

SunTec[®]

The Power of Options and Choices

A definitive view on Banking-as-a-Service

e-Book



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Part 1: Setting the Context

Be a bank without being a bank

On New Year's Eve 2022, Indian food delivery giant Swiggy tweeted that they delivered more than 9000 orders per minute. It is quite likely that this number touched 10,000 as it got closer to midnight, but the number is astounding. It certainly was far ahead of the number of orders that the traditional fast-food giants and quick service restaurants could handle. For example, Pizza Hut in India has only around 700 stores and even with 10 orders per minute per store, it would be impossible to beat the bar set by Swiggy and its competitor Zomato.



9049. not the first 4 digits of my number. the current food orders per minute. 🥳

📍 Swiggy @Swiggy · 31 Dec 2021

nothing beats the joy of breaking our own record! from 5500 orders per minute last NYE, to 6610 orders per minute already in 2021, it's been quite a journey 🍷

8:02 pm · 31 Dec 2021 · Twitter Web App

In the literal sense, a restaurant is a place which provides food and by that logic, Swiggy and Zomato could easily be the biggest 'restaurants' in India. And the situation is not too different in other parts of the world. UberEats, Grub Hub, and Meituan Waimai are some of the largest 'restaurants' in the world.

Today Airbnb has more hotels and places to stay listed on their website than the world's top five hotel brands combined. And on the day of its listing on the bourses, Airbnb became more valuable than the combined market capitalization of the three largest global hotel chains. Remember, Airbnb never owned a single hotel room until that point of time. Essentially, Airbnb gave customers a choice of staying without getting a traditional hotel involved.

All these are results of the growing concept of the 'as-a-Service' economy where subscriptions and pay-per-use are the primary revenue models. The 'as-a-Service' economy is present across the world – be it toothbrushes (ever heard of burst?), movies (Netflix or the hugely popular MoviePass), healthcare, and even cars – as it is revamping traditional business models.

Banking-as-a-Service (BaaS) is similar. It is all about an organization (any organization for that matter) offering a financial service (any financial service for that matter) to its customers without getting a bank involved in a traditional way or even having a banking license.

Everyone across the world seems to be talking about it because the market potential is huge – don't be surprised if someone says it could be worth upwards of \$7 trillion by 2030, which would be much more than the combined present-day market valuation of the top 30 global banks.ⁱ

Apple Card, launched in 2019 in partnership with Goldman Sachs, is another great example. In just two years, Apple Card became the highest ranked card in the Midsize Credit Card segment in the J.D. Power 2021 U.S. Credit Card Satisfaction Study. Apple Card and issuer Goldman Sachs were ranked the highest in the midsize credit card segment across all the surveyed categories, including interaction, credit card terms, communication, benefits & services, rewards, and key moments.ⁱⁱ

This is a great example of how an industry can be disrupted when an external organization brings in an outside-in perspective. In partnership with an existing player who knows the pulse of the industry such a player introduces a new product variant into an industry that had not seen innovation in a long time. It is a great example of how customers are willing to take a leap of faith if the product is good and it is a great example of how organizations, as part of an ecosystem, can succeed without 'owning' the customer.

The aim of this e-Book

This e-Book is a guide to the world of BaaS.

Before we go into the details of BaaS, we will look at its place alongside other counterparts like Banking-as-a-Platform and Open Banking.

We will then understand the reasons for the emergence of BaaS and look at the evolution of BaaS over recent years. BaaS will not only change the way we interact with banks but will also have a substantial impact on the banking value chain. We will also understand that like any change, BaaS offers a lot of benefits along with pitfalls which banks will have to navigate and this e-Book covers that too.

Finally, we will identify what banks need to do and the behaviors that they will have to adopt to ensure success in this transformed world of BaaS. We will also discuss technologies that they will have to adapt to deliver optimum value to stakeholders through BaaS.

BaaS, BaaP, and Open Banking – A story of difference amidst similarity

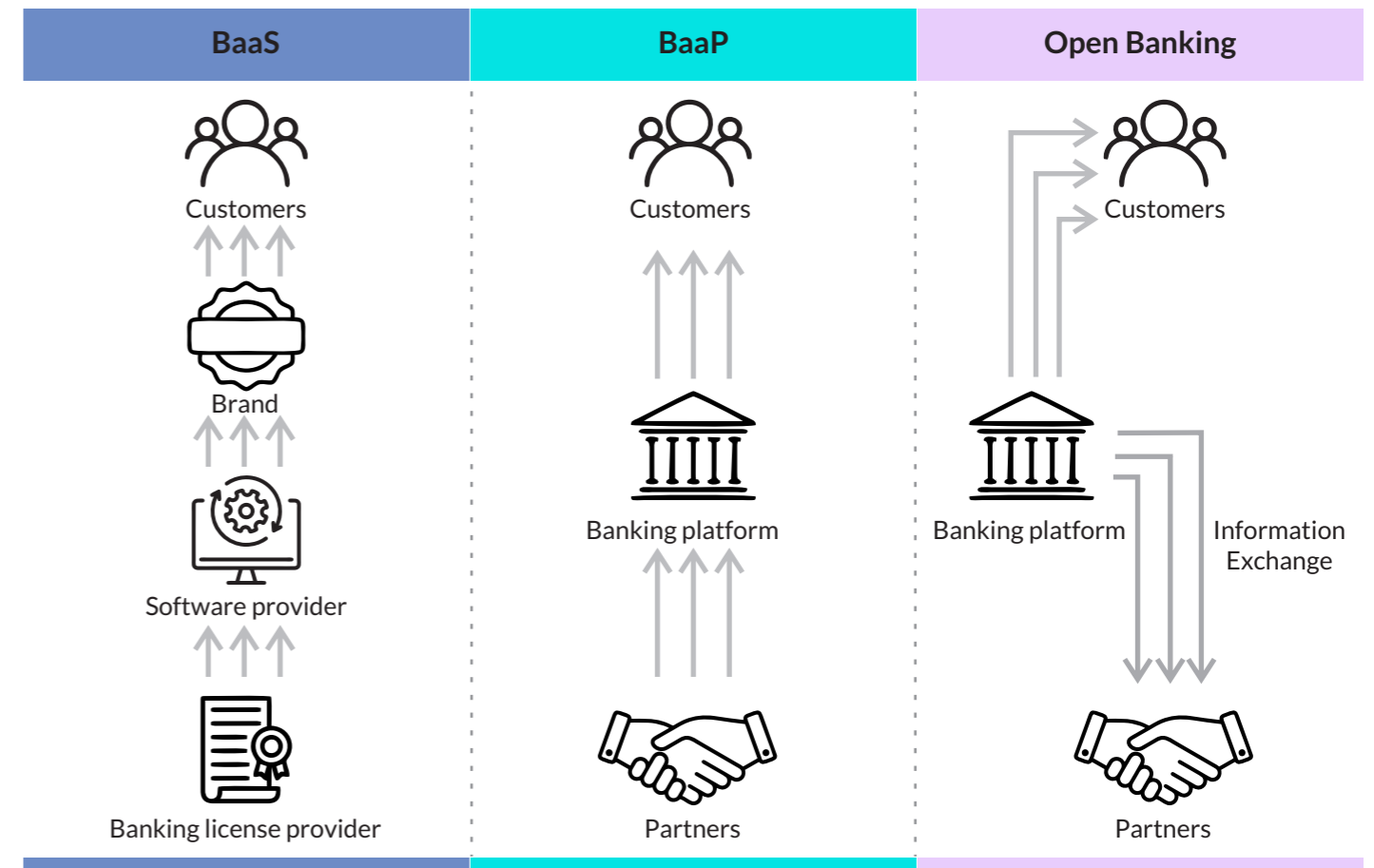
BaaS, BaaP, and Open Banking involve banks. All three have the potential to create an exponential change in the world of banking. All three, if done right, have the capability to create an amazing change to stakeholder benefits. And yes, all three involve partners beyond banks. The similarity ends there.

The differences are quite strong.

BaaS, as mentioned, involves three stakeholders at its core – the brand that interacts with customers to provide the financial products; the set of BaaS software providers; and the financial institution that completes the financial transaction within the regulatory framework. In this concept, APIs are used to exchange data and information between the three stakeholders.

In open banking, non-banking businesses only use the information from the banks to provide value-added services to customers. For example, let us consider an app that provides you with spend analytics based on your financial transactions using your bank's card. This app takes the data from the bank through APIs and provides you with a value-added service. It may or may not recommend financial products suited to your needs based on your spending patterns. But in open banking, the boundaries are drawn to consider only the exchange of information.

Platform banking is significantly different. Here, a bank integrates products and services from different fintech and non-financial providers to augment existing offerings. For example, the bank can onboard a virtual assistant software provider to provide a personal digital assistant to its premium customers. Or the bank can onboard an architecture firm to provide its home loan customers the option of interacting with the architecture firm to design and build their homes in a more cost-effective way. In essence, the concept of platform banking is inverse of the concept of BaaS.



Part 2: The BaaS Story

BaaS in real life

Just before the pandemic, reports of South Korean banks getting wary of Starbucks started emerging. Korean banks felt that Starbucks, with deposits amounting to 70 billion Won was an unregulated financial services firm and had the potential to disrupt the existing South Korean financial services industry. These rumors were not based on speculation only, but on calculated assumptions. In the U.S. for instance, Starbucks has more money loaded into its cards than several U.S. banks. Even though Starbucks does not have any banking license, Starbucks has the potential to become a financial institution with billions of dollars of assets from inception through the cash its customers have loaded into their cards.

Starbucks does not partner with any financial firm, does not have a banking license, and its customers don't earn interest on the money loaded onto their Starbucks cards. But Starbucks is still an excellent example of the potential of BaaS. The Starbucks card, and the Starbucks app are excellent examples of successful loyalty management platforms. And BaaS is all about non-financial organizations offering one or more banking services in partnership with a set of BaaS providers and financial institutions which have the regulatory approvals and industry expertise to offer financial services.

In short, we can consider the BaaS ecosystem to be made up of three layers:

1. The interface layer – provided by the brand that is the front-end to the customer.
2. The intelligence layer – provided by a BaaS platform and a suite of BaaS software that connect through APIs.
3. The infrastructure layer – provided by a financial institution.

For example, in the case of Apple Card, the interface layer is provided by Apple, the intelligence layer is provided by the software suite that Apple has onboarded, and the infrastructure layer is provided by Goldman Sachs.

BaaS is not a new idea altogether. As Deloitte mentioned in their report, BaaS is part of an evolutionary journey that started with the concept of cobranded cards and loyalty cards. The ultimate destination is for customers to get access to value as close to their point of need and not way before or long after. It is important to understand that BaaS is also not a destination but a path or a strategy.

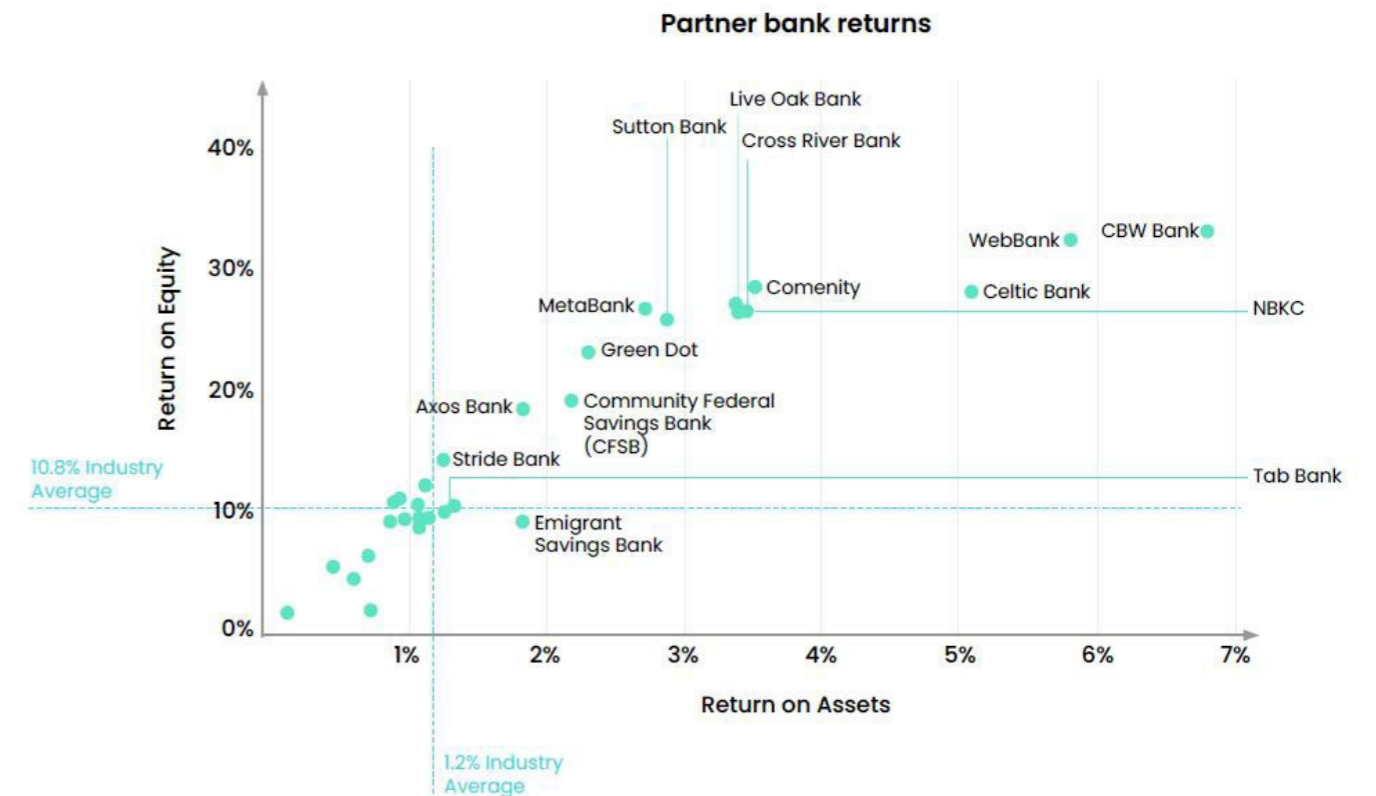
Evolution of Banking as a Service



Banking as a Service Explained: What it is, Why it's Important and How to Play; Deloitte Digital

Until now, barring a few exceptions, it was the smaller banks and the neobanks that dominated the BaaS market. It was easy for them to be agile and forge partnerships with other organizations to build the necessary changes in their technology architecture.

But recent years have witnessed larger banks like BBVA and Goldman Sachs making inroads into the BaaS market and the benefits are already visible. As per a recent report by 11FS, 'banks that have embraced BaaS and embedded finance are generating higher returns'ⁱⁱⁱ.



Report by 11FS – Better banking business models: embedded finance and the path to growth

BaaS is also a study on how successful partnerships can deliver value. Paytm, an Indian digital bank and payments app, has a large base of customers to whom it offers a plethora of services including personal loans. With a large amount of capital at its disposal, it would have been easy for Paytm to disburse its own loans. But instead, it partnered with banks such as IDFC First to distribute loans.

The fundamental forces at play that led to the birth of BaaS

Apart from ever-evolving customer demands, there are three fundamental forces at play that contributed to the birth of the concept of BaaS.

Why should customers take a detour?

The first and foremost factor is the fact that organizations want their customers to be deeply entrenched in their own value stream and do not want customers to move out. For example, let us consider a customer booking a holiday through Expedia which includes flights, hotels, and local transport. There are two options if the customer wants to avail themselves of a loan for the holiday – go to a bank for a loan or go through Expedia itself. The second option is preferred by both Expedia and the customer. The disruptions in the customer's journey are minimized and unlike a financial institution Expedia can provide a loan that addresses the immediate requirements of the customer.

Banking is a serious business

The second factor is the realization that not everyone can be and should be a bank. Apart from providing deep industry expertise, banks and other financial institutions have a special place in any nation's economy. Hence a strong regulatory framework is required to manage the flow of capital across the banking ecosystem. Every country has its own rules on who can deposit money, who can transfer money, and who can avail credit via the banking ecosystem. This enables governments to maintain control and still offer flexibility to the necessary stakeholders to enable secure and smooth flow of capital. By segregating regulatory responsibilities away from other organizations in the BaaS framework, regulatory authorities can achieve these goals.

It is easy to start a bank!

For several years, the banking industry was a closed one – with heavy regulations, and an immense amount of capital requirement. While some regulations remain, and the capital requirements are not small, starting a bank is now as simple as the click of a button. And this ease of starting a 'bank' is the third force that contributed to the birth of BaaS.



The screenshot shows the AWS Digital Banking Home Page. At the top, there's the AWS logo and a navigation menu with items like Products, Solutions, Pricing, Documentation, Learn, Partner Network, AWS Marketplace, Customer Enablement, Events, and Explore More. Below the navigation is a secondary menu with categories like Financial Services, Overview, Segments, Use Cases, Compliance, Security, and Governance, Case Studies, Resources, and Partners. The main heading is "Build a Digital Bank on AWS" with the subtext "Yesterday's tech can't power today's advances" and a yellow "Get Started" button. Below this is a blue banner that says "Free AWS Training | Focus on the cloud skills most relevant to you—choose from 500+ digital courses across 30+ AWS solutions". The main content area has a paragraph: "Financial institutions are now considering how they fit within the world of digital banking as customer expectations, regulations, and new digital banking licenses drive change across the industry. At the same time, many consumers are considering a move to digital-only banks as their appetite increases for digital channels and personalization. Digital banks can meet regulatory requirements while developing new business models by building a secure, scalable, and innovative platform in the cloud with AWS." Below this is a section titled "Digital banks are finding a home on AWS" with a world map showing logos for various digital banks like Chime, Varo, NEQUI, nu, TymeBank, Openbank, Starling Bank, Tandem Bank, OakNorth, monzo, Solarisbank, N26, SPACE, WeLab Bank, mox, qonto, TONEX, tonik, Hay, and judobank.

The Digital Banking Home Page of AWS shows how easy it is for any organization to start a bank

Reimagining the banking value chain

Goldman Sachs, for its 2020 Investor Day, presented a mammoth 263-page report outlining its recent successes, learnings, and strategy for the coming years. It was on the back of a successful partnership with Apple for launching the Apple Card and immediately after it had successfully launched Marcus, an online only bank which had disrupted existing high street banks.

While the voluminous presentation was not a surprise, what was surprising was the amount of importance given to BaaS – it was placed as the topmost stack on the innovation areas planned for the current decade.

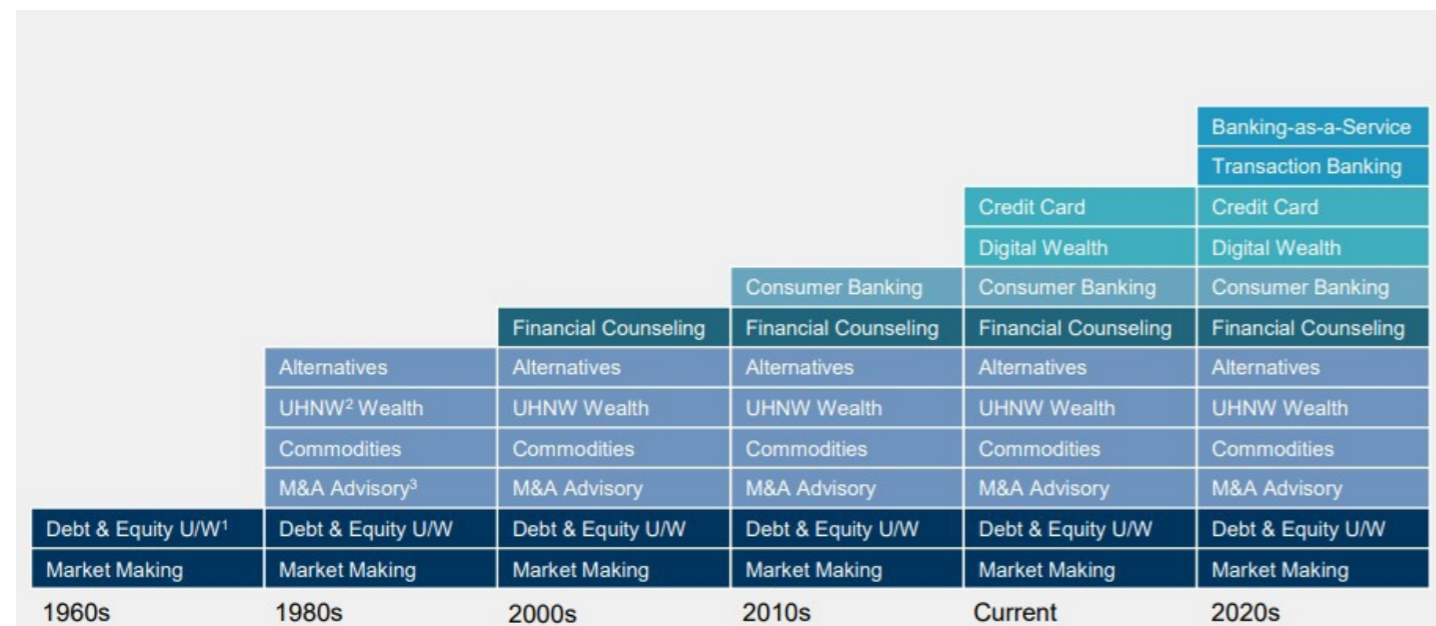


Figure – Snippet taken from Goldman Sachs Investor Day 2020 Presentation outlining its track record for successful change and innovation

This was a high street bank that was ready to accept that one of the strategic directions it will take in the coming decade is to give utmost importance to Banking-as-a-Service (BaaS). Clearly, Goldman Sachs had seen something after their partnership with Apple. In fact, Luc Teboul, the Head of Engineering - Transaction Banking wrote in the Goldman Sachs blog about the reasons why Goldman Sachs entered the BaaS playing field.

As Goldman Sachs Transaction Banking (TxB) set out to build its platform a couple years ago, we had a clear focus on meeting the needs of treasury clients in search of a better, fully digital system. We chose ourselves as our first client, figuring that if we worked from a blank sheet to meet the complex treasury needs of a company like Goldman Sachs, we would be well on our way. It didn't take long to realize, however, that we were developing a system that could be shared with a larger universe of digitally savvy clients—not just corporate treasury clients but also fintechs and e-commerce marketplaces. That's how we entered the Banking as a Service (BaaS) sphere, recognizing that we had something unique to offer there too.

It is not just the high street banks who have realized the potential of BaaS. Walmart, the world's biggest retailer, is planning to enter the world of finance through its partnership with Ribbit Capital. IKEA, the innovative furniture retailer, bought a 49% stake in its financial services partner Ikano. Right from offering point-of-sale loans to loyalty programs and rewards, organizations across the world are realizing the power of partnering with financial services providers.

Earlier, banks used to design and develop a product and sell it through its branches or through other channels such as co-branded cards or specific loans or mortgages. These products were designed and developed based on the significant amount of data that banks are privy to. And this data was aligned with the goals of the banks for the immediate future. There were hardly any intermediaries in the value chain between the banks and the customers.

With the emergence of BaaS, this value chain has been disrupted and reimagined. It is still the banks that own product development, but the design is not just based on the banks' whims and fancies. Instead, it is based on comprehensive input of data from the organization that owns the end customer experience, and intermediate software providers who form the core of the intelligence layer in the BaaS ecosystem. The products are aggregated by the intelligence layer and distributed by the interface layer, that is the point of interaction with the customer.

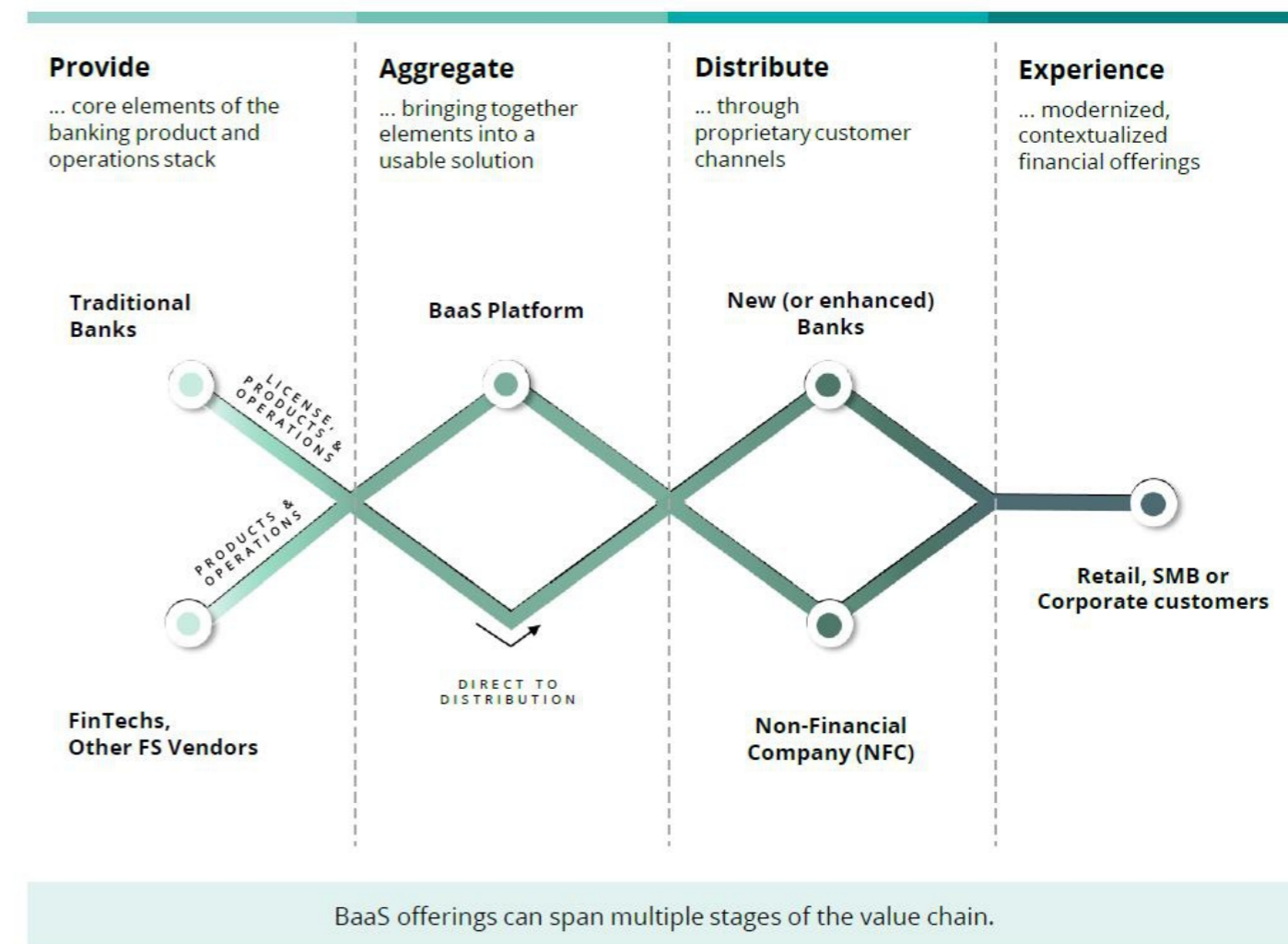


Figure: How BaaS is disrupting the banking value chain, taken from Deloitte report^{iv}

Part 3: The Drivers Contributing to the Growth of BaaS

The reimagination of the banking value chain and the subsequent growth in BaaS have been driven by a dramatic overhaul of the bank's internal and external environment in recent years. We will explore this in the following section.

We can call this era of overhaul as the TRACE overhaul – Technological, Regulatory, Architecture, Customer Expectation, and Ecosystem Overhaul.

The era of overhaul

The last decade in the last millennium was quiet. The internet was just beginning to pick up pace. Amazon and Google were upstarts. We associated the cloud with weather. Apart from the geeks, no one had heard of abbreviations like 5G, PSD2, APIs. And Blockbuster was the primary refuge for finding rare movies.

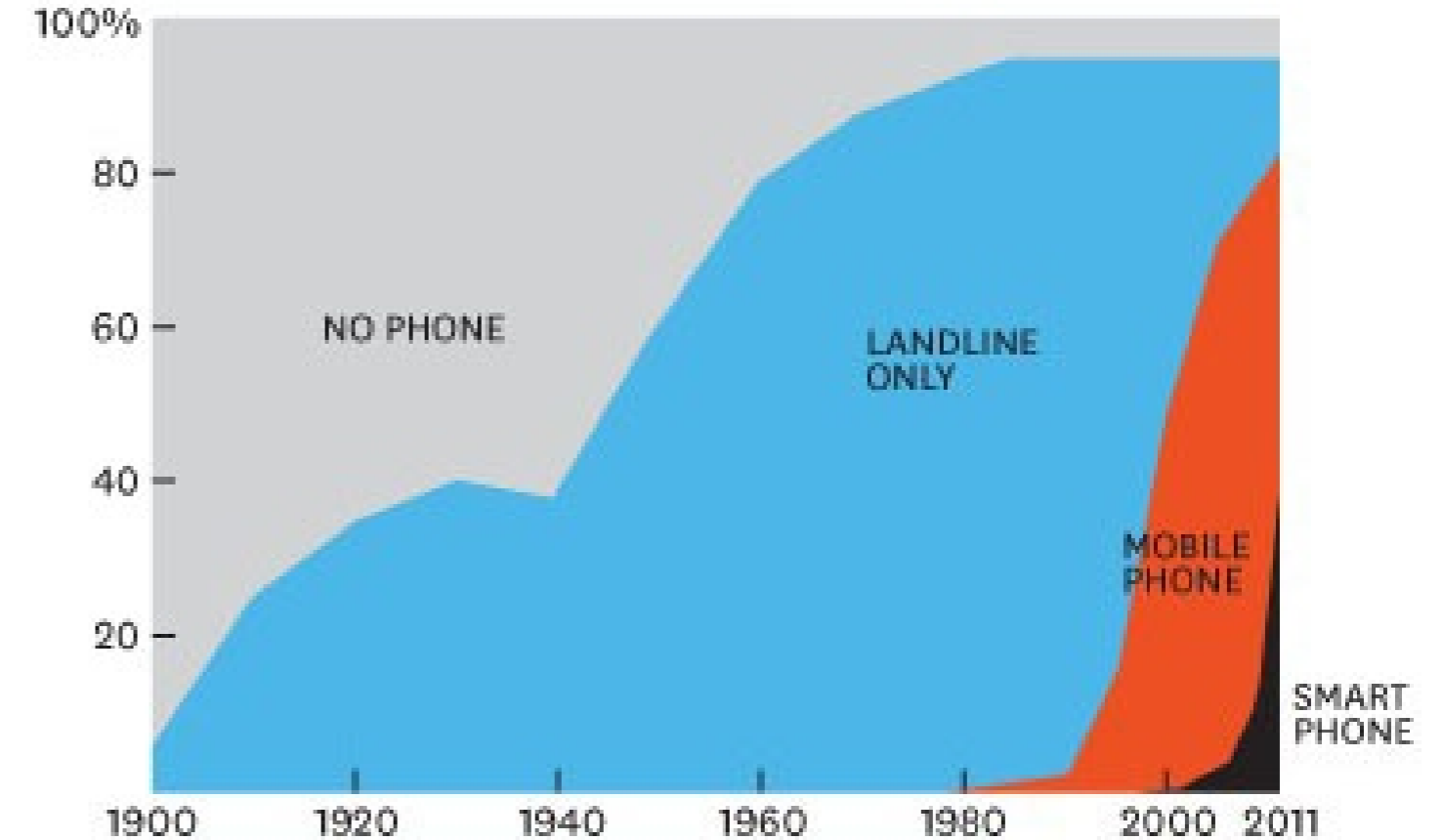
Nearly a quarter of a century later, we can blame the internet and mobile phone for all our problems. Amazon and Google make more money than several nations put together. The cloud is ruled by the technology behemoths and is the bread and butter for many technology companies. We live in a world of abbreviations where a new one lands in our inbox every single day. Newer versions of emojis come with the launch of every new iPhone model. And yes, hello Netflix.

We are officially in the era of overhaul.

The graph given shows that the world is adopting smartphones and mobile phones at unprecedented rates.

FROM NO TELEPHONE TO SMART PHONES

U.S. HOUSEHOLDS BY TYPE OF PHONE, 1900-2011



SOURCE MICHAEL DEGUSTA AT THE MIT TECHNOLOGY REVIEW USING DATA FROM FORRESTER, KNOWLEDGE NETWORKS, NEW YORK TIMES, PEW, U.S. CENSUS

HBR.ORG

The same is true with many innovations and regulations across the world. Innovations like cloud, regulations like PSD2, architectural concepts like SOA etc., have been adopted faster than ever before.

In recent years, most banks across the world have been struggling with stagnant profit margins and flat ROE. The share prices of many banks increased during the pandemic, but even then, they paled in comparison with their tech counterparts who have consistently outperformed the financial service majors over the last decade. Customer trust in financial service providers has reduced too as they now have access to other viable alternatives. In this context, the overhaul in each of the following areas has been critical in driving the shift towards a BaaS world.



Technology overhaul

In the last five years, the world has witnessed the adoption of several technologies. Concepts such as cloud and edge computing, 5G, Machine Learning, and Artificial Intelligence were only beginning to emerge at the start of the last decade but are the fulcrum of any technology stack today.

This overhaul has made technology more affordable and more accessible. This means that more companies can access the latest technologies without investing big bucks upfront, and without having access to heavy computing power.

How has this resulted in the growth of BaaS? Simple – BaaS, by concept, is built on two foundations. One, a layered approach that consists of different components or apps which require a fast and real-time transfer of information between the layers. And two, the need for access to computing power in a cost-effective way. The latest technologies have made this possible – significantly more data can be exchanged in a shorter time frame across two different entities, that may be on two different continents. A lot more data can be analyzed with a lot less human involvement. And all this can be done from any corner of the world.

This has resulted in the adoption of the BaaS concept as organizations across the world can connect with a provider and other parts of the ecosystem easily and cost effectively.

Regulatory overhaul

The world of banks was, is, and will always be governed by strict regulations because banks can impact a nation's economy, and probably national security. Governments cannot be blamed for being stringent when it comes to the banking sector. The impact of the Great Recession of the 1930s was exacerbated because commercial banks were too speculative and took too many risks with depositor funds which led to heavy regulations like the Glass-Steagall Act.

Over the last decade, governments, and regulatory agencies, aided by technology overhaul and a shift in customer mindset, have eased up on policies and regulatory frameworks. Regulations like open finance, PSD2, and to a large extent GDPR have helped the world of banking be more open and accommodative to partners and other stakeholders.

This has blurred the regulatory boundaries between what a bank and a non-banking entity can do. This means that banks are now compelled to share access to the data they hold within their systems via APIs. It also means that any organization with the right ambition and with the right set of partners can become a bank. It has given rise to a new set of companies – the BaaS providers – who are not banks but have all the capabilities of banks.

Architecture overhaul

From the time of monolithic architecture models, software architects have followed a service oriented or event-driven microservices architecture. The individual components of a software are becoming smaller as the concept of micro-frontends are evolving. This is because the focus is on improving developer productivity, faster time-to-market, and being agile to respond quickly to evolving market trends.

This overhaul of architecture has meant that there is an improved information flow and an increased ability to expose internal functionalities. Today banks can share data with relevant stakeholders securely and quickly and leverage functionalities from their partners in a seamless manner.

This has enabled non-banks to quickly build the set of services required for offering financial services through API gateways, event management, and service orchestration. Agility and scalability are not hindering the thought process of these non-banks as dependence on any one platform or location is not a drawback. Reliability and reusability from the architecture overhaul are the obvious advantages for different partners in the BaaS ecosystem. And not to mention, software has become easier to maintain.

In short, the continuing evolution or overhaul of architecture has been one of the driving forces in the rise of BaaS.

Customer expectation overhaul

At the turn of the new millennium, a good percentage of people across the world still chose a bank because of the following reasons – proximity of the branch to their home or office, their relationship with the branch manager, and the perception of trust that the bank had with a customer. Waiting at the branch to clear a check or going to the branch to deposit or transfer money was not an exception, but a norm that people were willing to accept.

Cut to 2022 and reports indicate that if the current trends continue, we can expect bank branches to be extinct by 2034.^v We expect money to be credited the instant we make the transfer. Customer expectations have changed dramatically over the last two decades driven by increasing mobile penetration, the influx of a new set of customers, and a host of other factors. One of the key trends that has changed in the last five years is the readiness of customers to adopt a hitherto unexplored product or service. For example, in India, Paytm, a digital wallet and payments enabler witnessed 471% increase in loans distributed in the first two months of FY 2022-23.^{vi} On the other hand, HDFC, one of India's largest private sector lenders and banks witnessed a growth of only 21% in the previous financial year.^{vii} The COVID-19 pandemic also accelerated nascent customer trends as people were willing to opt for alternative banking methods. For example, fintechs such as WorldRemit, Remitly, and TransferWise reported record growth in their digital business driven by stay-at-home orders during the pandemic.^{viii}

We must understand that most of these trends have resulted in a customer expectation overhaul. They are here to stay and have already led to customers being increasingly open to working with non-banks for financial services. Moreover, customers prefer to have access to a financial service at the point of need, not before or after that.

Non-banks have leveraged this opportunity to scale up their market – in terms of the products and services they offer as well as in terms of the customer and market segments they are targeting. To scale up quickly, they tied up with software providers and banks to leverage their technological capabilities, regulatory knowledge, and licenses. This has resulted in a faster adoption of the BaaS concept in the last two years.

Ecosystem overhaul

Ecosystems have always existed. Platforms have also existed since the concept of trade flourished. It is only in recent years that the concept of ecosystems has drawn the attention of business leaders and industry icons. This is largely due to the rise in concepts like shared economy, marketplaces, and the success of companies like Uber and Amazon.

The world of banking is no different. Given a chance, all banks want to be the central cog in their own ecosystems. And this is a concept many banks are pioneering through the idea of Banking-as-a-Platform (BaaP). But from a banking perspective BaaS is an inverse ecosystem as it is not at its center. It is primarily controlled by non-banking companies who are trying to orchestrate an ecosystem of financial and non-financial banking services by partnering with different BaaS companies and financial service providers.

The readiness of all stakeholders including banks and different suppliers to be part of an ecosystem and not focus on customer ownership has been one of main growth drivers of BaaS. The stakeholders of the BaaS value chain realize that the maximum value realization of the ecosystem is by optimizing the value at each node.

This realization has meant that more companies are ready to explore a business model where they are not the primary customer owners but are contributors in a successful value chain – either in a vertical or a horizontal mode. The emergence of APIs, and the rise of the prosumer economy has also boosted this thought process.

As part of this ecosystem overhaul, new business models are emerging as organizations are willing to move away from the tried and tested path. Priorities are changing as the focus has shifted towards providing the optimum stakeholder value and not just shareholder value.

BaaS, a business ecosystem with its pre-defined rules and relationships, is constantly evolving like a natural ecosystem and overhauling existing business models. This in turn is driving further adoption of BaaS across the world of financial services.



Part 4: The Good, the Bad, and the Ugly

While BaaS may bring a different set of benefits and drawbacks for each of its participants, for banks, the outcome will be beneficial if they play their cards in the right way.

The good news

BaaS brings in an entirely different business model for banks. In the world of BaaS, banks do not directly sell their products or services to the customer but do so through an extended value-chain consisting of other partners, BaaS providers, and an organization which acts as the face of the ecosystem.

In such a scenario, banks will have **access to previously unexplored markets** that can easily be opened up by the customer-facing organization. For example, Ikano Bank partnered with IKEA to offer point-of-sale loans to IKEA customers across their stores. This opened a whole new market for Ikano as they were able to provide a new set of customers with their products and services at the point of need. In fact, the success of the partnership prompted IKEA to buy 49% stake in Ikano Bank, a move widely seen as the entry of IKEA into the consumer financial services market.

Banks **do not have to invest heavily in acquiring new customers or entering new markets** as these activities will be done by the customer-facing organization. This will ensure the bank's **access to incremental revenue at minimal incremental cost**, leading to **higher profits and a better than average return on assets**.

Banks can also **achieve a greater share of customer wallets** as the customer may choose related products based on the experiences that they receive from the BaaS ecosystem. Through this, banks can also aim to **deepen their existing customer relationships**.

Banks can also use the BaaS ecosystem to **test out new products and services and get customer feedback quickly**. This will not only ensure **faster time-to-market**, but also provide banks with a quicker feedback cycle which can help them **improve their products faster**.

For example, the Uber Debit Card for its drivers, powered by GoBank, an online bank, went through multiple iterations, and is still going through improvements, as it aims to provide the best incentives for its driver partners. After several rounds of feedback, Uber is now able to pay billions of dollars to its drivers in an instant— with minimal time and money lost on transaction fees.

Banks also **have the potential to rethink their customer experiences by adding new value propositions** that are relevant to customers and other stakeholders in the BaaS ecosystem. In fact, they can use BaaS as an opportunity to rethink, revive, and relaunch themselves. Through the opportunities that BaaS creates, **banks can also focus on being more integrated, yet invisible in their customers' lives through the concept of embedded banking**. As banks go about rethinking their roles and value propositions, they will also realize that they have a lot of non-value-added components in their value chain which are non-essential to the end customer. They can use this opportunity to perform a value stream mapping and push the non-value-added components and activities out of the value chain to improve agility and efficiency.

Through BaaS, **banks will also have an opportunity to strengthen their core** and make it more digital with effective hyper-personalization, real-time data transfer, embeddedness, and greater conversion at a transaction level.

The not-so-good news

A recent article in The Economic Times elaborated on how CRED, one of India's premium fintech companies has been competing with banks for share of customers' wallet through a set of innovative policies. In fact, CRED's lending business is around the size of private sector lenders such as Kotak Mahindra Bank and many banks see it as a poaching.^{ix}

The companies that act as the customer facing interface providers are competing with banks themselves to gather a piece of the same cake. If CRED could reach the lending volumes of a well-established bank like Kotak Mahindra Bank within a couple of years of its launch, imagine the disruption a host of such brands can cause in the financial services space. One needs to look at the example of how companies like PayPal, TransferWise, and Paytm have transformed the digital payment space in a matter of few years.

Right now, most BaaS companies and fintechs handle only low volume transactions, but this may change in a matter of a few months. Aided by regulatory frameworks, the fintechs and **BaaS providers can expand their footprint into high value transactions** such as home loans and vehicle loans. And they can do so in a matter of days as they are supported by a stronger technological framework and are not crippled by legacy issues that hold back many banks even today.

The other danger for banks is that BaaS has enabled a faster and more free exchange of data across the three layers mentioned earlier - the infrastructure, the intelligence, and the interface layer. The opening up of data, so far controlled by the banks, **has levelled the playing field as fintechs and banks along with a host of other companies have access to information on customers and their transactions**. If fintechs and other competitors can make better use of this data, the threat to banks is manifold.

As companies that are at the forefront of the BaaS ecosystem such as CRED, Paytm, Uber, and Apple become **more powerful and gather a larger mass of customers, there is a chance that some of these brands can follow the path of passive aggression**, to obtain lower rates for better services from financial service providers. This can impact the banks' balance sheets which are already under pressure because of macro-economic trends and other factors across the world.

It is also important to remember that the **greatest threat for banks comes from the disconnect with customers in a BaaS ecosystem**. As pointed out earlier, the number of intermediaries between the customer and the bank increases in the BaaS ecosystem. In such a scenario, the customers can conveniently 'forget' banks as the customer stickiness will be towards the 'brand' that operates the ecosystem. Customer loyalty towards banks may become a cause of concern as banks will be seen only as service providers who can be replaced by simply changing the connecting APIs.

The good news is that this can be averted if banks act intelligently. For example, if banks can work towards becoming the owners of the customer experience, then customer loyalty may never be a question. If banks can calculate and provide the value of each transaction to each of the stakeholders, banks may not be considered as a replaceable entity, but as an integral part of the ecosystem. The onus is on banks and the financial service providers to ensure that they turn these risks into opportunities and avenues for growth.



Part 5: The Way to Success

HSBC is a global banking behemoth and Oracle is one of the largest software providers in the world, and if both decide to get into a partnership, it is worth taking note of.

In October 2021, HSBC announced its foray into the world of banking-as-a-service through a partnership with Oracle, which the CEO of HSBC's global commercial banking termed "the first alliance of many." *Through this partnership, 'enterprise customers of Oracle's NetSuite cloud business and accounting software could tap into HSBC's payments and business banking tech to send and receive money automatically. For instance, an expense report could be automatically filed through NetSuite and then paid out via HSBC without any human involvement.'*

With this partnership, HSBC wanted to partner with their clients to offer business banking propositions, integrated into their platforms with the support of HSBC's technology and international network. In short, HSBC wanted to play a deeper part in the end customer's value chain by being part of such large ecosystems. But given the increasing popularity and widespread adoption of BaaS, this may not be an easy task.

Neobanks and smaller banks have a head-start over large global banks as they are quick to spot the opportunity and act fast. The larger global banks have a lot of distance to cover even with their larger customer base and substantially better financial muscle as the focus is more on agility and execution.

The key to success on the road towards a BaaS utopia for banks will be to follow a six-pronged strategy hinged on providing optimum value to each stakeholder. This is described below.

Focus on customer experience orchestration

This is the experience economy. Right from buying a bottle of salt to cleaning their house, customers prefer experience over the functionality, usability of the product or the service.

There is no better example for this than the HBR snippet which popularized the term 'Experience Economy'^{xi} – 'How do economies change? The entire history of economic progress can be recapitulated in the four-stage evolution of the birthday cake. As a vestige of the agrarian economy, mothers made birthday cakes from scratch, mixing farm commodities (flour, sugar, butter, and eggs) that together cost mere dimes. As the goods-based industrial economy advanced, moms paid a dollar or two to Betty Crocker for premixed ingredients. Later, when the service economy took hold, busy parents ordered cakes from the bakery or grocery store, at \$10 or \$15, that cost ten times as much as the packaged ingredients. Now, parents neither make the birthday cake nor even throw the party. Instead, they spend \$1000 or more to "outsource" the entire event to Chuck E. Cheese's, the Discovery Zone, the Mining Company, or some other business that stages a memorable event for the kids—and often throws in the cake for free. Welcome to the emerging experience economy.'

Customers want to avail themselves of financial services at the point of need across the value chain. And BaaS is just a pitstop as customers and organizations are racing towards the world of embedded finance and embedded value chains.

Banks and other financial service institutions need to realize that they are not in business of providing financial products or services but are in the business of creating a memorable experience that facilitates the customers' needs like a vacation, or buying a home or a car, or their marriage. This realization is even more important in the world of BaaS as banks are facilitators and infrastructure providers in an ecosystem of stakeholders who work together to create a memorable experience for the customer.

Banks must focus on orchestrating this customer experience across the value chain as other stakeholders including the customer-owning brand will look at playing their own parts. For example, in the case of Apple Card, Apple will focus on the user experience and the offers when a new customer signs up. And Goldman Sachs is responsible for managing the underlying process frameworks for smooth onboarding, and the scalability to handle millions of new customers at the same time. Goldman Sachs is responsible for ensuring controls, and more importantly, the right infrastructure to make sure there is no chance of failure as the new customer handles each step of the onboarding process.

This enhanced focus on customer experience orchestration will necessitate that banks look at their own internal processes, systems, and practices, and reimagine them to cater to the increased expectations of on-demand real-time needs of the BaaS ecosystem.

Prioritize relationships

Banks were one of the earliest pioneers of relationship-based pricing as they realized that each customer is different. But because of the lack of technological capabilities, they had to categorize these individuals into broader segments and had to pigeonhole the products and services into these segments. Yes, the banking regulations also played a part in this. Over the last five years, thanks to big data, machine learning, and artificial intelligence, companies have been able to leverage data for better understanding of customers and their needs. The personalized recommendations of Netflix or the recommendation engines built by YouTube and Google are great examples of companies using multiple factors to suggest a product or a service that is built for a segment-of-one target. In fact, a retail behemoth used information like customer ID that stores information ranging from ethnicity to job history, as well as buying behavior, to form a “pregnancy predictor score.” This score allowed them to determine which purchasing patterns indicated a customer was in the early stages of pregnancy. They then offered those customers highly personalized products that met their requirements.

Banks will have to take a cue from these companies and build products that cater to the unique needs of each customer. This will be one of the primary requirements of banking service provider in a BaaS ecosystem. For this, banks will have to leverage the power of APIs to collect data at a customer level. They will also have to leverage the latest technology to put this information into the right context by considering different factors. While banks may not directly sell their products to the customers in the BaaS ecosystem, they will have to take time and effort and invest further capital in moving away from a product-centric approach to a relationship-centric approach.

It is important for banks to remember that most of the banking services are on their way to becoming commoditized. It is essential that they prove their worth in the BaaS ecosystem by leveraging their industry experience and understanding of financial services. Otherwise, they will be replaced by neobanks or other competitors who meet the necessary regulatory conditions.

Reimagine business models and pricing

During the pandemic, a Forbes study revealed that nearly three out of every five car owners felt that they were overpaying for their car insurance as they were not using the vehicles.^{xii} This led to the popularity of 'pay-as-you-drive' mode of insurance as insurance companies across the world were forced to move away from the traditional model of annual premiums.

This is an example of a fundamental shift of a traditional business model. Similar shifts have been happening across the world in other industries including banking.

The banking value chain is being upended as the traditional concept of building a product and selling it directly to the customer is not the primary mode of revenue. The bank must make small variations. Intermediaries between the bank and the customer in the BaaS world includes aggregators and sales channels which may be the brand operating the BaaS ecosystem. The bank is one of the many vendors and participants in a multi-stakeholder multi-nodal multi-directional BaaS value chain.

In this revamped ecosystem, it is essential that banks move from their traditional concept of a B2B or a B2C business model and adapt a B2B2C/B2B2...C or B2B2B/B2B2...B business model. The monetization models for BaaS are endless as pointed out by The Financial Brand.

In the earlier models, pricing was relatively easy – sell a product for a fee or charge a recurring fee monthly or charge a fee for a transaction. In the world of BaaS, banks will have to rethink their pricing strategies along with their business models. Pricing models to suit Infrastructure-as-a-Service, Regulation-as-a-Service, value-based fee based on the 'context' of the transaction made, and hyper-personalization will be the need of the hour. While BaaS will open new business models and pricing strategies along with radically different revenue streams, banks will also have to understand two things. First, some traditional revenue streams and business models will become extinct. And second the rules of the BaaS business model and pricing will not be set by the banks themselves but by a larger group of BaaS ecosystem participants and regulators, which in turn will be driven by customer expectations rather than business considerations. Banks will also have to realize that, in such a revised context, the onus will be on them to understand the 'value' of each 'transaction' and share it with the other ecosystem participants.

To achieve this goal, banks will have to rewire their existing systems and processes, some of which may be part of the legacy infrastructure. Banks will also have to be ready to accept the paradigm shift in pricing and must explore innovative pricing strategies. They must invest in intelligent pricing systems that are agile enough to support them in this journey.

Create an intelligent layer, not a middleware

IT systems are complex and very few understand them. And even lesser number of people understand the IT systems of the banks.

Middleware was seen as the answer to this challenge. But as we stand today, middleware, which has solved many problems, is part of the problem. Most middleware was built to solve immediate problems like Y2K or meet regulatory requirements in a short time frame. Since the focus was on immediate requirements, the long-term vision was forgotten. And as people, processes, and technologies changed and evolved, middleware became clumsy and cluttered. While middleware is the glue that holds disparate parts of the IT ecosystem together, today's needs mandate the glue to be more effective. Glue is good when you need to connect two systems together to work, but apply too much glue, or apply it to the wrong places, and you quickly find yourself stuck.^{xiii}

To succeed in the world of BaaS, banks must put 'smart' when utilizing middleware. In other words, banks need to make middleware intelligent. An intelligent middleware will not just integrate the different IT systems, but also provide the overall IT architecture with the right capabilities to meet the needs of scalability, agility, functionality, and hyper-personalization. This kind of intelligent middleware is not about adding bulk to the existing layer, but it is about de-layering the existing layer, leveraging only what is needed, and enhancing the efficiency and effectiveness of the existing middleware.

While banks have realized this need for intelligent middleware and are increasingly adopting a service-oriented architecture, it is not easy to replace tightly coupled existing systems. Many banks still follow an integration-centered mentality, which must be replaced with a service-centered mentality to succeed in the world of BaaS. With the legacy infrastructure, code, and mindset being the impediments in this dramatic shift, the sooner the banks act, the better it will be.

Build partner management capabilities

Banks need to understand the value they provide throughout the BaaS ecosystem and the value they provide to each participant in the ecosystem. The value that the customer derives from a personal loan may be different from the value that the BaaS orchestrator gains, and it be different from the value that the core banking provider receives.

As the concept of open economy grows, banks will need to invest in systems that can provide end-to-end management, monitoring, and monetization capabilities across the partner and the customer value chain. For this, they would an end-to-end partner management system driven by APIs which can support multi-business models as well as consider the numerous stakeholders of the ecosystem. Banks will need to invest in systems that can help them visualize the entire customer buying experience and enable product managers to create innovative offers using products from a partner ecosystem. They will also have to focus on solutions that will enable them to co-create products that are customer-centric, innovative, and relevant to all stakeholders in the ecosystem.

Put the stakeholder above the shareholder

Today, the objective of any organization, whether it is a profit-driven business or a non-for-profit organization, is to optimize the value it provides to its various stakeholders.

Over recent years, the definition of stakeholders has broadened. It is not just the investors, employees, the suppliers, and the customers who are the stakeholders of a company. The impact of any organization is wider and the repercussions across any organization's value chain have only widened. The supplier's supplier and the customer's customer are also the stakeholders of an organization. Regulatory bodies and governments are also stakeholders. In fact, the environment and society in which an organization operates are also its stakeholders.

For example, banks across the world require their suppliers to work with other suppliers who focus on sustainability. Technology behemoths like Apple and Google ensure that their OEMs work with suppliers who follow ethical practices for employment and business. Many organizations have mandatory representation from the regulatory bodies or governments who monitor their policies and processes. The rise of B2B2C and B2B2B models is also the result of the widening stakeholder value chain of any organization.

The rise of BaaS is also a result of this shift in perspective and in this context, the banks need to rethink their strategies of focusing on the customer only. As pointed out earlier, banks will have to consider a holistic partner management framework while ensuring that the other stakeholders also have a seat at the table. Even though banks may not sell their products to the end customer, they must ensure that the needs of the 'end customer' are met. They must also ensure that the infrastructure and services that they provide to the 'brands' who in turn offer financial services do not misuse the support provided by them. They need to consider the unique needs of each of stakeholders in the BaaS value chain while ensuring that the entire ecosystem operates within the boundaries of the agreed regulatory framework. It is also important that banks rethink their role on how they impact the society and environment.

To achieve the above, banks need to rewire their thought process and focus on realigning their core operations to suit the different needs of different stakeholders. Satisfying all the conditions may not always be possible, but banks need to ensure that they identify and separate the 'need-to-have' conditions from the 'good-to-have' conditions. To achieve this, they will have to leverage technology as mapping the value expected and the value delivered to each stakeholder may not be possible otherwise. Moreover, banks need to understand that the goal of stakeholder delight is not maximization, but optimization across the entire ecosystem and value chain.



Part 6: Behaviors Banks Must Adopt

The banking industry has been in existence for a long time and one of the primary reasons for its long-term success has been the trust that it has been able to cultivate in the minds of its customers.

As times have changed, there are new behaviors that banks need to imbibe as BaaS grows in prominence. These behaviors will form the cornerstone for success as they move forward and try to maximize the benefits and minimize the risks.

Be agile

BaaS is an evolving concept and like any new concept, it is going through its own journey of evolution. Very few people know how BaaS will grow but the only thing people know for sure is that BaaS will be a sure-shot success.

The key in this evolving market will be for the banks to adopt an agile mindset and be ready for change. Banks need to imbibe agility in their organization practices and remove the fear of change from their people. They need to make their systems and infrastructure flexible and cater to the changing needs of the customer and market, even at the shortest notice possible.

Be ready to partner

BaaS is not going to be a one-organization show. Apple partnered with Goldman Sachs, CRED with IDFC First, and Uber with GoBank. Shopify is partnering with financial institutions such as Plaid, Stripe, and Affirm – the list goes on.

Banks must realize that the strengths of each stakeholder in a BaaS ecosystem are different, and it is the amalgamation of all these strengths that will make the BaaS journey a success. For example, let us look at the BaaS ecosystem orchestrated by Shopify, where it aims to build embedded financial services to enable its merchants to accept more forms of payments while offering more inclusive and consumer-friendly payment options for customers. As Jared Simons mentions in the financial analysis tool Seeking Alpha's website, 'Shopify has better insights into its merchants' businesses because it sees each sale as it comes and enables merchants to leverage internal data points such as SKUs (stock-keeping units) and information from their manufacturers.... Stripe has better payment processing capabilities...Plaid has better data transfer capabilities...and Affirm is a BNPL company with a portfolio of retail products to choose from'. This mix of capabilities cannot be built by the bank alone and hence the need to partner.

The key to adopting a partnership-driven mindset is to create a strong digital core that will be driven by APIs, micro-service-based architecture, and will be fully on the cloud so that the hooks that the partners provide can be easily integrated. Banks will also have to focus on adopting a partnership mindset internally – in its people, processes, products, and technology.

Be practical, experimental, and exponential

To succeed in the world of BaaS, banks need to be practical and try to experiment and innovate. But they also need to think of going big, having a moon-shot than can exponentially alter the services they offer and the experience their customer gains. Incremental success is not good enough anymore and the expectation is for an exponential improvement. And it is time that banks tread the fine line between practicality, experimentality, and having an exponential thought process.

Be ready to embrace chaos

The world is changing at a rapid pace. Technologies that are ubiquitous today may not be relevant tomorrow and the trends that are considered niche today may be the necessary ones tomorrow. Customer expectations change overnight. Stakeholder expectations continue to evolve like the fast ascent of an airplane.

In such an environment, banks must be ready to embrace chaos as a way of life. The old-world habit of planning for a very long time, breaking it down to a shorter time frame, and driving execution through a top-down approach is not going to be relevant anymore. Banks must be able to adapt to the worst possible scenario as uncertainty will be the only certain thing. And most importantly, banks must derive creativity from chaos.

Be value driven and value centric

Every transaction in this universe has a unique value attached to it. Or in other words, no two transactions are the same.

Banks have always focused on building their trust by being the focal point of each transaction that the customer makes, but they never bothered about value. And it is time that they changed that perspective.

Banks must figure out mechanisms to understand the true value of each transaction from a series of transactions. For example, if a customer starts buying more fitness-oriented products, banks need to understand that the customer has started giving importance to fitness for some reason and the onus is on the bank to figure out the reason. Once the bank figures out the 'why', the value of each transaction becomes more apparent. They need to communicate this 'value' from each transaction to each of the appropriate stakeholders in the right mode. In short, customer experience orchestration by the banks in the BaaS ecosystem will rest on value management across the entire enterprise value chain.



Part 7: The Technology that Powers BaaS

We are a technology company – This is a catchall phrase that many non-technology companies use. For example, Citibank once said that they were a technology company with a banking license. Even though it has become a fad to position oneself as a technology company, it is the truth.

BaaS is no different. BaaS is essentially a technology paradigm where the products happen to be of a financial nature. Leveraging the latest and the right technologies is not just a 'good-to-have' option, but the only option. In that regard, there are six technology concepts that will drive the success of BaaS.

End-to-end service-oriented architecture

From the era of monolith-based software architecture, the world is now witnessing a shift towards service-oriented architecture. Even though service-oriented architecture was seen as the panacea to many problems that the software world was facing, the problems with scalability and deployment persisted. The answer to this is an event-driven microservice architecture that banks must adopt. Moreover, even though most banks have adopted a service-oriented architecture, the front end remains largely monolithic, which means that most of the front end is not easily scalable and deployable. To solve this, they will have to focus on adopting event-driven micro-service architecture with micro front-ends which will help the BaaS framework to be more scalable, decoupled, and agile. It is important to note that this will be one of the foundations for the success of BaaS.

API platforms

APIs can effectively connect services, applications, and clouds. Banks will have access to more partners through a simple network of APIs, which in turn can provide them with greater revenue and market share. The power and influence of APIs can be gauged by the fact that banks are expected to double their API count by 2025. To ensure the success of building an API-based banking service, banks will have to look outside their core banking vendors and make sure that the API vendors are capable of filling in the shortcomings of their core banking vendor. They also will have to ensure that the API providers are in line with the overall growth and customer strategy that banks have set for themselves. While focusing on creating the right API strategy they will also have to keep the following advice from Alex Johnson of Cornerstone Advisors - **'APIs aren't, from a technological perspective, new or in any way challenging to build. The challenging part is the ongoing commitment to clearly document them, maintain them over time, and nurture the use of them within your own company and across a diverse ecosystem of external developers.'**^{XV}

Cloud-based applications

One of the key drivers for the growth of BaaS is its ability to provide financial products and services in a location-agnostic manner. It does not matter where the customer is, or where the orchestrator of the BaaS ecosystem is, or even where the bank is head-quartered. If the transaction is within the regulatory boundaries, the game is afoot. The growth of cloud technologies has been a cornerstone in making this possible as cloud has enabled BaaS providers to offer agility, scalability, and security in an efficient manner.

For banks to succeed in the BaaS journey, they will have to focus on making their entire application suite cloud-first and cloud-native. While this will not be easy considering legacy applications still residing within the bank, the right strategy can help them go a long way. API providers and BaaS orchestrators from banks need cloud-native applications which the other partners can easily connect to and exchange data and information.

Machine learning and artificial intelligence

Everyone wants to get on the AI/ML bus now, but many organizations are just touching the tip of the iceberg when it comes to AI/ML. The potential for banks in embedding AI and ML in their core as well as different layers is huge, especially in the context of BaaS. They will have to invest in designing and developing use cases leveraging machine learning and artificial intelligence for smoothening business flows and API connections. They can leverage these technologies to predict customer behavior and create products and services that are better suited for them. Banks can also leverage AI/ML to understand and predict the true value of any transaction and use this data to share inputs on the value that each stakeholder receives from each transaction.

Prescriptive security

BaaS will open the doors to sensitive data that only banks had access to till recently. And as the custodians of the data, it is the prerogative of banks to ensure it is secure and access is restricted to the right stakeholders only. As BaaS is primarily driven by APIs, AI can help in improving the effectiveness of API calls and security. Artificial intelligence and machine learning can help in detecting attacks such as Data Exfiltration, Advanced Persistent Threats (APT), Data Integrity, Memory Injection, and DDoS API attacks. This is critical in the BaaS context as it is open and connected. Banks must also invest in creating algorithms that will be self-learning and provide prescriptive security technologies.

Technologies on the fringe

Apart from the technologies that are mentioned above, banks must also be ready to adopt and experiment with fringe technologies like quantum computing, embedded AI, and other forms of AI, metaverse and more. They must start their journey towards adopting a composable architecture as the future of banking in the world of BaaS will rest on their ability to become a composable enterprise. The focus on adopting and experimenting with these new technologies must be to enhance their efficiency, increase their speed, and create composable organization blocks that are agile, scalable, and connected by themselves.

Part 8: The Final Word

BaaS is not just disrupting the world of traditional banking. Fintechs and non-financial companies are also feeling the pinch as customers are expecting financial products at their point of need, not a moment before or after. The growth of BNPL, micro-loans, pay-day loans, and focused financing options are just the tip of a massive iceberg that BaaS can potentially grow into.

Unless BaaS is reined in by regulations, it will grow further and faster, increasing the average ticket size of the product that is handled by the current BaaS players. Do not be surprised if we see BaaS ecosystems launching SME loans or loans for large corporate customers.

Today, BaaS is seen mostly as a quick opportunity by many customer facing firms as a route to be more embedded in their customers' lives. While the early movers were the digital banks and the smaller and more agile banks, the larger banks are only beginning to act and take note. More sectors will adopt the concept of BaaS – for example healthcare, e-commerce, hospitality, etc.

The impact will be great for banks, and even greater for legacy banks which normally take a lot of time to act and change. But the possibilities for banks are also endless if they take the right step in rewiring their processes, renovating their technology architecture, reskilling their people, and re-inventing their customer experience orchestration. It is time to go the BaaS way and break barriers.

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AI





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