

Banking Industry

Swipe into the future

Disclaimer

This research expresses our opinions, which are subjective. Our views were based on public and available information. All information here presented is reliable and accurate at the time of the research.

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Introduction

According to a number of statistics, the number of smartphone users worldwide is over 2.5 billion, and it is clear that penetration rates are also increasing. In 2018, **consumers worldwide downloaded a total of 205.4 billion apps.**

All this data means that the future of banking is already here and it's up to us to get on that train and change with it.

In recent decades we have seen the rise of the Web followed by the development of new and advanced technologies which have, without any doubt, revolutionised many different industries.

The banking industry, although enjoying this technological advancement in some ways, has remained resistant to change in the way it does business and the way it interacts with its customers.

However, considering user expectations and the experiences that new entrants, like fintechs, are offering, banks are now realising the need to change as our cultural framework changes.

Banking in Europe and PSD2

Challenges of the industry

02

PSD2 is the second Payments Services Directive created by the EU, and it will be expected to play a major role in redefining the banking industry...

... not only by increasing competition and innovation but also by increasing the security of digital payments and transactions.

Competition will derive from the emergence of fintechs and from two different third-party providers:

AISPs (Account Information Service Providers) and **PISPs** (Payment Initiation Service Providers). Under this new legislation and according to Paul Rohan, author of the book PSD2 in Plain English and a consultant with a focus on financial services, third parties will be able “to initiate online

payments directly from the payer’s bank account via an online portal.

This will bring new opportunities in convenience and cost for online businesses in how they accept payments”.

Furthermore, with this new directive, the customer is responsible for managing their financial data, giving them the power to decide which data they want to share. Therefore, in the same app, you will be able to both access information from your various bank accounts and manage your money in a single place.



Another objective is the continuous improvement of security. In this new directive, one of the security measures is SCA (Strong Customer Authentication), which means that two or more elements of authorisation will be needed for some operations:

- 1 Something only the user knows (pin, password, etc.)
- 2 Something only the user has (key card, matrix card, etc.)
- 3 Something only the user is (fingerprint, face or voice recognition, etc.)

That being said, one of the biggest challenges the banking industry faces is the **ongoing engagement of customers in the face of continuous digitalisation and more competition from nontraditional banks**. PSD2 intends to be a force of change that pushes banks to offer the types of innovative experiences users want.

For the UK, Open Banking bears slight differences. While PSD2 is related to all payment account providers regardless of the organisation's size, Open Banking is only mandatory for the nine top banks in the UK: HSBC, Barclays, RBS, Santander, Bank of Ireland, Allied Irish Bank, Danske, Lloyds and Nationwide.

Furthermore, Open Banking is underpinned by a single and pre-defined API which has been implemented in the aforementioned banks while in PSD2, the EU has left technical details open to the market to define, which means that we might see different groups of standards driven by groups of European banks and third-party providers (one example is the Berlin Group in which 40 banks, payment associations and payment services providers got together to define a common API standard called NextGenPSD2).

Independently of the way in which banks are going to implement their strategy, the movement is happening and it is putting the power in the hands of the users, who will be able to choose the bank that best addresses their multi-bank experience.

Banking Industry in the Future

Challenges and Trends

03

With increased competition and a new landscape, there are various challenges the banking industry faces if you look at how the market has evolved and what might come in the future.

These can be summed up in four broad themes:



Digitalisation

The continuous improvement of technologies ensures that the spirit of innovation is alive; however, it offers a challenge if it means we're not keeping up with the market. Digitising processes can help banks **reduce costs** and, more importantly, **take advantage of the opportunities that emerge from the implementation of these new technologies.**

Digitalisation is internal facing with an integrated IT infrastructure and an enhanced revenue model but also customer facing with fast and secure processing, an immediate high-quality interaction, fair-price with transparency and comparability and a wide spectrum of products and services. In fact, the need of the hour is to have an upgraded system embedded with reliable and trustable technology that can withstand frauds and deliver scalability and security.



Security

Security is still one of the main concerns of customers when talking about banking and their daily operations. It's fundamental to **ensure security while making sure we're complying with all regulations in place**, especially since with new regulations TPPs will be able to access data from customers, even though they will only be able to do so when the customer authorises the access of their personal and financial data.



Innovation

Implementing new technologies (like AI, machine learning, big data, etc.) that help you gather useful insights about your customers guarantees that you keep innovating, keep pace with market trends and that you get to **better engage with your customer, offering increased value for them.** Blockchain, for example, is one of the technologies that has the potential to improve innovation but also security: it provides quicker transactions, more transparency and accessibility and reduced transaction costs.



Engagement

In a demanding and over-stressed world, it's essential not to lose the personal connection you have the potential to create with your customer.

People desire to be understood, and it's increasingly important to offer your customers what they want without them having to ask for it. Data-driven insights are an important tool to beginning engagement with your customer and **presenting truly relevant offers as well as targeted products.**

You can achieve this from new and emerging technologies that can help you make sense of how your customers use your app, where they shop, what they buy, and so on.



**It's all about the experience.
Either banks remove friction...
or someone else will.**

- Brett King



Reflecting on these different challenges, we can already detect opportunities for differentiation that rest solely on offering a unique and relevant customer experience. How we respond to those challenges is what will differentiate the experience we deliver.

The future is full of possibilities, and market trends point us to a path that relies on various values, as follows:



Personalisation & engagement

Relevant connections and relationships are what makes our experience unique. A one-to-one relationship is longer lasting and invites loyalty from your customer. Therefore, you need to embrace new technologies that permit to **better know your customers' needs and desires**. That data will enable you to reach out to your customers with a meaningful message, increasing satisfaction and strengthening your bond. Furthermore, studies show that engaged customers spend 30% more than non-engaged customers.



Convenience & simplicity

We need simple solutions in our everyday life. Complex processes are unproductive and generally make the customer give up. We are always interacting with our money, so we want a **convenient and immediate accessible solution** that makes our daily operations easy and simple.



Customer service

In the same way that we look for immediate access to solutions that simplify our everyday lives, when we encounter a problem we don't know how to fix, we want **an immediate solution that is efficient and responsive**. In-app support provides instant help and response to customers' frustrations. Chatbots, video calls and instant messaging with a dedicated account manager are just a few examples of different approaches to customer service.



Value

Creating value is not always easy, but it is an achievable goal when you enable different tools that can help you. Again, one has to take advantage of the emergence of new technologies.

Analytics that help you **learn from the way customers use an app**, take advantage of machine learning to help you understand consumer behaviour and even detect potential frauds. Understanding consumer behaviour also lets you provide financial advice to your customers that can bring a lot of added value to the relationships you establish with them. Loyalty programmes are a non-traditional approach that can spark your customers' interests and increase perceived value.



Wealth management

The utilisation of processes and new technologies will be essential to present additional products and services to the customer. Data-driven insights not only turn you into a trusted financial adviser, they also give you the potential to **deliver hyper-personalised products**. AI and machine learning are two tools that can make that a possibility.

Mobile Banking

04

Nowadays we live and do so many of our daily tasks through our phones – be it calling a taxi, ordering food, connecting with our friends & family, listening to music, checking the weather, reading the news or even books, shopping...

Some studies have shown that we now spend more time on social media and on our phone than watching TV, for example.

In fact, according to App Annie in the study *The State of Mobile*, a user spends an average of 3 hours on the phone while the amount of time spent on finance apps has increased in just two years, making finance one of the 5 categories with the fastest growing global market share. Furthermore, on average, Gen Z, a generation of people born from the mid-1990s to early 2000s and commonly known as digital natives, engages more with non-gaming apps than Millennials or other generations before them.

Through the apps we install in our phones, we are able to satisfy different needs. We have apps to check our health insurance, to store our multiple cards, to check our emails, to keep us updated on our reading list or our to-do list; we have apps to look for jobs and yes, to check our bank account – but more important than that, to manage our financial life.

This means that your customer has an incredible amount of information at their fingertips and their buying decision process will start earlier than we are used to. If we begin designing our customer experience to ensure that our customer's journey has no friction at all, we will engage them sooner and more efficiently.

Therefore, it is only normal to expect that apps, as life facilitators and organisers, should have high levels of usability and functionality. That's where customer experience comes in – apps which are not easy to use, are not efficient or do not create value for your customers are quickly uninstalled, written off as useless and, more important than that, the customer will review the app letting other potential customers know that the solution is not that cool and that it is, in fact, useless.



Digital Xperience in Banking

With all the changes that new technologies promote and that PSD2 will make inevitable, banks will have to up their game in order to gain and retain their customers. How can they achieve that? The competitive advantage of today's economy is the customer experience.

We have evolved from a service industry to a CX industry where your greatest asset is the awesome experience you provide to your customers.

Ultimately, it is all about the experience you can deliver.

The digital revolution is changing the way customers relate to various services and institutions.

That is especially true with the banking industry. As far back as 1994, **Bill Gates affirmed: "Banking is necessary, but banks are not"**.

Consumer behaviour is changing, and traditional banks have not kept pace with that change effectively.

In the gap that traditional banks have not been able to close, new emerging fintechs have

appeared, launching new apps that revolutionise the way we see banking and even personal finances management.

There are a variety of channels through which your customer can connect with you – website, call centre, branch, app, etc.

The 21st century customer is more informed and more in control. They know they have the right to demand more from service providers, and they do not feel compelled to stay loyal to a brand which doesn't meet their needs.

That's why it is of fundamental importance that you offer a memorable experience in all these different channels.

More and more frequently, searches begin with picking up your phone and saying "let me check on Google" – the customer's decision process starts right at that moment or even before, when talking with peers, colleagues or family who talk about their experiences and give their opinion about the validity of a certain service, product or solution.

It is becoming evident that we have the world in our hands, and the phone is enabling that experience. So, if we design and think about every step of the experience, we are on the right path to delivering a great journey.



Apps: EYC

According to App Annie's The State of Mobile study, in 2018 the average user checked their banking app nearly daily. That is why, when it comes to mobile banking, a banking app is the more convenient solution. It's immediately accessible and it's practical. Taking into consideration the rapid adoption of smartphones, it is the most efficient way to **Engage your Customer.**

This should be an obvious step for the banking industry, especially considering the amount of information banks possess about us, not only about the way we spend but also about how we manage our money. More than KYC, you need to engage them and give them the best experience ever, free of friction and obstacles – that is the future of banking apps.

Complexity-free solutions are a great way to offer seamless experiences that will bring satisfaction and higher levels of engagement. According to research from Bain & Company, engaged customers spend 30% more than non-engaged customers.

Therefore, we cannot ignore the importance of an effective engagement strategy.

The million-dollar question is: how can we do it through our app? What are the functionalities and characteristics that will keep my customer engaged? There isn't a magical answer to these questions or even a single answer. There are, in fact, multiple answers to these questions and they include many different variables. In the long run, it is important to consider factors such as the company's strategy, their market positioning and finally, their goals. Different apps should reflect different positioning and different strategies or else all the apps would be equal and all banks would offer the same products.

We have studied 10 different apps in order to understand the existing banking industry solutions and discover the characteristics of each one. In order to have a more profound understanding of the industry as a whole, in two different realities, we have looked into two different areas of the industry: retail banking and digital banking.

The 10 different apps we have studied have distinguished themselves, not only because of the functionalities they present but also because of their usability, as reported by their customers in Google Play Store and Apple App Store.

In the table below, you can see the different apps we evaluated and their average rating both on Google and Apple stores.

Retail Banking				Fintechs			
App	Google Play Store Rating	Apple App Store Rating	Average Rating	App	Google Play Store Rating	Apple App Store Rating	Average Rating
Discover	4.6	4.8	4.7	Revolut	4.8	4.9	4.9
Chase	4.6	4.7	4.7	N26	4.3	4.6	4.5
Capital One	4.7	4.7	4.7	Monzo	4.6	4.5	4.6
IKO	4.7	4.8	4.8	Chime	4.5	4.7	4.6
Bank of America	4.5	4.8	4.7	Qapital	4.6	4.8	4.7

Our evaluation of the different apps included in this report was based in two criteria: **usability** and **value**. It is important to take a moment to explain why we focused on usability and value and not on other criteria. Our vision of a banking app is very clear – on one hand, users need to perceive value while using the app. On the other, every user should be able to use the app without any difficulty or additional learning.

Both usability and value are broad concepts. In our view, **usability in the context of banking apps is based on 5 fundamentals which are: personalized experience, contextual navigation, pro-active virtual assistant, artificial intelligence and machine learning and finally, a focus on the future.** These 5 pillars, all together, are the backbone of a relevant mobile experience which results in high usability. To offer a personalized experience means that we're not offering a one-size-fits-all solution. Personalized experiences must rely on technologies, such as artificial intelligence, which are the engine that fuels a unique experience.

Furthermore, contextual navigation is fundamental for the relevance of the experience – the user can navigate the app while seeing tasks that are completely aligned with a given context. Additionally, in our vision of a banking app, it is not enough to have a virtual assistant. In fact, we believe that any virtual assistant should be pro-active, that is, it should be empowered to take action and not wait for the user to engage.

Last but not least, we believe that a **banking app should focus on the future and help users plan for what's ahead rather than focusing only the past or the present.**

Value, on the other hand, is an important concept in marketing and it is a much-studied concept in the field as it is believed to be an important component of relationship marketing - it is many times correlated with the ability of a company to differentiate itself from its competitors. Our definition of value in a banking app is the one of perceived value which is a combination of features (does it meets the needs of users), personalization (can it be personalized in order to meet each user's needs) and engagement.

In our view and for the purposes of our study, value is the customers' evaluation of the benefits of a certain app, that is, whether it is able to meet their individual needs and expectations. We must not forget that perceived value might be different for different individuals.

Our goal, when comparing these apps, is to reflect about the future of the banking industry and how that future might impact banking apps. We believe that rather than affirming that an app is better than the other, all apps have different purposes and also different goals.

Our analysis then, is not only about usability and value. It is also about our own vision of what a banking app should be and, in our understanding, there are different layers that represent different evolutionary steps or stages of maturity in the evaluated banking apps.



The first layer – titled **Core Functions** – comprises all the basic functions users would expect to be able to do with their banking app. It is easy to verify that all the apps permit their user to fulfil basic banking functions, that is, make a transfer, check balances and movements, make payments, etc. That being said, it is also easy to see that for each bank, the core functions it provides are different, depending on the bank's positioning.

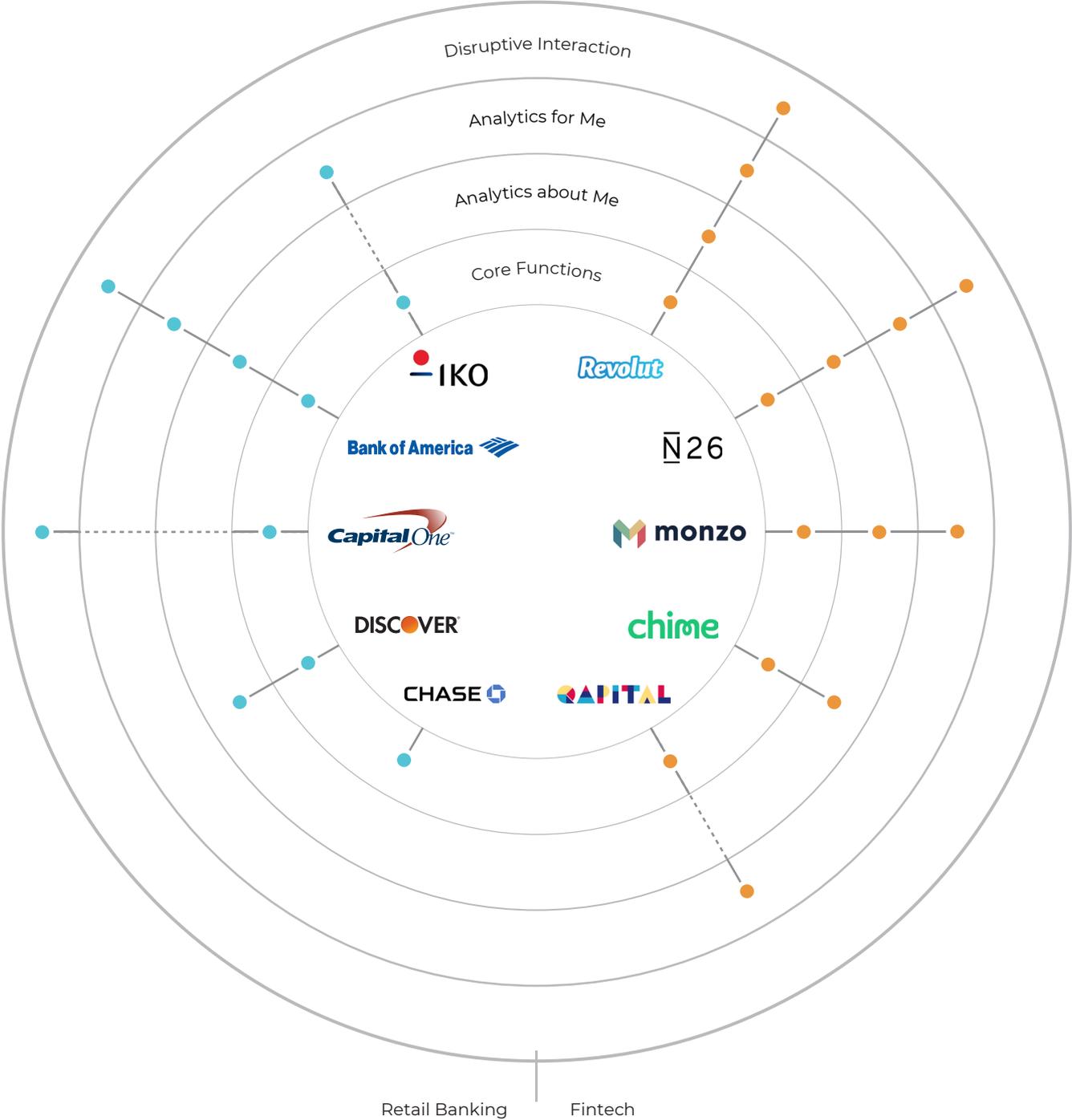
The second layer – called **Analytics About Me** – pertains to analytics capabilities, which we consider to be the second stage in the banking app evolution. This layer tells us that the bank is showing and interpreting the data it has about the user but all this data is not being translated into an action.

The third layer, the next step in our banking app evolution is called **Analytics for Me & Personalization** and it pertains to any degree of customization the user is able to perform within the app that meets their individual needs and desires. This layer tells us that, not only does the bank have an enormous amount of data about the user, it is actually acting upon it, making that data work to the users' advantage.

Finally, the fourth and last layer – **Disruptive Interaction** – is the layer closest to our own view of what a banking app should be and do for its users. A banking app should be intelligent and completely attuned to its users' needs.

This layer shows us that not only does the bank have data about the user and that it's turning that information into different actions but also that it's capable of disrupting the way it communicates with the user. It's a banking app which is proactive, attentive and it has the best interests of the users at heart, helping them make the most of their money and make better financial decisions.

Following these criteria, we rated the evaluated apps, which resulted in our strategic positioning below:



Legend

- Not Present in the product / app
- Present in the product / app Retail Banking
- Present in the product / app Fintech

In order to complement the visual approach, you will find a more comprehensive analysis below, where we reflect on what we feel are good and not so good aspects of the different apps.

DISCOVER®



This app covers the **basic banking functions** like deposit checks and check balance without logging in, it has an ATM locator in-app, it lets you manage your account and it also relies on biometrics for secure log in.

Additionally, it has a **rewards programme** and lets you check your credit score, freeze yourcard and you receive notifications when your card is used. If you need assistance, you have the option of live chat or instant messaging customer service.



Its **spend analyser functionality only works for the Ipad app** and various customers report that the app occasionally crashes and its UI is not good, offering a poor customer experience.

While using the app, you can't always see your total balance due to pending transactions, and additionally you have to have a credit card in order to have the app. The updates on FICO score are slow and you cannot see future payments or tag multiple transactions, limiting your personal finance management.

CHASE



The app lets you deposit checks, and it includes a **digital wallet incorporating Zelle and Apple Pay**, enabling the possibility to make cardless payments and send and/or receive money to and from your contact list. It also has a **rewards programme** and ATM locator, and you can check your credit score.

You have **account alerts** to help you control your finances, and you log in to your account through biometrics. Also, if you want to check your balance without logging in, you can do so. You can have multiple accounts in only one app, and NFC technology is enabled. You are able to notify your bank of your travelling intentions so they can check your cards' movements.



Chase's app doesn't let you check scheduled payments, and you do not have **analytics about your spending in order to better manage your finances, or even budgeting tools**.

Customers also do not enjoy its poor performance and crashes, and the excessive number of ads is a pain-point in this banking experience.



This app covers the **basic banking operations**: you can manage your payments and bills, mobile deposits, you can pay and send money to friends through Zelle, you have account notifications, you can assess your statements, check your credit score, use the ATM locator and even check your transactions details (like location). You can also manage your card and security settings – you can freeze your card and you log in through biometric data.

Capital One app has a **rewards programme**, and its customers enjoy the app design. You can have multiple accounts under a single log in and an **innovative feature named Alexa, which is Capital One's virtual assistant that helps you to manage your money better**.



Flow of menus could be improved, and the app has an incomplete mobile wallet compared to other banking apps. Its GPS feature doesn't show compatible terminals.

This **app doesn't have any budgeting tools or analytics** that help you manage your finances or make better 12 financial decisions.

Amazon Alexa is not enabled through the Capital One app. In fact, you have to have Amazon Echo, and you activate this Alexa skill through Alexa's app. Therefore, this is a feature only available to Amazon customers who have Echo and, therefore, will not be available to the whole spectrum of Capital One's customers who have the app.



The app from the Polish bank PKO gathers many features. You can send and receive money, and you have an ATM locator. **By scanning a QR code, you can pay without your card, and you can create vouchers in order to redeem them in multiple stores.**

NFC and biometrics technology are also supported in the app to unlock other functionalities. You can lock your card and there are notifications to help you keep track of your balance and movements.

In the same account, you can aggregate savings, credit cards, loans and insurance, centralising the information. You can also exchange currency and finally, you have **BLIK functionality, which lets you create vouchers, make payments on the internet and withdraw cash without your card.**



The IKO app could improve when it comes to tracking investments and better understand your monthly spending. It does not integrate Google pay, and BLIK is only available in certain stores and partners of the bank.

Although you can store different things in the same account (savings, loans, credit card, etc.) it does not let you have multiple accounts in the same app.

You do not have **budgeting tools to help you manage your finances**, and you **cannot add trusted recipients.**



The BofA app lets you **personalise your dashboard**, make payments with Zelle, deposit checks, **collect rewards, schedule an appointment at a branch or even ask Erica, BofA's virtual assistant some questions about your account.**

You log in to your account through biometric data, and in the same log in you can aggregate your savings account, your loans, your mortgage and your checking account.

The app has built-in notifications that help you be in control of your account, and you can also check your credit score in-app. It also has a digital wallet and lets you define savings towards a goal. Furthermore, you have an ATM locator, a travel notice, **spending and budgeting tools and you can manage your card security** (temporarily lock it).

Its customers praise its user-friendly interface.



Despite being user-friendly, the app performance is slow and not intuitive. Its bill pay centre could be more organised in order to facilitate the searching of information, and its alerts are delayed or they do not work correctly. You **cannot set regular transactions** and its customers point out that information is not well organised.

Others feel that **Erica might be a little intrusive**, and it would be great if customers could choose when to call on Erica.

BofA's app doesn't always allow an-obstacle free login as various users note, which results in customer frustration.

Revolut



Revolut offers **account notifications, spending notifications, it has automated spending analytics and it supports in-app customer service through a bot.** It lets you set up recurring payments, send or request money or create payment links. You can split the bill with your friends, set up direct debits and you can **even round up your purchases and save that amount.**

You have the possibility of 13 investing in cryptocurrencies, and you can transfer money without being charged fees in 150 international currencies. You can manage your cards, and you log in to the app through biometrics data.

The app has **fraud prevention mechanisms based on location,** and you can set up virtual cards if you have a premium account. Revolut operates a Freemium business model: you have three different packages – the free one, the premium and the metal. As you upgrade your account, you unlock different functionalities.



As of now, Revolut is **testing its Perks functionality.** In addition, it will be launching **wealth management functionality sometime in the future.**

Revolut has limited cash withdrawals, and you cannot top up your account with cash. Also, its customer service could benefit from some improvement as it is slow to help resolve issues.

You do not have the possibility to **invest or apply for a loan or open a joint account.**

N26



This German app has a lot of functionalities including biometrics, integration with Google and Apple Pay and the ability to send money to your friends or receive money through Money Beam.

The app **provides analytics, and you can set up “spaces” where you can drag and drop your savings**, making this app super user-friendly. You can also manage your card definitions, and you have notifications from your account that put you in control of your accounts' movements.

N26 operates a Freemium business model, and that means that you can unlock other features when you sign up for N26 Black or N26 Metal. You have the opportunity to have **insurance** (in premium accounts), and you can **apply for a personal loan**. Additionally, with **Invest26**, the company has opened up new opportunities for their customers to diversify their financial assets.



While free ATM withdrawals are free in premium accounts, with a basic account you have to pay a 1.7% fee for foreign currencies.

The app doesn't provide virtual cards, and it doesn't have a **rewards programme**. Additionally, it doesn't give you the possibility of buying cryptocurrencies or other functionalities that focus on travelling, for example.

It also does not offer you the possibility to have **multiple accounts** with different currencies and exchange money to and from those accounts. You can't open a joint account.



With this app, you can have **spending budgets, a summary analysis, create standing orders and send or receive money from friends**; you also have instant notifications and integration with Google and Apple Pay.

You can lock your card if you fear it has been ill-used, and you can also split your bills with friends. In addition, you can see transaction data and set up savings. If you encounter any problem, **you have in-app support**.

For Android users, you can choose **different payment sounds**, making it even more fun to receive money in your account.



In order to set up savings pots, you need £1,000. If you have an insufficient balance, Monzo will decline your payments.

Budgeting and summary functionality might be confusing or even incorrect. You do not have a description of scheduled payments or the **possibility to add notes on your savings pots**.

You do not have a rewards programme, insurance or investment options.

chime



With Chime, you can lock your card, you get instant notifications, you can **send or receive money from friends or even split a bill**.

You have integration with Google and Apple Pay, and you have an ATM locator.

There are no fees to maintain an account, and you're able to **set up automatic savings with the round-up of your purchases** or putting aside 10% of your salary.



You cannot have a joint account with Chime and do not have the opportunity to set up a saving account towards a specific goal. Furthermore, your savings generate low interest rates.

You have **limited accounts**, that is you can only have one spending account and one savings account. In addition, if you withdraw cash from an out of the network ATM, you will be charged.

Its customer service could use much improvement as there are lots of customers who complain about not getting a response.

QAPITAL



This app started as a saving planner, but it has since upgraded to something more: you have **goal saving, you have the possibility to invest and set up saving rules.**

Qapital also offers budgeting tools and biometric data for log in.

You can manage your bill payments, you have notifications, you can lock your card and the **app provides tips for how to spend less and save more.** You have overdraft protection and you do not have fees for transfers. Additionally, there's no minimum balance to open an account.



Every account plan has a fee, and you do not have **analytics on your spending data.** Also, your **savings do not generate interest,** so the app is great for short-term savings.

Your account will be locked when you have \$100 or less, and you can unlock it only if you top up your account.

Furthermore, the **customer service is not that efficient.** There are also many complaints about the difficulty of cancelling services with Qapital.

Best Practices

05

It's important to look for best practices not only in the banking industry but also outside of it, so that we can learn from the most disruptive apps in different industries. In other industries, we have witnessed the disruptive power of tech companies like Amazon, Uber, Waze, Spotify and Netflix.

Amazon and Uber have focused on customer pain points and therefore, they are constantly working to deliver a personalised and easy customer experience. Both solutions are customer-centric, and they strive to offer a complexity-free journey. Take Uber's example – its solutions make it so easy to hire a vehicle, and what's even more important is that you never have to exchange physical money with the driver or even take out your card to make the payment; everything is dealt with in the app, making the journey free of hassle.

This seamless experience is possible because of technologies such as geolocation, **predictive models** and machine learning. The same example applies to Amazon's Go stores where

computer vision, **deep learning algorithms** and sensors allow for a seamless customer experience, where you pick the products you want and you just walk out of the store when you've finished with your shopping.

Amazon is also using data to predict customer behaviour and enhance its suggestions but also in order to maximise margins and efficiencies, by using historical information of each consumer and then applying **AI and machine learning** to predict actions and drive future engagement.

Spotify and Netflix use **machine learning** to tailor and curate content based on historical data and also on similar customers' profiles. Customers don't buy individual songs or movies.



Rather, they buy a subscription to a cloud-based service which has unlimited possibilities.

These companies too are focused on **improving the customer experience.**

Finally, Waze has also revolutionised the mobility industry relying on crowdsourcing data – it is an app similar to Google Maps, but it relies on community data in order to provide traffic information in real time.

Waze relies on its network, and the app gets better as more people use it – what Rich Daly (contributor to Forbes) deems the network effect. This network effect, he argues, turns costs into profits, opening up the possibility for companies to invest in transformative technologies and create great user experiences that add value to their customers' lives.

However, the banking industry also has a lot of practices that are worth getting to know.

Mint is one example: as an aggregator of the financial ecosystems of its customers, Mint facilitates the management of money be it in a checking account,

savings account, an IRA or even investments or loans. You can check all your bills and payments and you can set up budgets. Mint personalises your experience by providing tips and advice so that you maximise your money.

Prism (and Yolt) are two other examples of aggregators of accounts and bill management that help you manage your money in one place.

HSBC is the first retail bank testing this type of app that presents the financial information of all your accounts in one app.

Acorns helps you invest all your spare change from your spending.

Personal Capital is a set of financial tools, based on analytics, that helps you manage all your accounts in one place – checking accounts, savings and investments, and even offers financial advisers that provide tips in order to manage your wealth.

Spendee is a great example of spending analytics and smart budgeting – through the app you can check all your expenses, e-wallets, cryptocurrencies and cash expenses, and you can also set up smart budgeting for different goals – all in order to help to get your money into shape.





Through Ant Financial (formerly known as Alipay), **Alibaba group has entered the world of the financial services industry and is revolutionising the way it creates relationships with its customers.**

The group operates in a tech-enabled model in which most operational decisions are made by machines. Machine learning is used in order to efficiently leverage data in real time. This means that machine learning enables the company to turn their data into valuable insights that lead to business gains.

This allows the company to adapt in a dynamic manner and rapidly respond to changing market conditions and customers' preferences.

Ming Zeng, Alibaba's CSO, revealed to HBR that the company follows a smart business logic based on four steps, listed below:

#Step 1 —————

Datafy every customer exchange in order to improve your customer experience and understand which data is relevant.

#Step 2 —————

“Software” every activity in order to build the foundation for the application of machine learning technologies.

#Step 3 —————

Get data flowing through multiple players while guaranteeing strict control of who can access or edit the data in your ecosystem, therefore creating more value.

#Step 4 —————

Apply algorithms so that you can assimilate, interpret and use data to the company's advantage. This makes explicit the underlying product logic or market dynamics.

Alibaba evolved from an e-commerce firm to an asset-manager, lender and payments company and now provides a wide range of products and services from a single platform.

This is possible because of AI, computing and risk management capabilities, which help the company provide more cost-effective financing services. Proof of how new technologies are empowering scalability in finance is the fact that Alibaba became one of top 10 global banks in 2018.

In fact, if you visit My Bank's website, you can see its promise to costumers:

“Based on big data and cloud computing, we can understand your needs. Even before you arrive, we have calculated the help you need”.

New technologies and data sharing are changing the way we interact with our banks, essentially making customers reclaim their personal data in order to gain more choice and also more protection.

The future of banking relies on innovation – it might drive retail banks to partnership with fintechs in order to use data to their advantage.

But the ones that will survive this massive change will be the ones that recognise these changes and use them to innovate and adapt to the ever-changing reality.

Opportunities in Banking

06

Innovation and automation are not about technology or interfaces but simply about anticipating the needs of customers.

With better information on customers' daily decisions about their money and which channels customers are using for different transactions, banks can use behavioural models and advanced analytics to anticipate the needs of customers.

Customer experience in banking can be improved with better customer communication, reduction of friction, complexity and barriers to engagement, improved use of transactional automation and service technology.

In the new landscape of PSD2, there are different opportunities for banks to diversify and change their business models. There are many views on which strategic business options banks can adopt in order to retain existing customers and gain new ones. In Banking Hub's view: "banks must design highly efficient, scalable technology architecture to support innovative solutions. If they strike the right balance of financial-asset management and data-asset augmentation, they have the potential to boost revenue, strengthen margins, and increase market share."

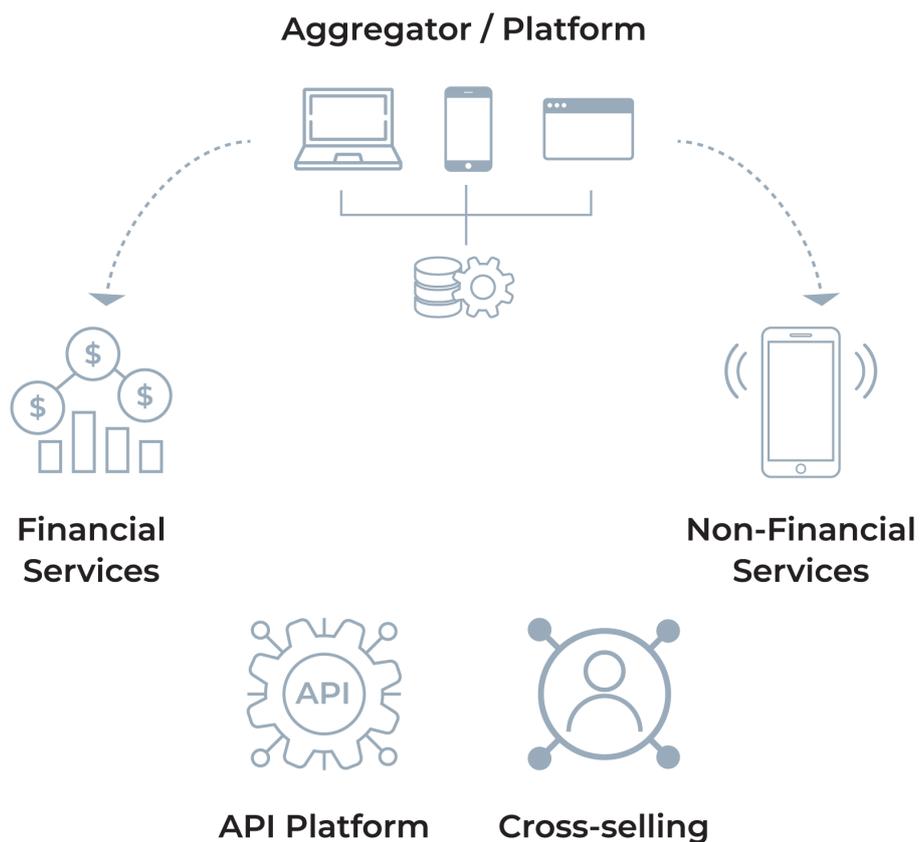
APIs will change banking as they changed a lot of other industries. Banks can serve as API platforms, supplying enhanced data-driven services through APIs based largely on internally derived data.

Alternatively, banks can act as third-party providers, offering services and products that integrate information derived from multiple external sources via APIs.

Banks have the option of becoming an aggregator or even a distributor. By using their data strategically, they can unlock new services and also cross-sell their own products.

Another possibility is to offer partners' financial services on their own platform, just as Starling Bank has started doing.

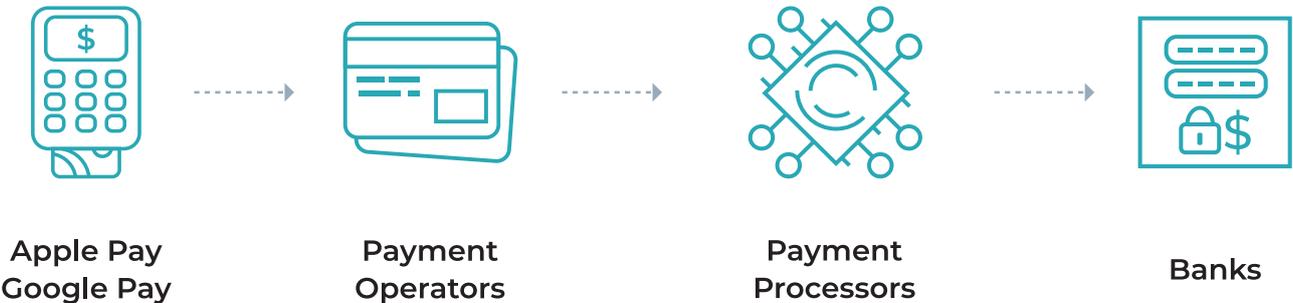
In the future, they might even offer non-financial services from their partners on their own platform.





The global digital payments market was valued at \$3 billion in 2018, and in the last decade the industry has had robust growth with new providers and new platforms. Two of those new providers are Google and Apple. Integrating Apple and Google Pay is also an opportunity for banks. They can simplify the payment process while protecting the user's card information. Through tokenisation, merchants won't ever access the user's card details, therefore increasing security.

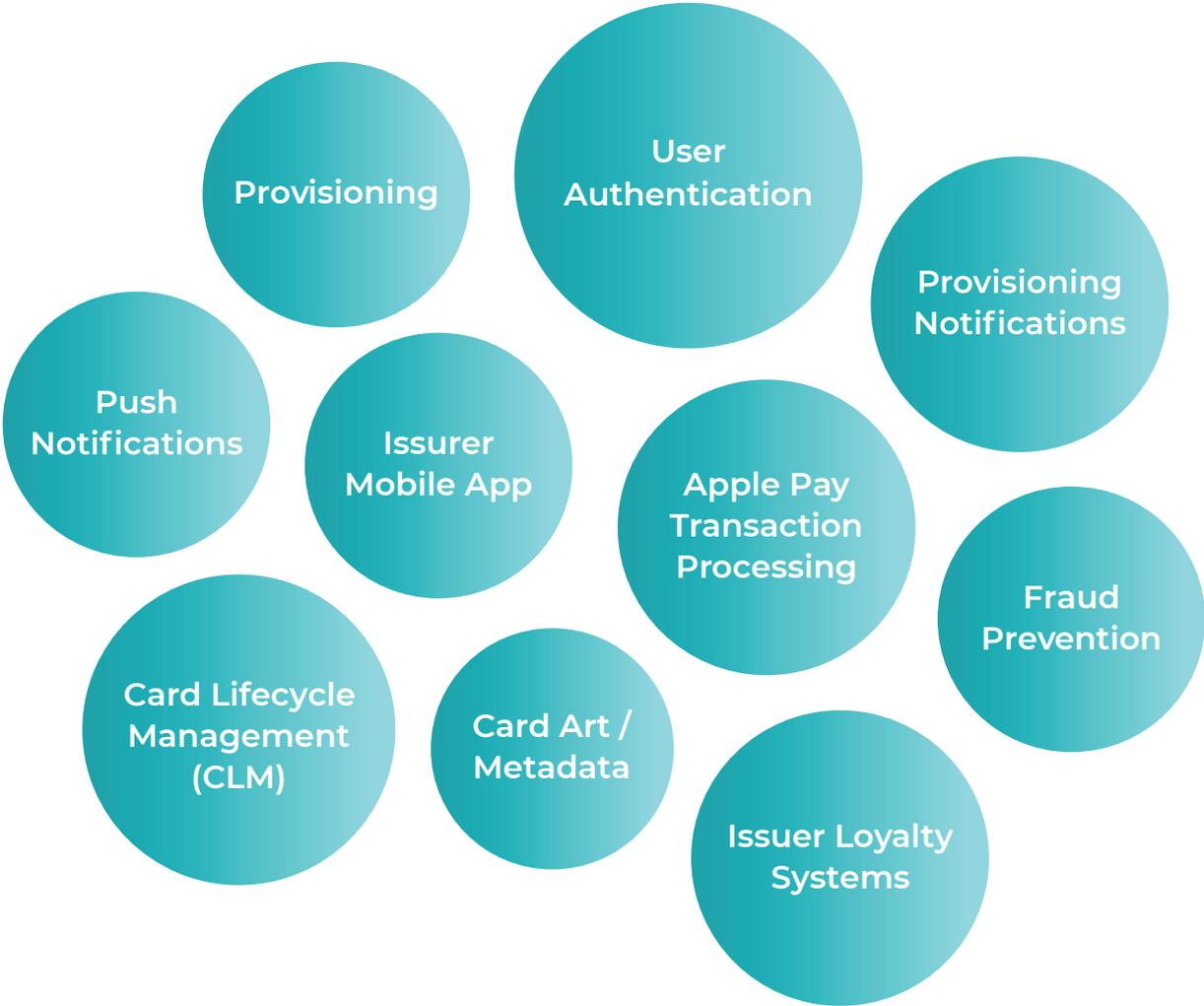
The process looks something like this:



Source: Intellias

Both Google and Apple Pay have a set of requirements for financial institutions to follow, and neither will activate their service unless all requirements have been met.

For Apple Pay, you have the following set of requirements:



Source: Intellias



For Google Pay, the following set of requirements applies:

Registration process	Payment process	Card Management
<ul style="list-style-type: none"> • Device binding and eligibility check • User authentication • Tokenization establishment with SDK providers 	<ul style="list-style-type: none"> • One-tap activation • Two-tap activation that demands a PIN on a device 	<ul style="list-style-type: none"> • Suspend option • Unsuspend option • Delete option

Source: Intellias

Due to the usage increase of the internet on mobile devices and the wide adoption of contactless payments, this market is expected to grow in the coming years. Our society is marching towards a cashless approach, where physical money starts to slowly become irrelevant.

Conclusion

The next few years will no doubt be exciting for the banking industry. We, the consumers, will hopefully see and get to know innovative experiences that will change the way we bank and manage our money. Despite the challenges this industry faces, the future proves to be exciting and challenging but also more refreshing.

PSD2 and Open Banking are only the first steps in the banking industry's ultimate disruption. Fintechs and banks alike should take the opportunity to reinvent their digital experiences – by putting their customers' needs first. **True innovation lies in anticipation – getting to know and listening to our customers is important to actually acting upon their needs. That's how solutions become relevant. That's how you can become relevant.**

In order to thrive, it is essential that banks adopt a customer-centric approach. The truth is, that's why new market entrants have proven to be so disruptive. They dared to put the customer in the centre of their decisions and activities. Every decision is taken based upon the customers and their needs and, at the end of the day, that's what differentiates them from the incumbent banks.

By embracing new technologies and all the opportunities there are to reimagine the customer journey by making use of the right data in the right way, banks can succeed in this new landscape of banking.

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