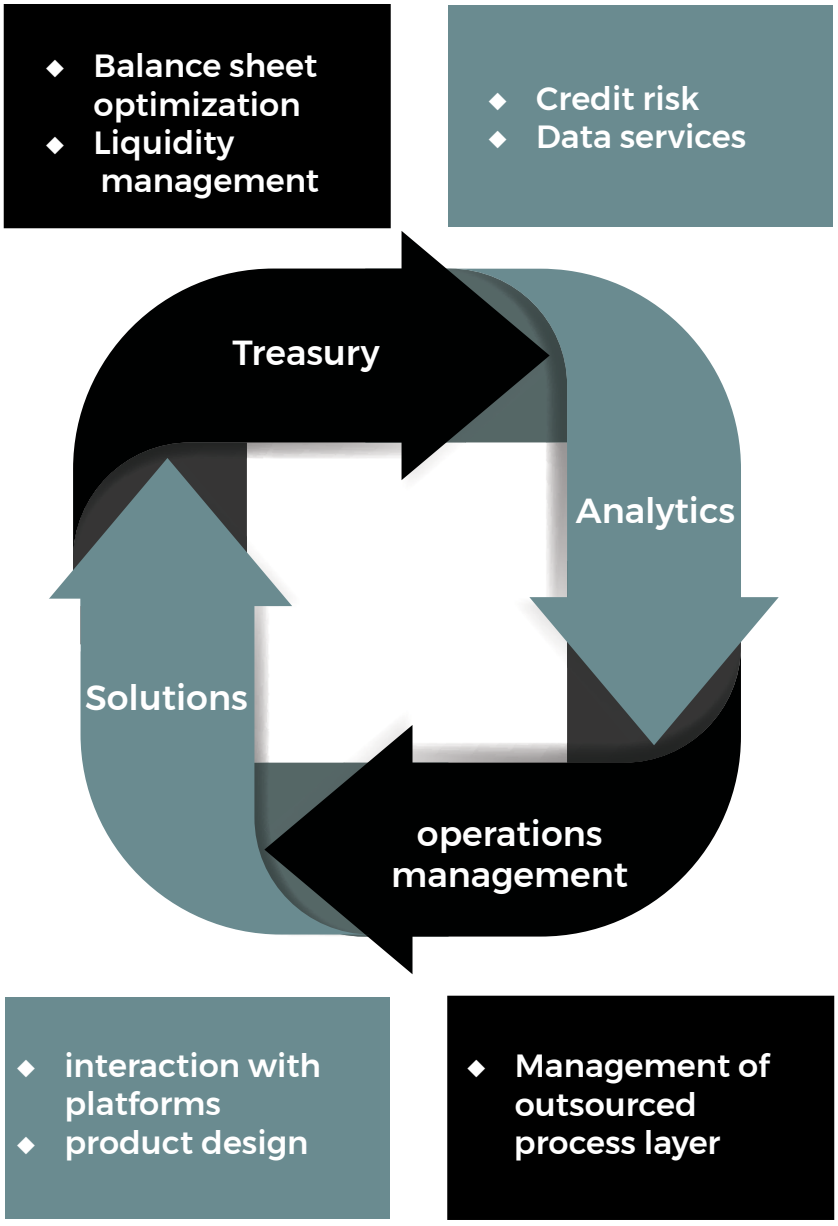


Introduction

Imagine a day when banking activities become invisible-the banking one doesn't have to think about. Let's remind ourselves of the past decades when customers would need to visit the four-corner banking hall for virtually any banking activity and cash was the main mode of payment. Gradually, the internet and Web 2.0 gave autonomy to a few individuals to control data and broadened the customer horizons allowing the mobile device and internet to bridge the traditional banking hall activities and customers' needs. The payments value chain has been changing fundamentally and as part of the evolution, several battles are unfolding across parallel fronts, touching upon geographies, offerings, and functionalities. Financial technologies are growing rapidly to serve everyone's needs. From mobile banking to digital payment, card, and e-wallet payment systems are all aiming to make the consumer market flexible to users.

But is the trend of digital banking enough to satisfy consumers' needs? Do consumers remember all banks' products and services? What if banks and fintechs rather provide financial care to consumers? Scholars are predicting fintechs and banks to rethink the customer experience because the future of banking will be one where customers don't even think about it. It will be invisible. An invisible banking model would not only make banking easier, but it could also automate products and services in the name of customer care. Digital banking will evolve to become invisible banking because it will be embedded in other daily activities with the help of artificial intelligence, analytics, personal financial management software, the Internet of Things, 5G networks, voice banking, banking as a service, and fintech innovation.

Figure 1: Key functions of the Invisible Bank



Source: KPMG

Factors Shaping Invisible Banking

Financial companies are doing everything they can to draw attention to themselves with new offers, interest rates, products, and services. Yet, as they provide a surplus of options, fintech disruptors are showing that a simpler experience can entice customers away from traditional banks for example, companies like Venmo, Klarma, Tencent, Alibaba, etc are simplifying payments in everyday lives.

▸ The emergence of big tech and fintechs

FinTechs are changing the way customers engage with banking services, thus, forcing banks to reimagine their role in the payment ecosystem. Nowadays, the customer no longer wishes to go to a banking hall or visit a bank branch. Largely, customers prefer to use their mobile for an end-to-end banking experience. Thus the rise of financial technologies, sharing economy, and competition for market share have driven

▸ Open banking

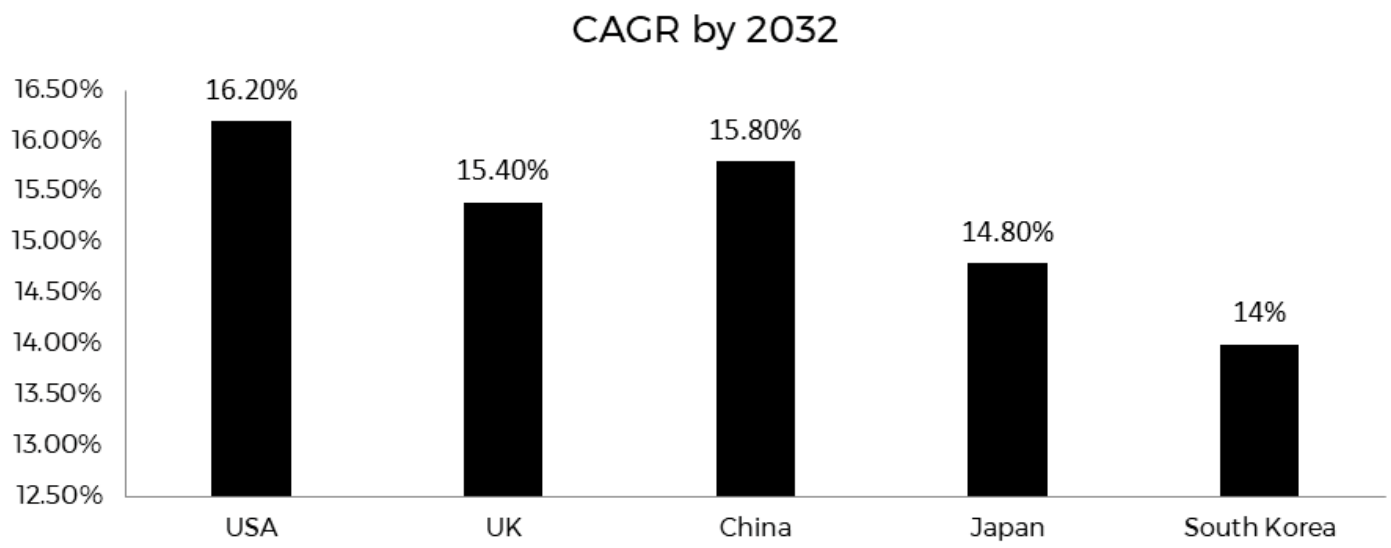
Close to open data access is the opportunity for banks and fintechs to realign or compete in new arenas, organized around distinct customer needs. These arenas will expand far beyond the current definition of financial services, and they will also be hotly contested by a wide range of tech giants, tech start-ups, and other nonbanks. Open banking provides a holistic business model that financial institutions automatically and securely share consumer data. By using an approved API, consumer data is securely transmitted because the API acts as a software intermediary allowing different applications to communicate with each other. With this open banking, users can access multiple financial accounts in one place. This gives consumers greater control over their financial data anywhere anytime.

▸ Embedded Finance

Embedded finance is a great opportunity for banks, big techs, fintechs, and other non-financial institutions (NFIs) to integrate data, interact and provide easy payment and money management solutions to businesses. Embedded finance consists in integrating financial services and products in non-financial businesses, so that companies not operating in the financial services sector can independently provide financial solutions tied to their products or services. The evolution of embedded finance has been enabled by fundamental changes in e-commerce, merchant and consumer behavior, and technology. The digitization of commerce and business management has massively expanded opportunities to embed finance in nonfinancial customer experiences

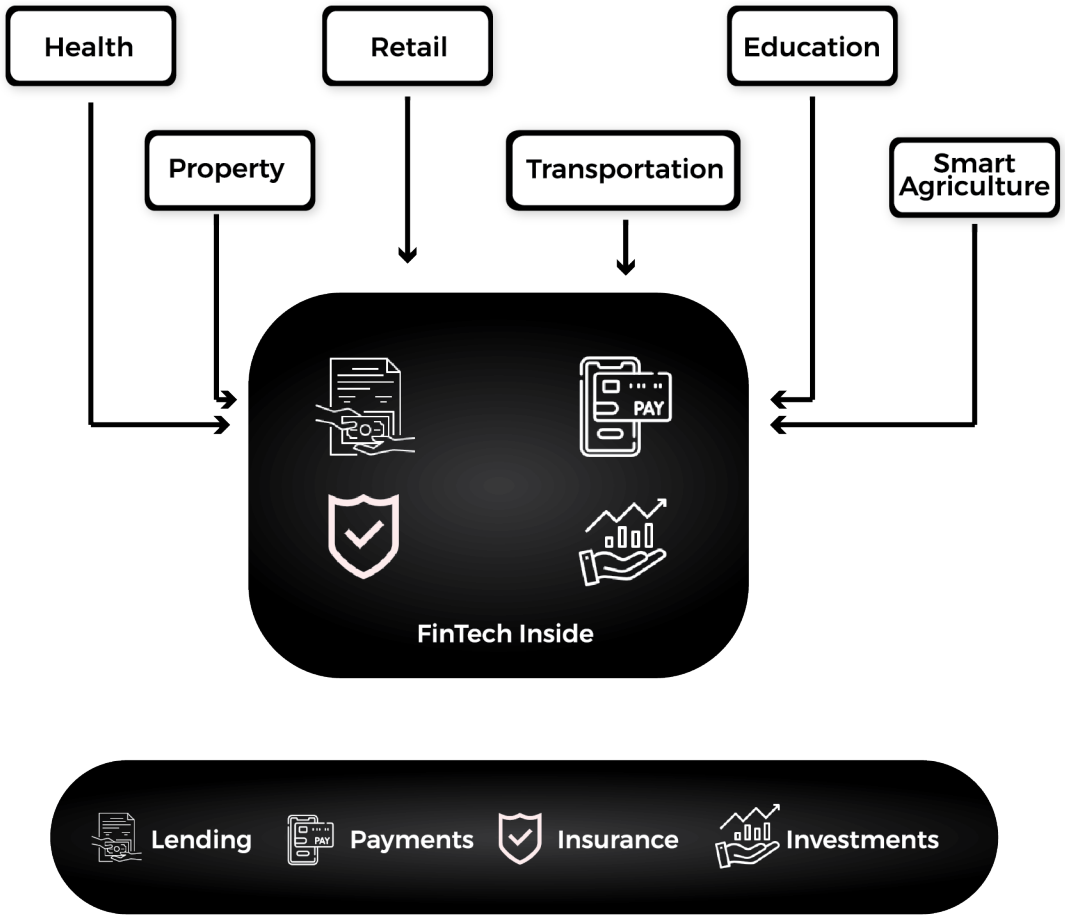
In the United States, the revenue generated by embedded finance in 2020 was estimated at 22.5 billion U.S. dollars and was forecast to reach over 230 billion U.S. dollars by 2025 (Statista, 2023). Embedded finance is likely to emerge in any environment in which a critical mass of end customers (consumers or businesses) have frequent (often daily) digital interactions with the operator of the digital platform, which we refer to as the “distributor” of embedded finance. For a nonbank company acting as a distributor, embedded finance offers a way to enhance the customer experience and create a new source of revenue without incurring the overhead associated with operating a bank

Figure 2: compound annual growth rate (CAGR) by 2032



Source: Future Market Insights

Figure 3: Embedded finance industry



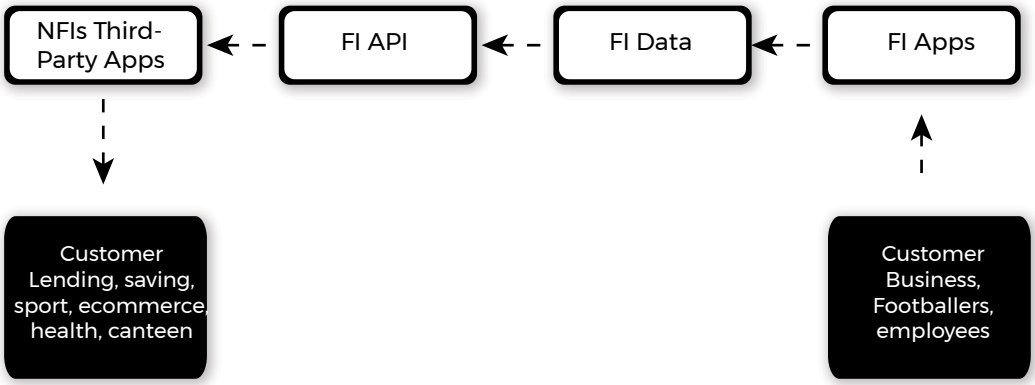
Source: Agpaytech

Application Program Interface (API)

A deeper than ever interconnection and interdependence between providers and applications of all kinds utilizing APIs, which have become the connecting glue and the rails of the modern economy. Financial APIs provide a safe way to create financial apps and services based on different types of available financial account data, such as account and routing numbers, account balances, transaction data, investment holdings, and others. APIs can be used to easily extract bank transaction details and more notably, aggregate accounts from different financial institutions. Banking management APIs can also be used to enrich the user experience by offering personal finance or subscription management.

In fintech and banking, API is used as a method of communication between third parties and online banking systems. For instance, an independent payment or financial service provider can access certain data about a certain user through his or her bank account by relying on the already undergone KYC process. Third-parties NFIs are using APIs to integrate payment money solutions in daily activities.

Figure 4: How Banking API works



Source: Agpaytech

Different types of APIs come with different target solutions and usages, but as outlined by Fintech Ranking, these are divided in:

- Core banking (for deposits, lending, and SME cross-border);
- Plug & Play (trading, accounting routine, oAuth)
- Cards, wallets, and transfers (SDK stock, MultiCurrency, fraud monitoring, and others);
- Acquiring (mobile and alternative phone payments, NFC solution, online card acquiring, and others).

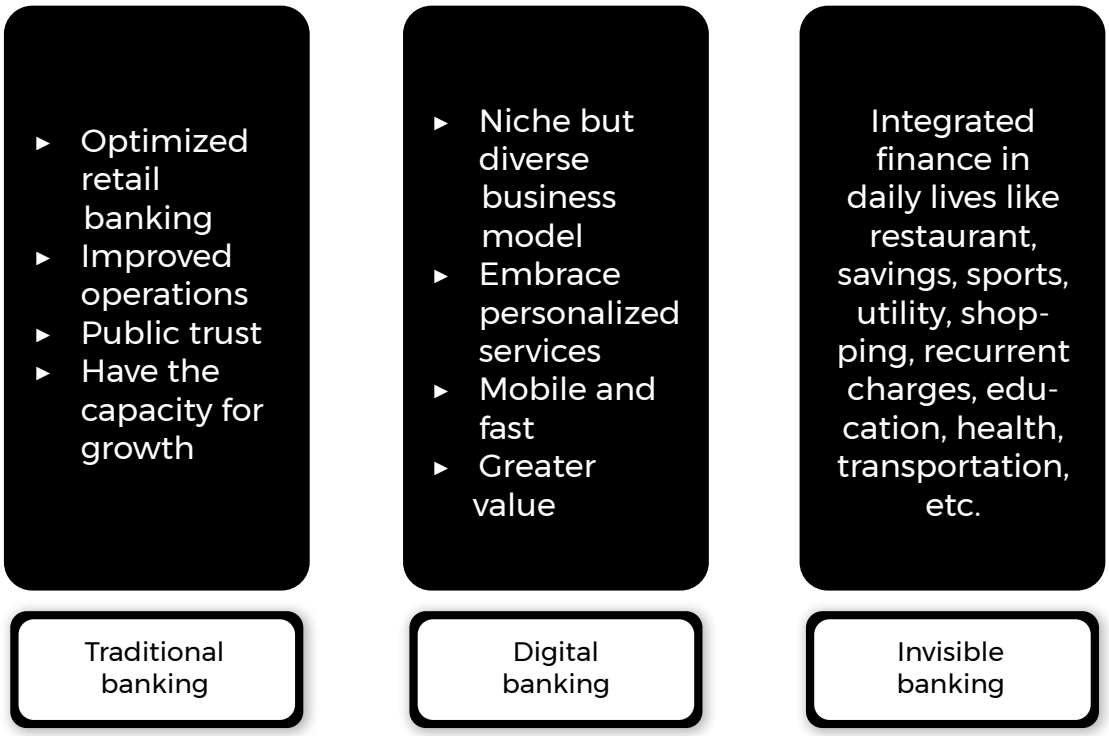
> *However, it needs to be stressed that invisible banking does not refer to the role of banks (becoming invisible), but rather to the way they will play, the how.*

Caution to banks and PSPs

For banks, the biggest challenge from all the above coincides with their greatest opportunity: how to re-invent themselves and find a new fit in this much more complex modern value chain. Staying the same is not an option, simply because the environment in which they operate has changed dramatically. However, it needs to be stressed that invisible banking does not refer to the role of banks (becoming invisible), but rather to the way they will play, the how. And irrespective of the model approach this will be shaped by a few common factors. Such factors include the ability to generate revenue in new, indirect ways. Secondly, the capacity to provide value-added services going beyond banking, and thirdly the effective use of partnerships.

In the same way that other industries have been re-shaped from the ground up (mobility, commerce), banking is now being re-defined by the (same) trend of experiences. Less is focused on the banking activities or products and features, but much emphasis is on being in a position to sell experiences. Look at the way that BigTechs have been able to start from the end outcome and build backward seamless customer journeys, and the same is now happening in finance. With two major forces in the driving seat; technologies like the cloud, big data analytics, and artificial intelligence that enable mass personalization or hyper-customization. Also, the rise of the platform economy has moved all the weight from infrastructure ownership to the front end, an immediate effect of the increased importance of controlling customer relationships.

Figure 5: The rise of invisible banking



Source: Agpaytech

Technologies for Invisible Banking

Invisible banking is the result of several different innovative technologies, which have been recently developed and are mainly driven by the need and convenience of making contactless transactions or moving from one place to another. Invisible banking means using financial services through existing resources and tools incorporated into our daily lives, almost going unnoticed. To achieve that, they use Artificial Intelligence, voice interface, and 'Internet of Things (IoT) resources.

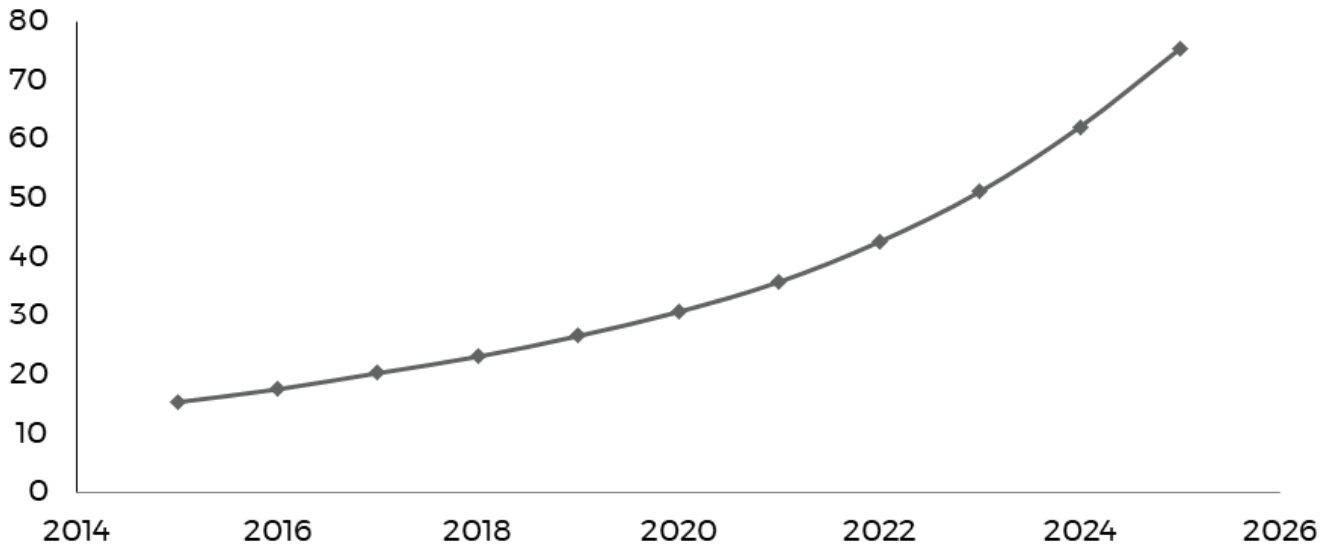
▸ Internet of things

The Internet of Things has long been promised as the next tech breakthrough, although many efforts such as Google Glass have fallen short. Yet wearable devices appear to be gaining ground again (Amazon is launching its version of tech-enabled eyewear that can access Alexa along with a ring that does the same, and promise to make banking and money movement seamless.

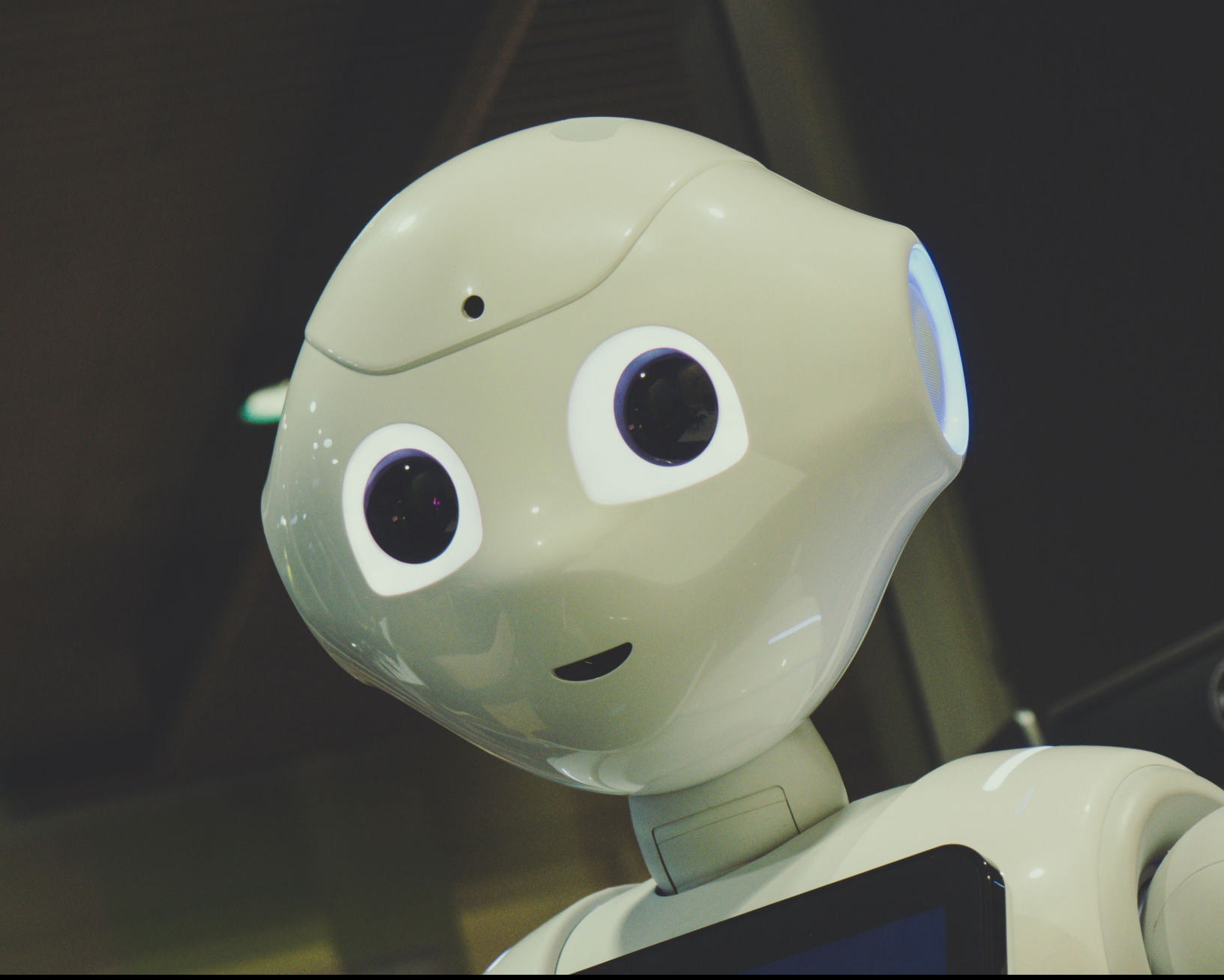
By 2025, Alan McIntyre, senior managing director for banking at Accenture, expects payments to move completely away from cards and phones toward wearables and biometrics. As cards and cellphones are incrementally replaced by wearables and biometric resources, payments are expected to become more organic by using face recognition or simply tapping on smartwatches. In a few years to come, the trend of payment will be embedded in smart methods accepting payments in a standalone manner, without any user command. For example, in cars, the driver can pay for filling up the tank as soon as they leave the gas station's perimeter.

As of 2019, the number of IoT devices connected was over 26 billion and it is projected to surpass 75 billion by 2025. In addition, the value of the global IoT market worth $1.7 trillion in 2019.

Figure 6: Number of IoT devices currently connected



Source: Propertymanagment.com/iot-statistics



▸ Voice banking

Voice banking is a process that allows someone to create a synthetic voice that ideally sounds like your natural voice. It is achieved by recording a large number of messages when your voice is clear. The number of messages required varies depending on the voice banking service used. There are a variety of services available for people who are interested in banking their voice. If it is already common to start our day by asking Siri or Alexa whether it will rain, people will soon ask virtual assistants to keep their bills in order, make loans and make other transactions simply by using our voice. The trend is that different operating systems will become interchangeable, by working on an open-source basis integrated with IoT.

Table 1: Voice banking services

	Model Taler	MOV Acapela	Speak Unique	VocalID	Voice Keeper
Process	1575-3000 messages	50 messages	300 messages	1600+ messages	50-500 messages
Time commitment	5-7 hours	10-60 minutes	60 mins	5-7 hrs	15-90+ mins
Bank from home	Yes	Yes	Yes	Yes	Yes
Cost USD	100	99	295	1500	250
Can double dip from message banking	No	Yes	Yes	No	Yes
Languages	English	16 languages	English	English	English & Hebrew
Equipment needed	Headset/ computer	Headset /computer	Headset/ computer	Headset/ computer	Headset/ computer or iPhone
Voice Repair	No	No	Yes	No	No

Source: Propertymanagment.com/iot-statistics

Artificial Intelligent (AI)

Artificial intelligence is becoming increasingly important as organizations automate their day-to-day operations. AI is considered one of the technologies that can fundamentally change industries. Banking is no exception. Artificial Intelligence enables banks to manage record-level high-speed data to receive valuable insights. Moreover, features such as digital payments, AI bots, and biometric fraud detection systems further lead to high-quality services for a broader customer base (IBS, 2022). AI brings the advantage of digitization to banks and helps them meet the competition posed by FinTech players. For instance, according to joint research conducted by the National Business Research Institute and Narrative Science in 2020, about 32% of banks are already using AI technologies such as predictive analytics, voice recognition, and various others, to have a competitive advantage in the market. Among the AI solutions in banking chatbots, are customer behavior analytics, customer relationship, management (CRM), data analytics and visualization, fraud detection, and others. Among the key market players in AI business include; Amazon Web Services Inc., BigML, Inc, Cisco Systems, Inc., Hewlett Packard Enterprise Development LP, Openai, Microsoft Corporation, etc. According to BusinessWire, the global AI in banking market size was valued at $3.88 billion in 2020 and is projected to reach $64.03 billion by 2030, growing at a CAGR of 32.6% from 2021 to 2030.

“Among the key market players in AI business include; Amazon Web Services Inc., BigML, Inc, Cisco Systems, Inc., Hewlett Packard Enterprise Development LP, Openai, Microsoft Corporation, etc.”

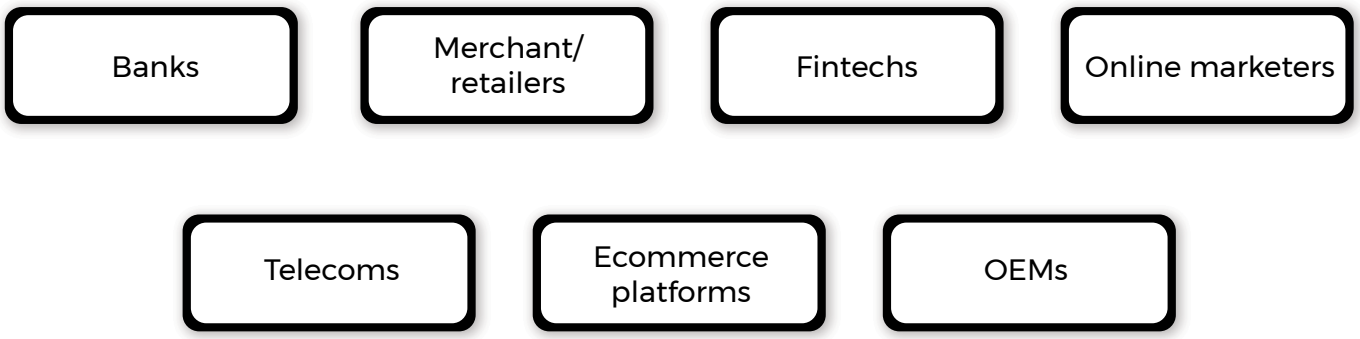
Table 2: Application of AI in banking

Application	Core activities
Customer service/ engagement	Chatbots deliver a very high ROI in cost savings, making them one of the most commonly used applications of AI across industries. Chatbots can effectively tackle most commonly accessed tasks, such as balance inquiry, accessing mini statements, fund transfers, etc. This helps reduce the load from other channels such as contact centers, internet banking, etc.
Robo Advice	A robo-advisor attempts to understand a customer's financial health by analyzing data shared by them, as well as their financial history. Based on this analysis and goals set by the client, the robo-advisor will be able to give appropriate investment recommendations in a particular product class, even as specific as a specific product or equity.
General Purpose / Predictive Analytics	AI can detect specific patterns and correlations in the data, which legacy technology could not previously detect. These patterns could indicate untapped sales opportunities, cross-sell opportunities, or even metrics around operational data, leading to a direct revenue impact.
Cybersecurity	AI can significantly improve the effectiveness of cybersecurity systems by leveraging data from previous threats and learning the patterns and indicators that might seem unrelated to predict and prevent attacks.
Credit Scoring / Direct Lending	AI is instrumental in helping alternate lenders determine the creditworthiness of clients by analyzing data from a wide range of traditional and non-traditional data sources. This helps lenders develop innovative lending systems backed by a robust credit-scoring model

Source: Agpaytech

Who distributes invisible banking?

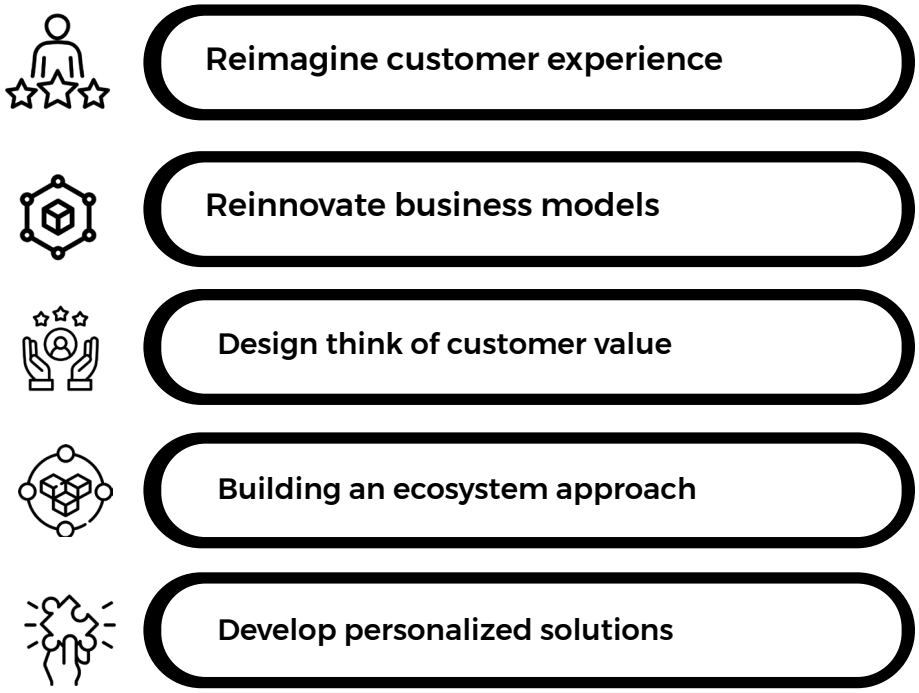
Embedded finance is likely to emerge in any environment in which a critical mass of end customers (consumers or businesses) have frequent digital interactions with the operator of the digital platform, which we refer to as the "distributor" of embedded finance. For a nonbank company acting as a distributor, embedded finance offers a way to enhance the customer experience and create a new source of revenue without incurring the overhead associated with operating a bank. The types of businesses well placed to offer embedded finance include retailers, business-software firms, online marketplaces, platforms, telecom companies, and original equipment manufacturers (OEMs). All these categories have seen high levels of activity and innovation in embedded finance during the past year or two.



Finding Success for Invisible Banking: BaaS, APIs & Fintech Partnerships

Fintech applications have long aimed to give consumers more control over their finances. Despite this goal, many retail banks have failed to deliver seamless applications and some make multiple applications for different functions at their banks. While banks in the past were the only ones providing financial solutions, today the industry is much more dynamic and open to different players stepping in—including in collaboration with traditional institutions. However, this is changing with the emerging data decentralization, data access, open banking, APIs, and partnerships between banks, APIs, Telcoms, and Fintech. FinTech and banks are working together to offer more services to customers and often those services are embedded in other third-party apps. Some of these applications include buy now pay later (BNPL), request to pay, insurance, and wealth management apps. The collaboration among Fintech, banks, and third-party service providers has strengthened the functions of invisible banking activities. The five key strategies for participants or players to succeed include reimagining the customer experience, renovating or reinventing existing business models, focusing on customer value addition, and developing personalized niche solutions. Figure 7 illustrates the leading strategies to success in the invisible banking market.

Figure 7: Invisible banking strategies



Source: Agpaytech

Open data access

Accessibility to data and sharing policies remain the key factor in providing personalized experiences to individual customers. On the side of the financial institutions, accessing data from non-financial institutions like telecoms, universities, public utility providers, insurance companies, etc. will help them provide invisible financial services. when there is open data access, they would be able to consume and share data across organizations, and ecosystem players to hyper-personalize products and services. Invisible banking activities could also leverage alternative data from ecosystem partners to underwrite loans for the underbanked and unbanked and utilize open architecture for the ease of connecting to ecosystem partners to expand their distribution channels for banking services.

Incumbents are using technology to make customer journey seamless

- Royal Bank of Canada has launched a mass-scale AI digital service, NOMI. It offers customers insights into their financial habits and uses predictive tech to find money that those clients can save. Subsequently, it automatically saves that money for them.

- BBVA's mobile banking app – CepBank, scans parts of the eye using eye recognition software to verify user identity. This data is then stored securely with the bank. On top, they have introduced an AI-based voice assistant known as MIA, which lets customers use voice commands to transact

- Google Hands-Free is a free app that allows people to pay in stores, restaurants, and cafes without having to take out their phones. The system allows point-of-sale systems to detect the presence of a customer's mobile phone, allowing the individual to simply ask to "pay with Google"

Conclusion

Today's modern technologies are an overpowering driving force in society. Financial technology is only 20% through its journey of change. Yet, few experts, banks, and fintech companies are seeing the reality of the future of invisible banking now. The Invisible Bank is one such possible future but there are other equally probable and alternative scenarios. Reimagining and renovating business models with new technologies, invisible banking services will be deep-rooted in APIs, cloud-based services, artificial intelligence, and mass personalization of daily financial and non-financial services. With these technologies, all banking transactions becoming getting faster. Fund transfer is happening in real-time where it was taking a few hours. The account opening process has also become so fast as the customer gets his account number, checkbook, and debit card immediately. Customers can analyze all expenses and spending on a mobile app. Chequebook, download statements, generate interest certificates, fixed deposits, investments, insurance these all transactions can be done with a single click or voice authorization. In a nutshell, the future of invisible banking cannot be carried by one firm, it needs collaboration from the bank, customer, fintech, and third-party service providers.

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About Agpaytech

Agpaytech Ltd. is a company pioneering in the Fintech Space with a focused approach to building robust technologies for eCommerce Card Processing Solutions for Payment Service Providers (PSPs). Additionally, we provide Compliance and Regulatory Umbrella, Remittance-as-a-Service, Banking-as-a-service, Foreign Exchange, Cross Border Payments, and digital currency technology. We have partnered with multiple banks, non-banking financial institutions, and corporate organizations to create a solid service delivery model for them and their customers to ease their international remittances and payments concerns. Website: www.agpaytech.co.uk

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