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FINACLE CONNECT

Connecting the banking world

PLATFORM BUSINESS MODEL IN BANKING

Cover Story

On the Platform We Bank

Sanat Rao, Chief Business Officer and Global Business Head, Infosys Finacle

Feature

Platforms for Banking and Beyond

Sangeet Paul Choudary, C-Level Executive Advisor and International Best-Selling Author

Inside Talk

In Conversation With

Gabriel Di Lelle, Vice President, Innovation and Digital Transformation, Grupo Bancolombia

Anuj Agrawal, Senior Research Manager, IDC Financial Insights

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Voice from the Editor's Desk

We are living and witnessing the most transformative times in the history of customer-centric banking. Buoyed by the proliferation of digital channels and copious connectivity, customers today expect ubiquitous banking experiences from their banks. How fast they can offer seamless banking on up and coming digital channels has become a competitive differentiator. It is becoming rather table stakes equally fast.

Banks are pulling out all stops to meet these expectations. But in providing these services and experiences, they contend with the much more agile digital native peers. Representative studies indicate that nearly thirty percent of customers today bank with at least one non-traditional provider. Combine this with the upcoming open banking wave and one reckons that, banking transactions are likely to move to third party channels even more rapidly, putting banks at a risk of losing the ownership of their relationship with customers. In response, banks are progressively innovating to play a larger role in the lives of their customers by becoming more than a provider of financial services. Progressive banks across the world are transitioning from the traditional model of vertical integration to the ecosystem-driven platform model, to be more to their customers. The platform business model, known to have blurred industry borders now seems set to help banks and financial institutions transcend borders.

In this edition of FinacleConnect, we present an array of perspectives from industry practitioners and thought leaders – all of them pointing in one direction – the platform business model in banking has arrived. The cover story by Sanat Rao, Chief Business Officer, Infosys Finacle, explores six business strategies for building a platform bank.

In our interview with bestselling author Sangeet Paul Choudary, we discuss how companies have embraced the platform model to expand the scope of the markets they serve. Interestingly, he debunks the myth that the platform model is about not owning any assets. He argues that it is about scaling the demand, and controlling profitable portions of supply, and substantiates it with examples from the very statement that allegedly propagated the observation – "The world's largest media company owns no content, and the world's largest taxi operator owns no cars."

Our interviews with Gabriel Di Lelle, Vice President, Innovation and Digital Transformation, Grupo Bancolombia, and Anuj Agrawal, Senior Research Manager, IDC Financial Insights, present how the model is shaping up in their respective regions, the key challenges that lie before banks, and the nuances of platform banking.

The edition also features points-of-view by Finacle thought leaders on industry developments in areas ranging from platforms, FinTech, blockchain, and more.

We hope you enjoy reading this edition of FinacleConnect and find it insightful. I look forward to your feedback and views.

Puneet Chhahira
Head of Marketing and FinTech Engagements
Infosys Finacle, EdgeVerve

On the Platform We Bank

Research from the [1]World Economic Forum's Digital Transformation Initiative indicates that digital B2B platforms could create up to US$ 10 trillion in value for business and society between 2016 and 2025. According to a [2]leading IT research and advisory firm, more than half the companies in the Global 2000 list will experience a third of their digital services interactions via open ecosystems.

If there is any residual doubt that the platform business model is here, and here to stay, the global leaderboard of companies by market capitalization – where the top 5 positions are taken by platform businesses – should dispel it forever.

The trend is also underway in the world of banking and financial services, and is most visible in the spectacular success of technology giants like Alipay and WeChat whose platforms carry 95 percent of Chinese money transfers today, or of Fintech firm, Paytm, which has notched up 250 million customers that it plans to double by 2020. However, the bigger news is that incumbent banks, who are not digital natives, are also plunging into the platform economy in earnest: think of JPMorgan Chase and Capital One collaborating with Amazon to launch checking accounts on the latter's platform. DBS Bank has gone so far as to envision itself as a part of a platform world order that it has nicknamed "GANDALF" – standing for the GAFA lot along with Netflix, LinkedIn and DBS (as the "D") – sometime in the future. Most progressive banks around the world, from HSBC to Deutsche to BBVA, have got some platform action going.

In a document produced in collaboration with our Banking Visionary Council, we identified 6 strategies to enable banks to build a platform business. APIs (Application Programming Interfaces) are at the center of each of these strategies as they render a bank's various properties – products, services, distribution, applications, operations, data, licenses, compliance, etc. – accessible to authorized third parties such as developers, partners and collaborators. But to attract interest in its published APIs, a bank must first provide the right tools, sandboxes, support documentation and API usage guidelines, all of which contribute to user experience. Now, the bank is ready to pursue any or a combination of the following approaches to create its platform business:

1. Embed banking in the customer's application or form factor of choice

A bank's relationships with corporate clients is a good starting point for this strategy. Big companies typically

If there is any residual doubt that the platform business model is here, and here to stay, the global leaderboard of companies by market capitalization – where the top 5 positions are taken by platform businesses – should dispel it forever.

exchange large quantities of information with their banks via a cumbersome upload/download process. In the past, a host-to-host connection eased this somewhat, but was unsustainable since it lacked standardization. Now, the API offers a great alternative by enabling banks to expose various services that corporate customers can take as needed. After corporations, Fintech firms make the best prospects, given their appetite for APIs on which they can build new experiences.

Having identified the customers for their APIs, banks must embed their services in customers' applications, form factors and business processes to enable them to provide value to their end customers. A popular mechanism is to build an API store, or alternatively, a development center, to expose APIs to those who want them. BBVA and Citibank figure among a long list of banks with API stores or developer portals.

2. Participate in an ecosystem

A bank would probably also want to join other ecosystems to expand its reach. Sometimes, this decision is forced by open banking regulations, as is the case with the Payment Services Directive 2 in Europe, Open Banking in the United Kingdom, or the Unified Payments Interface initiative in India. If the bank were only guided by strategic considerations, it would likely seek to join the giant payment ecosystems of Apple, Google or Amazon.

3. Curate an ecosystem

Large banks, or those deeply committed to the platform idea, may want to curate an ecosystem to gain both momentum and a community of producers and consumers who will benefit from the business. We can see quite a few examples of banks with such initiatives. There is the [3]HSBC Connections Hub, a network where the Bank's business customers gather to buy and sell to other HSBC customers around the world, or simply to connect with peers. A couple of years ago, Deutsche Bank built a digital platform or [4]"UnternehmerPortal" for SME customers

1. World Economic Forum: Digital Transformation Initiative – Unlocking B2B Platform Value
2.Digitalist Magazine: IDC 2018 Predictions – If you're not in Cloud, you're Isolated from Innovation
3. HSBC Media Release: HSBC Launches Global 'Social Network' for Business Customers

where they could access benchmarking, business intelligence, credit monitoring and trade information tools.

In some cases, a couple or more banks are getting together to build a platform ecosystem. ICICI Bank and Emirates NBD, for example, have collaborated with Infosys to build a Blockchain-based network to carry international remittances on the busy India-UAE corridor. [5]Last July, seven banks in Singapore went live on PayNow, a money transfer facility requiring only a mobile number or NRIC that they built together. India is waiting on a similar banks-led initiative to create a Blockchain-based ecosystem of banks, trading partners and shipping companies facilitating exchange of information and documentation in international trade deals.

4. Buy out or invest in an ecosystem player

Buying out an existing ecosystem player is an expedient alternative to building an ecosystem organically. This is what Alibaba chose to do in India when it took a stake in payments and ecommerce platform, Paytm; in Europe, Groupe BPCE of France did something similar by acquiring Fidor Bank, a platform-based bank from Germany.

5. Offer banking as a service

Banks following this strategy pool their strengths with the complementary strengths of Fintech companies/neo banks to offer banking services. Under this arrangement, the younger partner consumes basic banking elements – technology stack, operations, network connections and compliance – from a licensed bank as a service, and builds new customer experiences and value propositions on top. The Moven-CBW alliance is an example of this. Germany's Fidor Bank also provides a full stack of banking services required by digital banks and others – telecom company, O2, for example, taps Fidor's banking services to offer a credit card to its customers. In India, a Fintech firm named Moneytap layers its offering of quick, short-term, small loans on top of a banking service it consumes from elsewhere. Moneytap's role is to find and enroll customers, gather the information needed for underwriting, offer underwriting tools and services, and act as an intermediary between the customer and the lending bank.

6. Offer services to other traditional banks

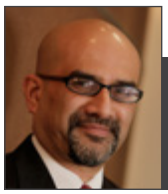
Similar to the abovementioned "banking as a service" approach, this approach envisions offering services to incumbent banks. In 2013, Denmark's Danske Bank launched MobilePay, a mobile payments app, with immense success. With 3.3 million of the country's 4.5 million adults using the app, other banks, such as Nordea and Jyske, had no option but to partake of the service. In China, WeBank offers its payment services riding on the WeChat network to smaller banks that cannot afford to build a real-time payment service on their own.

While these strategies offer a path to a platform business, being adopted by most banks, they do not afford much differentiation to their followers. The only way for one bank to distinguish its platform business from that of another is execution excellence.

On the business side, execution excellence comes from having the right talent, right external partner, and the courage to cannibalize part of the existing business in order to feed the platform business. It also calls for refreshing the banking mindset – which has always been about a bank designing, manufacturing and distributing products and services it owns, on channels that it also owns – and opening it up to the possibility of operating a financial services marketplace featuring best of breed offerings from the bank's own stable as well as from other providers. The way performance is recognized in an ecosystem business model will also differ from traditional banking KPIs. One example – the platform bank would need to reward creation of collaborative business use cases.

From a technology perspective, excellence in implementation is, to quote from DBS Bank's digital strategy presentation, about employing modern product design principles, finding the right product owners, agile product management, the right product funding model, and good product governance.

Since the transition from a traditional "pipeline" business model to a platform bank is a difficult one, not all banks will succeed at it. This will lead to a spate of consolidation because in the platform economy there are no middling survivors, only winners who take all. A bank can improve its chances by executing impeccably of course, but also by moving quickly. Amidst so much uncertainty around traditional banking, the rise of the platform/ecosystem business model is a rare certainty. There is no reason to hold back.



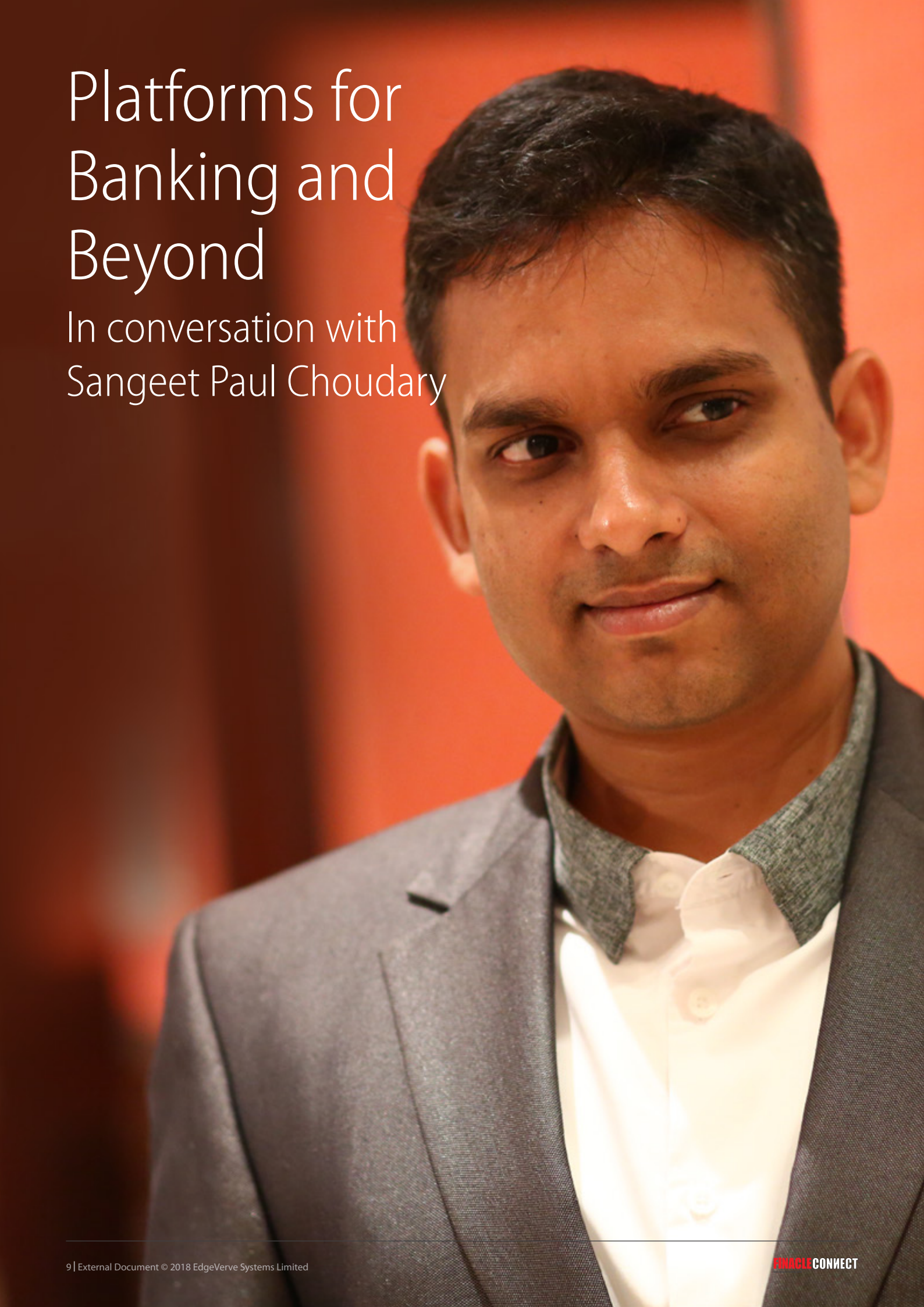
Sanat Rao
Chief Business Officer and Global Head, Infosys Finacle

4. IBS Intelligence: Deutsche Bank Targets SMEs with new Digital Platform

5. The Shutter Whale: Paynow Launches in Singapore to Facilitate Money Transfers with just Mobile Number or NRIC

Platforms for Banking and Beyond

In conversation with Sangeet Paul Choudary



Today, almost all industries have seen the disruption caused by new or incumbent players that have leveraged the platform business model to redefine how value is created and delivered to the consumer. In doing so, many of these companies have blurred existing industry borders and expanded the scope of the markets they serve. While many banks are looking to adopt this strategy to redefine the value proposition to their customers, they are faced with questions. What are the key principles to build a successful platform in banking? What happens to the assets that banks have considered as strengths till now? How should they measure success in the new economy and how should they make money?

To answer some of these questions, we chatted with Sangeet Paul Choudary, one of the sought-after experts on platform businesses. A C-level executive advisor and an international best-selling author, Sangeet is the co-author of Platform Revolution and the author of Platform Scale. He has been selected as a Young Global Leader by the World Economic Forum and is ranked among the top 30 emerging thinkers globally in 2016 by Thinkers50 Radar, a global ranking of top business thinkers.

In conversation with Sangeet Paul Choudary

FC: In your book you have elaborated on how any industry where information is an important ingredient, is a candidate for platform revolution and how this translates to practically all industries. How do you see banking as a candidate for such a platform revolution and how do you see the platform model evolving currently in this industry?

Sangeet: The banking model that we are familiar with is what I call the integrated bank model where the supply of loans, insurance and other banking products is combined with the demand side, and where the bank serves its customers through a channel with various processes such as anti-money laundering (AML) and know your customer (KYC). We are beginning to see that because of deregulation in recent times, this structure is coming under pressure, and the banking industry is moving to a platform economy. What this means is that all the key components of banking, namely, products, operations and customer relationships, are getting impacted. For instance, products such as loans are converting into APIs (Application Programming Interface) because regulations in Europe, the United States, Australia and the United Kingdom are favoring open banking. Even India is seeing a similar trend. When products become APIs, they become easily distributable to third parties, and this creates the opportunity to build platforms.

On the demand side, earlier the bank used to own the customer relationship, but now the customer may have a relationship with Facebook, Amazon, FinTech firms and other third parties, which means that the bank's products must be served in that context.

So these two changes show how supply and demand, which used to be connected internally within a bank, can now originate anywhere. And this is where platforms become important. Banks have to figure out what kind of demand-side platforms they must create; on the supply side they must think of where to take their products.

What's important is that a lot of banks do not understand this strategic view; they only understand the infrastructural or technological aspect – for example that they must convert a loan distribution or KYC process into an API, but they do not understand where the new business model is. And so banks must figure out when they start converting their traditional products into APIs, and what are the new ways in which they can engage customers and understand their data to take control of customer relationships.

This is where I would like to make one more point which is that banks have always been information rich, but the information is secondary data, such as loan eligibility, insurance coverage, or payments made, and not primary data, such as the type of car or house a customer is interested in, his driving pattern, or food choices, etc. The party that owns primary data owns the customer relationship. So the two things that banks must think about when moving in the direction of platforms is to take ownership of the customer relationship and shift secondary data thinking to primary data thinking.

Earlier the bank used to own the customer relationship, but now the customer may have a relationship with Facebook, Amazon, FinTech firms and other third parties.

FC: You have studied in-depth the principles for designing a successful platform. What are some of the recent examples of successful platforms that you are seeing in banking or other industries – how do you see these principles being integrated into business?

Sangeet: The following are the three most important principles or success factors for incumbent organizations.

When an industry moves to a platform economy, very soon you start to see aggregation and polarization towards certain players. And this happens only when a player holds some kind of critical asset.

First, as an incumbent, you need to understand the customer in a way that allows you to deliver value. Simply having data is not enough. A platform is most valuable when it has data that is most relevant to the customer.

Thus far banks collected data to be able to sell better but didn't collect data about the actual needs of customers. They need to rethink this strategy. Capital One is a good example here. They have an auto-search platform in which they leverage data from the car search process and provide loans to consumers. Commonwealth Bank of Australia and Danske Bank are doing similar things in the housing space. So these are some cases of banks moving from secondary to primary data thinking.

Outside of banking, Philips Healthcare is moving beyond supplying medical equipment to also capturing data about patients to create a platform around that. From gathering secondary data through its medical equipment, the company is now capturing primary patient data by creating relevant applications and integrating different data sources.

The second principle is you must figure out that when everybody in your business moves to the platform model, what is the asset that you will uniquely control because of which others will come to you.

When an industry moves to a platform economy, very soon you start to see aggregation and polarization towards certain players. And this happens only when a player holds some kind of critical asset. Some examples here are: media companies aggregate around Facebook because it controls user data and engagement – critical assets media companies need but do not have. In the telecom industry, handset manufacturers flock to Google because it has the best mapping technology in the world. This is because a smartphone is not valuable unless the mapping data is accurate.

So ask yourself what is that unique asset you possess which no other player has in the ecosystem. This is the most important factor for success.

The third thing you must understand is what will become a commodity and what will become a scarcity in a platform economy. An example here comes from Europe where the PSD2 regulation requires banks to open up their payments information, which used to be a scarcity, to third parties, thereby turning it into a commodity. So understand where the new scarcities are, and take ownership of those things.

These are the three success factors important from the perspective of an incumbent in the middle of a transforming industry, with existing assets and legacy.

FC: The banking industry is in a state of flux where incumbent banks and new players are adopting different approaches to digitization to gain a competitive edge. There are partnerships evolving too. What are the inherent advantages that incumbent organizations and the new start-ups respectively have for being successful in the platform economy?

Sangeet: That is an important question because one of the biggest mistakes companies make is thinking that the platform model is about not owning any assets. No doubt they have been influenced by a highly misleading statement that is going around, which says that the world's largest media company owns no content, and that the world's largest taxi operator owns no cars. If you look at the platform economy, it is not only about scaling very rapidly on the demand side, but also about controlling the most profitable portions of the supply side. Amazon is a good example of this and teaches incumbents the importance of asset ownership. It is because of its ownership of warehousing and logistics, and not only data, that Amazon is so powerful.

In the banking context, one of the most important things banks have is balance sheet pricing power. Nobody else can price products without that kind of balance sheet. So, banks have to figure out how to use this power.

The second thing banks have, which Fintech companies and other new players don't, is capabilities to comply with regulatory requirements in areas such as KYC, AML, fraud management and so on. What banks need to do is think about how they can convert these capabilities into services that others can start using. Let's say a real estate agency wants to enter into a contract. Can it use a bank's KYC for this purpose? Can third parties start leveraging banking capabilities? Banks must think about how to modularize their capabilities and offer them to third parties. This is exactly what Amazon did by taking its

technology and offering it to third parties as Amazon Web Services. So banks should also think of the capabilities they can offer to third parties and thereby embed themselves into the platform economy.

Banks' balance sheet management capabilities also offer them an opportunity to run banking back-end operations for a third party. This is happening already in China where ICBC has a financial cloud offering regulatory and operational capabilities needed by small players to start a bank. So now, the small player need not build everything from scratch; it can simply leverage the financial cloud and run its balance sheet on top of that.

Coming to the new players, well of course they have their own advantages. They have challenged the way banking has been done for years, but mainly on the customer experience side. Soon the impact will also be seen on banking processes. For example, banks don't use much biometrics in the KYC process, but Fintech companies do, and it is only a matter of time before banks follow suit. It is important for banks also to learn from small players – things such as using machine learning and new data sources in their processes, how to transform operations, etc.

FC: We have many incumbent banks that are rolling out platform based businesses. They do realize that the traditional metrics for evaluating business success will not work in the context of a platform. What according to you are the metrics that these organizations should track?

Banks will increasingly have to think about running two parts of their business – the regulated part and the part which is not regulated. Because increasingly, banks will deal not only with money but also with decisions and experiences that money feeds into.

Sangeet: The most important thing is to define what data is important and then start tracking the acquisition of this data. A lot of banks that have data don't know what to do with it. The problem is that this is usually the wrong data.

So once you define the data, start tracking and measuring the way you are collecting it. In order to do that, make one part of the bank responsible for collecting the data and another for monetizing it. It is therefore important for the organization to be structured in a way that not every business is in the process of making money. This is the case with Amazon, Facebook, etc. So that's something banks need to think about.

Another important thing about metrics is that banks must think of ways to own the customer relationship beyond disbursement of banking products. A classic example is the housing loan business. Before a customer decides which house to buy, he or she is chased by a number of providers. Once the decision is made and the loan is approved, the only relationship that remains is with the bank. Unfortunately, the bank does nothing with this relationship other than collect payments. To be relevant banks must think of ways in which this relationship can create greater value. For that it must measure not only payment inflows but also evaluate other kinds of data that can be gathered and repurposed using analytics to benefit the user or third parties, or connect users to other third parties, etc. Again, going back to the earlier housing loan example, what if the bank could help customers not only manage the home loan, but also the entire buying process by connecting them to different providers? So, the metrics will be defined by the definition of the end ecosystem. If the ecosystem is just built around serving the loan, then the metrics may not change much. However, if the end ecosystem tries to capture the relationship in a deeper way then the metrics will change in a big way.

FC: Monetization is a big challenge in platforms and you have talked about how businesses should monetize by charging for the value that the platform creates without inhibiting the growth of network effects. Can you guide our audience on how to choose the right monetization models and the pitfalls they should avoid?

Sangeet: Let's talk of some of the least controversial monetization models, which are about taking your existing assets and capabilities, modularizing them and providing them to third parties. Take the example of identity management, which is a core capability of banks. A bank could, for example, use its knowledge of SME customers and their financial status to provide an identity

management service enabling small businesses to enter into contracts with each other. It could charge for such services.

The second way in which banks could think of making money is to go beyond existing sources of data to determine creditworthiness and improve their existing banking model using much better data.

Yet another way is to go beyond merely disbursing a loan to participating in the automotive or housing ecosystem. Or going beyond selling insurance to creating value such that insurance is not needed in the first place. So instead of just providing health insurance, the bank could get into the fitness ecosystem with the aim of making people so fit that they do not need so much health insurance. If banks can solve that, there are monetization opportunities in the primary data ecosystem as well.

Banks will increasingly have to think about running two parts of their business – the regulated part and the part which is not regulated. Because increasingly, banks will deal not only with money but also with decisions and experiences that money feeds into. Whether that decision is about buying a house or the experience is about eating at a particular restaurant, banks will have to think about how to participate in these adjacent decisions and experiences, which are not regulated.

So, I think banks would need to think about monetizing both the traditional parts of their business, and the emerging ones.

Sangeet Paul Choudary
C-level Executive Advisor and International Best-Selling Author

Inside Talk I: Let's Talk Platforms

In conversation with Gabriel Di Lelle

If assembly line was the poster child of the producer economy, then ecosystems are the backbone of business in the platform economy. Today, four of the top five companies in the world by market cap are platform companies. And while market cap is a definite indicator of a company's market value, success in the digital age is not a function of return on assets but a function of value exchanged in diverse ecosystems.

In banking, it is not only the digital natives such as Alibaba or WeChat that are transforming financial services with their agile platforms, but leading and progressive incumbent banks are also opening up to the idea of ecosystem-driven platform model.

C-level support and funding are essential to quickly pilot and test the models.

FinacleConnect presents an interview with Gabriel Di Lelle, Vice President of Innovation and Digital Transformation at Grupo Bancolombia. With 1070 branches, Bancolombia is not only the largest commercial bank in Colombia but also one of the biggest in Latin America. In this interview, we quiz Gabriel on the bank's strategy, challenges in adopting the platform business model, key initiatives, and more!

In Conversation with Gabriel Di Lelle

FC: With presence in 4 key markets in Latin America, such as Colombia, Guatemala, Panama and El Salvador, Bancolombia is one of the leading banks in the region. We would like to understand how the developments around platform business model in banking are unfolding in the region.

Gabriel: The platform business model in banking is at an early stage in this part of the world. One of the key drivers for adopting the model is the emergence of new disruptive players that are able to offer high quality services at relatively low prices with radically different approaches. In the markets that we are present in, these players have just begun making a foray into financial services, as opposed to markets in other parts of the world that are burgeoning with these kind of players. We expect their growth to accelerate in the next couple of years. Incumbent banks must prepare themselves for new ways of doing business as these innovative companies gain critical mass and begin to dot the entire financial services value chain. The platform business model is a key strategy for banks to survive and thrive in the new world.

FC: Talking of incumbent banks having to embark on a platform business strategy, what do you think are the principal challenges before these banks as they take the plunge?

Gabriel: First and foremost, banks are regulated entities and have a lot more restrictions as compared to agile start-ups disrupting the space. The regulatory restrictions directly translate to a longer time to market since there is a process that banks have to abide by. Additionally, banks are burdened with associated regulatory over-costs that impact margins. New entrants get to circumvent these challenges as they have a lot more leeway. They can be faster, more agile, and also have leaner cost structures. As banks make the shift towards platforms, they must find a way to effectively partner with start-ups and FinTechs to take advantage of their agility.

The second biggest challenge I see is the cultural orientation of incumbent banks. Traditionally, banks have been rather reluctant to take risks. Now it is becoming inexcusably important for banks to discard the risk averse culture and adopt experimentation, collaboration and customer centricity as the new way of doing business. Banks have complex processes and systems that need to be simplified for ecosystem-led banking.

Having said that, I'd like to emphasize that major changes like these require endorsement right at the helm. C-level awareness is key. Building a culture that is conducive to experimentation requires the business to be involved in the innovation process, and educated about new business models. Once this is ensured, C-level support and funding are essential to quickly pilot and test the models.

FC: Does Bancolombia have an active platform business strategy? And where does it figure in the bank's mid-term to long-term strategy?

Gabriel: Yes, it is an integral part of our innovation and digital transformation strategy, since we believe that the industry is at a critical inflection point poised for game changing developments that will impact the very nature of banking. We believe that new business models, including platform-based business will be one of the major transformative forces.

Platform-led initiatives fall under our innovation & transformation strategy pillar called 'reinvent the business'.

It is also directly linked to a key strategic directive from our CEO, which is to renew the sources of revenue. Developing new business models is a critical capability for us at Bancolombia, especially since interest-based income is at stake globally.

Utilizing some of the bank's traditional resources such as its sales force, data assets, a mature network of channels and the client base can be extremely powerful to accelerate the adoption of new business models.

We have several initiatives underway. A lot of these are in the SME space, and a few in retail. We believe it is best to start small, experiment, and learn from what's happening elsewhere in the world. In the mid-term we are definitely looking to scale the platform-led business model, and will evaluate the ROI for these initiatives just like we do it for any regular initiative. At this point it is more about learning, experimentation and changing the organization for the future.

FC: We'd like to learn a little more about the initiatives underway. Can you share some details about the initiatives, the metrics you are using to measure the success of these initiatives, and the key learnings?

Gabriel: We are working on two new offerings under the platform model - one in the retail business, and one around monetization of data. We recently launched both in the market.

Key metrics at this point measure how quick our iterations are, and how efficiently we plough back the learnings. We expect to very quickly move towards measuring participation and growing the user base on both the sides – adoption by end-users and content creation by participating suppliers – to define our success.

Let me give you an overview of one of them - Plink. Plink as a platform is designed to work mainly with two major players: on one side the merchants who find in Plink access to a wealth of information on how their business is performing as compared to their competitors, who their customers are (demographic information), their profile, their buying behaviors – never providing individual information since we are obsessed about protecting individual privacy - and the possibility to "push" offers through Plink. Using machine learning algorithms Plink selects the most relevant offers for different consumers as per their history as a consumer. So consumers only receive offers that are more likely to be of interest to them and receive them at the most appropriate hour. For example, a restaurant offer arrives at 11 am, not at 3 pm or when, or when a customer is geographically in the vicinity of that restaurant. The monetization model is very simple: if the merchant is a Bancolombia customer they receive free access to the first tier of reports through the web platform. They pay only if they are interested in accessing a more advanced set of reports such as tier two reports that include analytical information, and a small "finder's fees" when an end customer approaches them to redeem an offer. The end user will never have to pay for Plink.

In our experience, one of the key learnings has been setting up a separate entity, at least in the initial stages, which not only helps channel the right resources, but also prevents any bias towards traditional models from impeding the development process. We tend to create new business units or new companies for different categories of initiatives. At times, regulatory restrictions limit the activities a bank can perform, and a separate company is a good alternative.

We have also recognized immense synergies with our traditional business in some cases. Utilizing some of the bank's traditional resources such as its sales force, data assets, a mature network of channels and the client base can be extremely powerful to accelerate the adoption of new business models.

Another key learning is to connect the new platform business with the core business of the bank. For us, even if a suggested platform business idea seems like a totally different business, it is worth a go if it reinforces a core competence such as analytics, or if it presents a way to tackle the new entrants in the industry. Our retail initiative, which is far from a pure financial services business is a case in point.

FC: What are the key parameters at Bancolombia for deciding which APIs to expose to corporate customers, FinTechs and developer ecosystems? And do the criteria differ for different user groups?

Gabriel: We have recently developed our API strategy. At Bancolombia, we see three categories of APIs: the

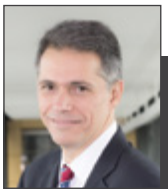
internal APIs, where we look for efficiencies, flexibility and time to market; the open APIs to keep expanding our open innovation initiatives such as a recent survey we concluded with a local FinTech to identify which of our APIs they'd like to use; and the third for corporate and SMB clients to improve our products and services and provide new value-added services.

Our own FinTech Nequi, a neo bank, opened its API marketplace for developers a year ago to build new solutions. Developers integrate Nequi in their applications. A parking lot has integrated Nequi as a payment method, and a logistics SME is using Nequi to disburse commissions to freelance drivers through Nequi APIs.

FC: With the shift towards platform banking, banking is set to become even more customer-centric. Banks will offer not just competing products but competing products from other financial institutions on their platforms.

Has Bancolombia made any strides towards forming a marketplace that sells solutions from other financial institutions?

Gabriel: Not yet. It is something that is being considered. The closest we have gotten to this is with our neo bank Nequi, which in a way competes with Bancolombia's traditional accounts. We are looking at some interesting areas where Nequi is a greater fit than traditional banking products.



Gabriel Di Lelle
Vice President, Innovation and Digital Transformation, Grupo Bancolombia

Inside Talk II:
Stepping into the Open Future
In conversation with Anuj Agrawal

With Open Banking initiatives across the world, a new category of assets has made its way into a bank's balance sheet – data and APIs. While most banks have begun tapping into these new assets for benefits of customer-centric innovation and collaboration, their business strategy around APIs is still at an embryonic stage. As these initiatives mature, banks will need to look at their API strategies more holistically. This entails evaluating the business proposition around their APIs, the consumers of their APIs, the pricing strategy around them, and more. FinacleConnect chatted with Anuj Agrawal, Senior Research Manager at IDC Financial Insights to understand these developments and their implications for the open bank of the future. Anuj is the Lead Analyst for Open Banking at IDC Financial Insights, Asia / Pacific. Excerpts from our chat with Anuj follow.

FC: How do you see the open banking trend shaping up in the banking space in the next two years? Is regulation still the main driver for banks towards open banking APIs?

Anuj: With about 80% of banks are expected to progress with Open Banking by 2020, Open Banking is going to drive the digital transformation in banks for next 3 years. Furthermore, 36% of Tier-1 & Tier-2 banks have already adopted at least 5 external partner APIs in 2018 to improve operational efficiency, increase customer reach or enhance customer experience and this number is expected to increase to 50% by end of 2019.

Unarguably, the regulator's position is one of the most important factors for the development of Open Banking as without strong regulatory clarity on Open Banking in the

36% of Tier-1 & Tier-2 banks have already adopted at least 5 external partner APIs in 2018 to improve operational efficiency, increase customer reach or enhance customer experience

form of firm guidelines addressing various compliance and governance issues, Open Banking will remain an uncertain journey for even the most ambitious financial institutions. This has been evident in Europe and in some Asia/Pacific markets that have seen regulator-initiated framework accelerating various activities that banks can do in the spirit of Open Banking.

FC: The banking industry is undergoing a lot of disruption with raising customer expectations, new competition and emerging technologies. As such times, what are some of the benefits of adopting open banking APIs?

Anuj: Open Banking APIs will allow banks to innovate, differentiate, and expand their products and services offerings while working and collaborating with TPPs and fintechs, especially if banks can act swiftly to changing market challenges. Open Banking APIs create new forms of distribution channels and servicing capabilities, provide access to third-party application marketplaces, and comply with emerging regulatory norms through the standardization of APIs.

3 Key benefits of adopting Open Banking APIs are:

Expanding customer reach: It enables banks to build applications with advanced layers of functionality and that can be opened up to third parties. Banks increase reach through new channels and new ways to meet unserved and underserved customers.

Create new revenue: Being a big custodian of customer data, banks will be able to generate deeper consumer insights and come up with a value proposition that enhances their products and services offerings.

Continuous innovation: With the help of more agile external partners, banks are able to come up with innovations fast, and ensure that as market dynamics change, innovation projects keep on pace.

FC: What are some of the key concerns of banks as they start their journey towards open banking APIs and what are your recommendations for overcoming them?

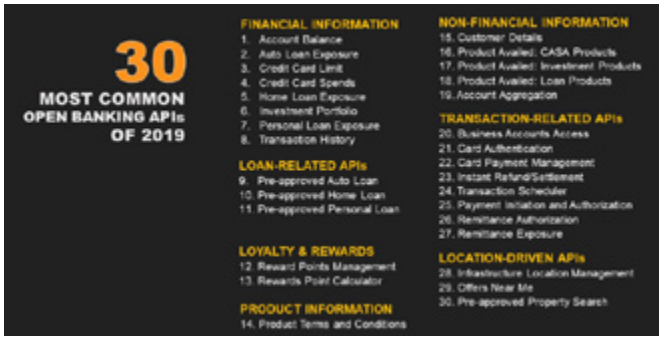
Anuj: With more and more new channels for transaction opening up through Open Banking APIs, cyber threats will also multiply as security measures for these new channels will naturally be weaker. In this context, in recent IDC survey on Open Banking, about 4 of 5 banks raised their concern around data security with Open Banking. Other concern which banks have with Open Banking is loss of intellectual and technological advantages as the technological advancement outlook of a bank can begin to shift from being the "most customer-friendly bank"

to the "most customer-secure bank," wherein customers will not be individuals but TPPs who are interacting with banks through Open APIs. Loss of customer loyalty, brand value and customer insights are other few concerns with banks becoming more of an information and payment platform facilitator and ceding more activities to third party providers, customers could increasingly meet more banking and financial needs through third-party applications without meaningful engagements with the bank.

FC: Which are the top 5 public APIs you would recommend banks should offer in 2019?

Anuj: Essential APIs would be in the categories of financial information, loan-related, and transaction-related.

IDC has published a list of 30 most common APIs for 2019:



FC: What should incumbent banks focus on to monetize their APIs effectively? What are some of the other metrics that banks should track to show progress?

Anuj: As banks search for ways to generate new value from their data and APIs, they should start with looking at the basic foundations of data within their institution: the data infrastructure and the business processes that support how data is collected, stored, updated, managed, secured, analyzed, and used throughout the enterprise. Fundamental discussions on governance of APIs, especially in the collection, integration, and use of data and APIs across different business units and product siloes should begin. The more the organization ventures into new things via APIs, the greater the focus will be on the basis of APIs and related data.

Inevitably, the bank will have to consider who owns and controls the data exposed through APIs. A cursory look into recent regulatory guidelines in the Asia/Pacific is already making it clear that the customer has the ultimate ownership and control of his/her data. However, generating new value from data can and should proceed.

In practice, however, APIs and data must be considered as a key resource to the business of banking. In a culture where APIs is widely accepted as an asset, the drive to get the maximum returns on such data begins.

Data-fueled intelligence is permeating all aspects of business, and other companies from other industries are generating new value from it. Financial services cannot be the hold-out from this. Several new principles on data utilization and API monetization may drive or hinder value generation, depending on how they are interpreted. These include privacy impact assessment, the right to be forgotten, consent and inference, and data portability.

Increasingly, APIs and data will be seen as an asset. For sure, some parties within the bank will claim the contrary, most likely citing how, in accounting terms, APIs and data is not an asset. In practice, however, APIs and data must be considered as a key resource to the business of banking. In a culture where APIs is widely accepted as an asset, the drive to get the maximum returns on such data begins.

The team leading the initiative to generate new value from APIs (or to monetize APIs) should look at their initiative not just as a theoretical exercise but as an actual build-a-business endeavor. This entails, therefore, decisions on who will benefit from APIs, the terms and rates of exchange of value, pricing models, distribution models — much like how a business creates the business. Many banks at this point are putting this endeavor under the care of their innovation teams or their fintech teams, but as the business scales, this should not be just an innovation project anymore. The bank has to promote this as a real business, in keeping with the new ways of doing business in this vastly different, data-driven marketplace.

Anuj Agrawal
Senior Research Manager,
IDC Financial Insights

Changing Roles of Banks in the Platform World

The most profitable seller on the Indian ecommerce site, Myntra, makes INR 25 billion in sales, even as the ecommerce player has never recorded any profit.

One of the most tangible outcomes of the digital economy has been the democratization of trade and services. An idle resource is only a click away from finding a potential consumer – a house owner's spare room can become a revenue generating asset in a jiffy, a cab driver can maximize profit by accepting passenger requests for suitable routes – thanks to the empowering intermediate layer of the "platform". So while the customer indisputably benefits from lower costs, better service, more options, and convenience, the service providers have a greater chance of making profits too.

These experiences are resetting the expectations of consumers, and the participants of trade at large. In financial services, FinTechs have been rather quick to recognize the market opportunity on the consumption side. Innovative offerings from FinTechs dot the banking value-chain and have witnessed considerable uptake given the clear advantages of speed and agility. Banks, the large incumbent institutions that operate around the full service concept of the pipeline model cannot match the agility and flexibility of digital natives, in part due to regulatory barriers and in part because of their complex legacy structures and IT-estates built for the traditional banking model. As a result, they have not only been losing their interest income to digital challengers, but also the ownership of relationship with their customers. In response, banks are slowly warming up to the idea of the platform business model by cultivating ecosystems that allow them to offer a diverse range of products and services to their customers. Drawing upon their strengths of scale, customer reach and understanding of regulations, platform banks can effectively manage the supply side of the equation and earn fee-based revenue.

In the traditional full service concept of the pipeline model, banks play three key roles – that of a manufacturer, an advisor, and a distributor of products and services. The radical shift in the banking business model is changing each of these roles.

1. The Manufacturer

Technology has empowered banks to get closer to their customer. What this means is that a bank can now get involved in a customer's buying process much earlier than it could traditionally. Consider the example of a customer looking to buy a car. This customer's journey begins with assessing the requirement and the budget, followed by exploring the features and performance factors such as mileage, and then on to the payment schemes or plans available to finance the car. What's more, the last bit is weighed down by reams of paperwork the customer needs to get in order, before getting to drive the car home. Now traditionally, a customer's bank comes into play only after the customer is more than half-way through the process. But a platform bank can assist its customer every step of the way, right from helping the customer find the right car through to the financial requirements and process. Thus, a platform bank's product is not just the loan required to buy a car.

DBS, a leading financial services group in Singapore has launched the country's largest direct buyer-to-seller platform that guides buyers and sellers seamlessly throughout their purchase or sales journey. The bank has partnered with sgCarMart and Carro to expand reach, and sellers can list their cars on both these automotive marketplaces. Buyers get assistance in selecting the car that best meets their budget, in estimating the loan amount they are eligible for, and even in scheduling a test drive. Both the parties are also guided through all the paperwork along with free services for car ownership transfers.

Banks are essentially looking to do more and be more to their customers. They are forming partnerships that can help them embed banking in the lives of their customers by offering lifestyle products such as movie tickets, restaurants and hotel bookings, etc. Emirates NBD's retail platform, Skyshopper, allows its debit and credit card users to buy flight tickets, hotel reservations, electronics, fashion items, groceries, etc. using one check-out.

So, one thing that is definitely changing for platform banks is the product portfolio. They are no longer sticking to manufacturing and distributing their own products and services, but are expanding their portfolio to include complementary offerings from insurance partners, products from FinTechs, and non-banking products such as movie tickets and cars.

Another way the products a platform bank offers will change, is through the emergence of specialist roles. In the case of retail platforms, a supplier with manufacturing excellence can get a product out to a significantly large

number of buyers. The most profitable seller on the Indian ecommerce site, Myntra, makes INR 25 billion in sales, even as the ecommerce player has never recorded any profit. Similarly, a bank that specializes in a product line, say lending or deposit products, and offers a unique and differentiated product with an attractive price point can get every distributor to offer the product on their platform. This approach of product leadership can help a bank earn revenue even though it doesn't directly approach the customers.

2. The Advisor

The oft repeated modern day adage 'Data is the new fuel' is especially relevant in the context of marketplace banking.

In a marketplace approach banks do not design and own all the products they offer, but form partnerships that allow them to offer the best products. This requires a change in mindset, and banks adopting the marketplace approach must understand that their job is to match their customer's needs to the best products in the portfolio, which could be their own or third parties' or even a competitor's. The key to a successful marketplace is a deep understanding of customer requirements. And it's common knowledge that the richer a platform or marketplace is in its data assets, the higher are its chances of getting it right. Amazon, that earns nearly 40% of its business today through recommendations, is a classic example of this. The uptake of the platform resulting in massive data assets, and its exceptional recommendation engine and algorithms are the key factors behind the platform's phenomenal success. Similarly, a financial services marketplace must be powered by recommendation engines that feed off huge volumes and variety of data. Accurate recommendations are an important element in the uptake of a platform, i.e. for customers to adopt as well as retain it as their marketplace of choice.

3. The Distributor

In the future, there will be banks that focus only on the last mile in the value chain. These banks will have business metrics built around high availability omni-channel presence, faster access and user friendly distribution service.

The richer a platform or marketplace is in its data assets, the higher are its chances of getting it right.

There are two key ways in which digital banks can do this – by being a distributor bank and by being a reseller bank. While both the distributor and the reseller banks focus on the top layer of distribution and do not manufacture products, in the reseller model the bank provides value added service on top of a product from a specialist bank or simply distributes the product by white labelling it.

The disintermediation of the value-chain has created specialist roles, and banks are no more the only provider of financial services. But by combining their strengths of experience and regulatory understanding with a holistic platform strategy, both large and small banks can thrive in the new platform world. As large banks increase their sources of revenue, small and mid-size banks stand to benefit from the enhanced reach. Large banks may play more than one of the roles described above, by manufacturing compelling products, creating a marketplace, and also owning a wide distribution network of own and third party channels. Small and mid-size banks will build their strategy around one or two of these roles.

Sajit Vijayakumar
Chief Operating Officer,
Infosys Finacle

The New Normal in Financial Services Goes Beyond Financial Services

In a conspicuous break with the past, winning customer trust is no longer only a function of ensuring that a customer's funds are secure. It is increasingly about knowing a customer well enough to be a partner at every step of her investment journey. To this end, progressive banks are turning to digital technologies to reimagine banking for their customers.

But as if in a balancing act, on one hand these digital enablers have increased the ability to understand and serve the customer better, and on the other they have amped up the customer's expectations. Customers' exposure to myriad digital services in their everyday life has reset their expectation from banking services. What's more, these expectations are not unrealistic. After reinventing hospitality, retail and transport industries, digital technologies and business models powered by these technologies are set to revolutionize other industries. Consider Philips Healthcare, the medical device maker, who is enhancing patient care using digital technologies with its Healthsuite platform that can scale up to millions of patients and help harness patient insights. The platform also augments revenue streams for the provider by offering solutions throughout the healthcare value-chain. Similarly, agile start-ups and FinTechs that have mushroomed across the banking value-chain are making unprecedented service levels possible. Mobile-only banks and several FinTechs such as CANDI by Canara Bank can open an account for a customer within minutes. MoneyTap, an Indian FinTech provides instant loan on-demand with zero collateral and incredibly low interest rates. Similarly, ICICI Bank has partnered with PayTM for instant short-term credit approval.

Clearly, banks are not the only providers of financial services any more. Digital upstarts have made a dent in the financial services space, and evidently in the books of the most trusted financial service providers, the banks. Studies suggest that about 73 percent of bank deposits, and about 7 to 9 percent of global banking profitability is projected to be at risk by 2020.

This along with regulatory challenges and environmental factors has put banks in a Darwinian race for survival. With their backs against the wall, banks are left with little choice but to innovate in order to offset the business lost to digital entrants. They are embracing a greatly expanded definition of banking, one that goes beyond providing financial services to integrating banking ever more closely with a customer's lifestyle and making it ever more contextual to their individual life stage.

Some of these new business models and initiatives include:

1. Partnerships beyond banking

In an attempt to win back lost customer ownership, banks are diversifying into adjacent markets to not just be a financial advisor to their customers but to also guide them throughout the purchase process of an asset. They are forming commercial partnerships with non-banking players. An example of this is the DBS car marketplace. The marketplace is a one-stop solution for car buyers and sellers that allows sellers to list their cars, creates the right buyer-seller matches, schedules test drives, and assists with all the paper work for ownership transfer, in addition to the vanilla banking service of providing loans. Buyers also benefit from attractive interest rate on their car loan.

2. Marketplace banking

Taking the concept of marketplace a step further, banks are setting up marketplaces for a host of non-banking products to integrate banking in the lifestyle of their customers. India's PayTM is a case in point. The leading payment service started with peer-to-peer payments and bill payments for a limited set of services such as utility payments. The e-commerce wallet now has more than 250 Mn registered users, and allows users to perform all kinds of payments – from fund transfers to flight tickets and hotel reservations to retail purchases. Revenue sources for the e-wallet include advertising, and commission or fee revenue from registered businesses. The e-commerce giant plans to expand its services by also offering loans by the year 2020.

3. Group synergies

Diversification is bringing about a convergence of industries at group companies or conglomerates that

are capitalizing on synergies among all the businesses under their ambit. Emirates NBD provides its debit and credit card customers attractive offers on Emirates airlines and Emirates Holidays. Not just this, the bank has tied up with over 25 non-banking players to form an online marketplace called SkyShopper for its debit and credit card customers. Through the platform, the bank's customers can pay for items including flights, hotels, electronics, fashion items, entertainment, groceries, etc. in a single checkout.

4. Renewed focus on business customers to address their larger challenges

With the decline in income from lending, banks are looking to gain a competitive edge in corporate business by tapping into their network of customers. HSBC has launched a Connections Hub for its corporate and SME business customers. It connects suppliers and buyers in various markets. Corporate and SME customers save the cost of due-diligence of potential customers and suppliers since these are the bank's customers duly verified through KYC checks. The Hub is a social media platform where buyers and suppliers can connect with each other, make announcements, add opportunities, and more.

5. Investments in adjacent industries

Banks are investing in service providers in other industries to launch new innovative offerings and in some cases to increase the customer base and expand their reach. In markets such as Kenya with mobile penetration rates as high as 80%, and high uptake of mobile banking services, leading banks such as Equity Bank are investing in MVNOs to launch banking services and reach a greater population. Equity Bank is utilizing Airtel's excess capacity to deliver MVNO services for financial inclusion and affordable banking.

Here we have touched upon just a few alternative models. With open banking and the exposure of APIs to third parties and ecosystems, the simple lines of code that have powered communication between applications for years are now opening the floodgates of innovation in banking. Progressive banks are introducing innovative business models to monetize their APIs and fuel innovation within banking ecosystems.

These alternative models not only provide new sources of fee revenue to offset the shrinking core business of banks, but also help banks serve their customers more innovatively and efficiently. While digitization has endowed businesses with the tools for unprecedented personalization and contextualization, it is critical that banks design the right customer journeys to serve requirements of customers at different life stages and also individual requirements of customers at the same life stage. Furthermore, with the increase in the number of digital channels, banks must ensure that data across customer journeys is analyzed and harnessed for enhanced customer experiences.

New business models, new experiences and new channels of engagement – in these evolving times, the "new normal" in banking is also perennially evolving.

Arun Krishnan
Senior Vice President, Product Development, Infosys Finacle

Blockchain
Building Block of the Future of Banking

The World Economic Forum in a 2015 report predicted blockchain to reach a tipping point in the year 2027. 73.1% of the respondents to the Technological Tipping Points survey believed that taxes would be collected using the technology by 2025, and 57.9% expected about 10% of the global gross domestic product (GDP) to be stored on a blockchain by this time.

Come 2017, and the government of China has already announced its plans of launching social taxation and electronic invoice issuance on blockchain. The Monetary Authority of Singapore (MAS) and the Hong Kong Monetary Authority (HKMA) are setting up a cross border platform on blockchain for trade finance. The European Commission as part of EU's research programs FP7 and Horizon 2020, plans to fund projects worth €340 million by 2020. The commission has also launched the EU blockchain observatory and forum with the support of the EU parliament. In the U.K., the Bank of England is examining the distributed ledger technology for secure RTGS transactions. Banks and financial institutions across the globe are discovering new use cases for blockchain, and the willingness of governments and central bodies is further helping move the needle on its adoption.

Against this backdrop, the WEF estimate seems rather conservative.

Blockchain is finding application in powerful real-world use cases such as digital identity, digital vault, and more! Imagine the convenience and security of having all your data and information such as education certificates, employment proof, health records, etc. encrypted and validated in the form of a personal digital vault. You control read, write, modify or delete permissions to this information or a subset of this information. For example, being able to share your health records only with your physician. Or think of the autonomy a smart contract can bring by eliminating the element of mistrust. You can convert your insurance, mutual funds or bonds into a smart contract and even transact on the bourses using the technology. Lost the physical documentation? Not a problem, the digital authority is legally binding! It's encrypted, decentralized, immutable, and safe.

The above possibilities are just a glimpse of the potential of the technology. Applications of blockchain range from supply chain management, intellectual property, or just about anything that requires a trustworthy record. Here we look at the key attributes of blockchain and explore how blockchain stands to revolutionize and transform the financial services industry.

Think of the autonomy a smart contract can bring by eliminating the element of mistrust. You can convert your insurance, mutual funds or bonds into a smart contract and even transact on the bourses using the technology.

1. Transparency – Blockchain is being peddled as the new standard for transparency. Instead of a central authority, blockchain passes on the power to the end-points in a transaction. Each record or transaction requires a sign-off from all the members of the chain.

The biggest worry for any regulator today is the absence of a single source of truth to ensure visibility to all of a customer's relationships with different banks. Central banks have for years strived to devise a way to bind all the relationships of a single customer into one unique identifier. In blockchain they have found the answer to this, plus a way to access all the transactions taking place in a network. Regulators also benefit from access to the required view of transactions and customers to ensure authenticity of transactions, enhance their reporting, and utilize the information for applications such as tax collection.

2. Network effects – No conversation about digitization is complete without the mention of Uber, Facebook, Alibaba, WeChat, et. al. who have all embraced the platform business model and harnessed the network effects to take their respective industries by storm. While banking has largely been a laggard in adopting the model, the industry is finally catching up. With blockchain, a technology that cannot operate in isolation, banks can reap the benefits of network effects as they form diverse ecosystems within banking and beyond.

3. Security – Banking has traditionally been prone to fraud and phishing activities. With digitization, digital identity hacking and related frauds have also become rampant. A secure system like blockchain can help banks combat and potentially put an end to these threats. Blockchain doesn't only offer the advantages of immutability and transparency but can make records and transactions even more secure with digital certificates issued using public key infrastructure.

4. Encryption – The sophisticated cryptographic encryption techniques of SHA-256 and above make blockchain extremely robust and resistant to attacks.

5. Flexibility – Contrary to popular belief, blockchain is not all public like Bitcoin. Bitcoin is essentially a public blockchain where a member doesn't require permission to become a node, to add a block or to mine the network. There are other ways of building a blockchain that require members to attain permission to read the information and transact or add to the chain. Thus, based on the capabilities a bank needs, it can build a private or permissioned distributed ledger.

6. Cost efficiency – Most European and U.S. banks are struggling with falling ROE levels, reducing interest income, eroding margins and profits. With the advances in technology, the cost of transactions has consistently come down from the days of branch-only transactions to transactions at ATMs to online and then mobile. With the advantages of speed, security, and transparency, the total cost of carrying out transactions on a blockchain will potentially be the lowest ever.

No single technology in the past has held the promise of all of the above.

With blockchain, for the first time regulators and central banks have a chance at not only effectively containing financial fraud but also ensuring authenticity of transactions. A block-chain extended to cross-border networks can lend itself for authentication and validation of transactions transcending geographies. Thus customers who have relationships with financial institutions outside their country of residence or domicile for reasons including but not limited to low tax regime, can also be brought under the radar of regulators and central banks.

The technology is gaining acceptance from all quarters – industry reports, analyst commentaries, regulators and bankers. Even skeptics such as the RBI in India, a body that has nearly banned Bitcoin transactions given the volatility and uncertainty surrounding the cryptocurrency, has ascertained its confidence in blockchain. The regulator has implemented a blockchain solution for trade receivable discounting systems.

So while it is abundantly clear that the industry believes that blockchain is a transformative technology, how can banks unlock its full potential. Let's explore some use cases:

1. Asset Registry

That certain customers pledge the same asset as collateral or security at different banks to secure loans is not new. There are cases aplenty of such a fraud in the history of banking. Now, if a bank provides a loan to a customer against an asset and insists on putting a record of the asset on blockchain, it can prevent the same asset from being pledged as collateral for a loan at any other bank. Banks can thus reduce non-performing assets, not with a remedy such as faster recovery but by preventing them from making their way into the system in the first place.

Customers who have relationships with financial institutions outside their country of residence or domicile for reasons including but not limited to low tax regime, can also be brought under the radar of regulators and central banks.

2. Corporate Bonds

Corporate bond, a popular trading instrument is also subject to considerable cases of fraud. If a bond issued by a corporate is put on a blockchain and is provided a unique verifiable ID, it can be traded across the globe without having to go through any intermediary such as a stock exchange or a brokerage house. Combined with digital identity where both the transacting parties have proper KYC check or equivalent in place, these cross-border transactions can be made completely transparent with unique immutable records on the blockchain.

3. Cross Border Remittance Transactions

The global remittance space is potentially the biggest beneficiary of blockchain. A standard remittance transaction involves fees, charges and loss due to currency conversions, which can be eliminated with the use of blockchain. The transaction can also be made quick since blockchain saves the time spent in approvals in a typical traditional remittance. When ICICI and Emirates NBD put their international remittances on a blockchain network, they reduced the transaction time from a couple of days to just 36 seconds.

4. Trade Finance

Trade finance transactions, typically plagued by process inefficiencies, trade regulation inconsistencies across geographies, payment and delivery delays, and absence of information on shipment can be significantly improved using blockchain. Cryptographic security of blockchain ensures immutable records that can only be accessed by permissioned participants of trade. Since the transacting parties have a single source of truth that is updated real-time with network consensus, the delay and need for reconciliation of payments can be greatly reduced and the risk of fraud mitigated. What's more, with smart contracts banks can easily execute contractual terms of trade.

5. Trade Invoice Financing

If purchase request, purchase order, payment, and all the stages of a transaction take place on a blockchain, banks can reduce the risk of fraudulent invoicing. This way, the invoice has a unique hash number which cannot be broken or decoded to derive the contents of the invoice, or be used for lending anywhere else.

6. Retail Lending

In retail, the number of mortgage related frauds can be brought down by putting all land records, land registries, and mortgage documents on a blockchain. This reduces the risk of litigation, as an asset has a single owner and the blockchain is the single source of truth. Regardless of who has the physical documents, the transaction record on the blockchain stays legally binding. Governments in countries such as Honduras, Sweden and Norway are already making it a national practice to store land registries on blockchain.

We have thus far in this article amply established how blockchain can rid banks of frauds and inefficiencies. But is there merit in blockchain use cases for winning business? We reckon yes. Banks have been losing their peer-to-peer lending and payments business to agile startups and fintechs for some time now. With blockchain, a trusted entity such as a bank in a classic platform fashion can bring the lender and the seeker together and orchestrate a secure transaction. The key reason this model augurs well for all participants involved is because checks such as KYC conducted by banks can authenticate the transacting parties, banks can conveniently build a credit rating mechanism for lenders to make lending decisions, and lastly because banks have the advantage of trust built over the years to be the body that puts the transactions on blockchain and controls permissions to accessibiity of information in this arrangement.

As the industry leading digital banking suite, Finacle's blockchain based solutions are powering transformations at leading banks across the globe.

In an industry first, a consortium of 11 banks partnered with Infosys Finacle to pilot a blockchain based trade finance network in 2016. Finacle announced the global availability of Finacle Trade Connect, a blockchain based trade finance solution for banks that help digitize the trade finance business process, including validation of ownership, certifying documents and making payments, while working on a distributed, trusted and shared network. The solution is available for a range of functions, including Bill Collection, Letters of Credit, Open Account for Trade, C2C Transactions for Trade, B2C transactions for Trade, PO Financing and Invoice financing.

In the truly digital world of banking, we believe this is just the beginning of the most transformative things to come. The confluence of blockchain, artificial intelligence, deep machine learning, analytics and the new generation of technologies can unlock possibilities that have been only figments of sci-fi imagination so far.

Rajashekara V. Maiya
Vice President, Business Consulting and Product Strategy, Infosys Finacle

Platform Banking
Not Why, But How

In a sense, business has come full circle. When it started out, trade was rooted within a small community, from where it expanded over centuries to a state, a nation and finally, the globe. Today, business conducted on a digital platform is once again centered on the values of community (albeit a global one) and fellowship.

But many other things have changed. Whereas the fundamental premise of traditional business models was to produce goods and services where they were cheapest and sell them where they were most profitable, the driving principle of the platform business is to create shared value, even to the extent of binding competitors together in co-opetitive alliances. The linear manufacturing assembly line of yore has made way for a web-like network thriving on connectivity and collaboration. Also, unlike traditional organizations, which internalize innovation and are therefore restricted by the availability of in-house talent, platform companies externalize innovation, welcoming the contribution of the ecosystem at large, to break all boundaries of reach and scale. The story of Apple, which evolved from a "linear" phone manufacturer to the owner of an iconic ecosystem of apps, developers and users around the globe, is a great example of this change.

Today, the platform business model that was seeded by Apple and a few other firms a couple of decades ago, dominates the leaderboard of companies with the highest market capitalization: in 2017, almost 60 percent of global, billion-dollar unicorn businesses were based on the platform model; the situation was even more pronounced in Asia where 31 of 36 unicorns were platform businesses. What's more, the platform model is spreading quickly from early adopters such as commerce, transportation, hospitality and telecommunication to other industries, including banking.

Typically, a platform enhances business in two ways – first it creates a certain value to attract customers and then leverages the same ecosystem to capture value for itself. Once again, Apple serves as a good example. After attracting millions of users by offering voice communication, Internet and data on the same device (iPhone) it capitalized on its software strength to augment value by building a platform and reaping the benefits of the ecosystem.

While it may sound counterintuitive, banks are well placed to adopt a platform business model. They are well past the first stage, with a long history of delivering value through a variety of financial products and services. Now they have an opportunity to capture immense new value by building an ecosystem where consumers fulfill their needs, vendors build their businesses and the banks themselves gain both loyal customers and additional revenue through advertising, subscription and transaction fees.

For banks planning to enter the platform business, there are currently seven avenues:

Product platform: In this model the platform company aggregates products from various sellers and offers them to buyers. Retailers such as Amazon, eBay and Alibaba follow this model. In banking, the DBS Marketplace for used cars is an example of a product platform.

Service platform: Airbnb and Uber are the first names that come to mind as examples of a service platform, which like the product platform, aggregates service offerings from different providers and presents them to customers looking for the same.

Typically, a platform business secures a valuation that is 2 to 3 times what a linear business would receive. Of 2017's US$ 700 billion private equity financing, US$ 494 billion went to platform businesses.

Payments platform: Probably the first port of call for banks, the payments platform marks a revolution in the way payments are made, transported, received and incentivized. It is largely responsible for making payments cheap, real-time, fast, and simple enough to consummate on a mobile phone. While there are innumerable examples of payments platforms, no list is complete without PayPal, Square, and Apple Pay. In India, the Unified Payments Network is a standout example.

Investment platform: Another area of immediate interest for banks is the investment platform business, exemplified by the likes of Prosper, Lending Club, Funding Circle and Upstart, which connects borrowers (especially of small loans) to lenders. Banks intermediate the actual financial transactions for a fee.

Social platform: A necessary part of modern life, the social platform needs no introduction. Networks, such as Facebook, have now entered the banking space with peer-to-peer "social payments". Conversely, one could perhaps cite HSBC Connections Hub as an example of a bank-sponsored social platform where business customers can connect, interact and do business with one another. Once social payments gain traction, more banks will likely set up social platforms of their own.

Communication platform: WhatsApp and WeChat are the frontrunners among communication platforms and both have enabled in-chat payments. This is an avenue for banks to be part of their ecosystems and facilitate both financial and non-financial transactions passing through. In India, ICICI Bank has pipped its rivals by becoming WhatsApp's partner bank for the initial launch.

Social gaming platform: Several gaming networks, including Second Life, allow gamers to buy and sell stuff using virtual currency. While regulations may deter them for now, is it possible that someday banks will participate in such platforms, helping to both move and trade real and virtual money?

Which of the above platforms a bank chooses depends on its unique circumstances. Regardless of that choice, there is one thing that every bank must do to succeed in its platform business, and that is tie up an extensive ecosystem from end to end to offer frictionless, seamless customer experience. This is exactly what DBS – which prefers to be known as Digital Bank of Singapore – is doing so successfully by bringing key participants, from developers to Fintech to private equity firms, together.

Platform banking is inevitable, and huge benefits await those who get it right, not just reach, scale, efficiency and growth, but also unprecedented valuations: typically, a platform business secures a valuation that is 2 to 3 times what a linear business would receive. Of 2017's US$ 700 billion private equity financing, US$ 494 billion went to platform businesses.

In return, platform banks can deliver immense value to investors, elevate the economy by fostering sharing and collaboration, and be part of one of the biggest business revolutions in recent memory.

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Open Banking, FinTech and Platform

The Trifecta for Banking Innovation

Banking Turns Open and Collaborative

Three years is a long time in the global banking world. During 2015 to 2017, when the FinTech trend began to take root, incumbent banks viewed the new competition with a measure of apprehension. A chief concern was how their creaking legacy systems, some of which were more than 50 years old, would compete against the nimble, innovative models of FinTech upstarts.

Gradually there has been a perceptible change in attitude and approach. In the past year or so, both banks and FinTechs have realized that there is more advantage in joining their complementary strengths than pitting them against each other in the marketplace.

The realization couldn't have come at a better time. In several parts of the world – Europe, Australia, India and elsewhere – open banking is either being mandated or encouraged by the government, leaving banks with no choice but to share their customer data and development environment through APIs with authorized third parties, such as FinTech companies, in their financial ecosystem. [6]To their credit, banks are responding positively: in a recent global survey on payments, 87 percent of the respondent banks claimed to have a strategy for open APIs, significantly more than the 59 percent who said the same thing a year before.

Take that as a signal of banks' acceptance of the new reality of banking – open, collaborative, and ecosystem-driven. In this reality, incumbents are shedding their universal model of linear value chain to gradually transform into platform-based financial marketplaces with a wide set of own and rival offerings to fulfill not just the financial needs of customers but also others, ranging from travel and leisure to shopping and education. The transition to a platform model is no surprise, given that in less than a decade, the leaderboard of companies by market capitalization in the United States has changed from Exxon, GE, AT&T, Microsoft and P&G to Apple, Alphabet, Microsoft, Amazon and Facebook, all of which have very substantial platform plays.

Bank-FinTech Partnerships

FinTech companies are essential for a thriving financial services marketplace and for a successful platform bank. FinTech-bank relationship in today's open API environment come in a variety of forms. In the first one, the bank itself creates a digital subsidiary with FinTech flair for its digital operations: examples include a Goldman Sachs subsidiary called Marcus, digibank from DBS, and Greenhouse by Wells Fargo.

Another model is one where a FinTech firm with a niche offering evolves into a full-fledged, digital, challenger bank. Atom Bank and Monzo in the United Kingdom, and India's Paytm exemplify this.

The third option is collaboration between an incumbent bank and a FinTech provider that is all about taking highly innovative products and services to market. Take the case of Portland, Oregon-based Simple, which has partnered with banks BBVA Compass and the Bancorp to offer FDIC-insured checking accounts built to help customers save money, and supports smart spending with inbuilt budgeting tools. The accounts are free, and Simple doesn't charge fees to its customers. [7]Or that of online small business lender OnDeck, which is offering its underwriting technology to JPMorgan Chase that the bank will use to quickly approve and disburse loans to its own small business customers. Then there's Moven, which has licensed its money management app to Canada's TD Bank, which claims a cut in spending of 4 to 8 percent among app users, and gives customers unique insight via "spending meter". [8]And let's not forget SoFi, which announced in March this year that it was partnering with 6 banks to offer a checking account that would come not only with zero fee but also a debit card, bill payment and other facilities, and an interest rate of 0.92 percent that was several times the market average.

Innovation and Insight

By allowing FinTechs and third party developers access to open APIs at the experience layer, banks can leverage their innovation expertise to acquire applications of real value. Think of Ayden, which enables banks to receive customer payments from any channel, from mobile app to bank account to Facebook, to save them the cost and effort of setting up infrastructure for that purpose. Or China's Xero, which offers low cost business accounting services to small businesses, and a new revenue stream to their banks.

Besides innovation, FinTechs also bring valuable insights to their bank partnerships. Banks can use these insights

6. Ovum: 2018 Global Payments Insight Survey – Retail Banking

7. Lend Academy: An in-depth look at the On Deck / JP Morgan Chase deal

8. Bank Innovation: Sofi Money Wants to Provide Checking Accounts Without the Inconvenience

to improve and personalize products, services and experiences, reach customers on the right channels, and target promotions to the right audience at scale. For example, Ant Financial helps its partners make personalized, contextualized recommendations to more than 800 million customers at every stage of their journey.

Platforms and the Banking Ecosystem

An open API allows banks to easily onboard FinTech partners and their innovative solutions to increase revenue and more importantly, stay relevant in a rapidly changing landscape. It is also the most important tool for building a banking ecosystem.

Banking ecosystems, with their diverse bank and non-bank participants, have the potential to completely transform banking as we know it. New models of the platform bank, other than the marketplace model mentioned earlier, will come up in the future. Examples include specialist banks that offer only one or two products that they are really strong in, and distributor banks, which focus only on delivering products sourced from other providers on every possible channel.

However, the big decision before banks is not which model to adopt, but rather, what must be the core

Just as the most successful platform companies understood that they were in the business of connecting providers with consumers, banks too must figure out the real needs that they serve.

proposition of their platform business. Just as the most successful platform companies understood that they were in the business of connecting providers of transportation and accommodation with consumers, rather than owning cars and hotels, banks too must figure out the real needs that they serve. One thing is clear – the days of transactional banking, of merely lending and borrowing money, are over. Today's customers want their banks to enable their lifestyle through every stage of life – starting from when they enter college until the day they retire. Nothing is better suited to fulfill this expectation than the trifecta of Open Banking, FinTech, and the Platform Model.

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5 Steps to Realizing the Vision of the Platform Banking Model

Driven by ecosystem orchestration, reduction of marginal costs, and collaborative innovation, platform business is fast emerging as an important pillar for success in the digital world. A recent report from McKinsey says, "Platform is the preferred operating model for 7 of the world's 12 largest corporations". However, none of these organizations are financial institutions. Banks are lagging behind in adoption of the platform business model.

Banking executives are aware of the advantage of platform business - platforms can help banks retain their competitive edge in a world where customers are constantly resetting their expectations based on their experiences across sectors. But platform is a new business model for banks, and designing and building a platform is a new and sometimes confusing journey. Some important questions before a bank looking to build a platform business include: Shall a bank acquire a platform, or build it from scratch? Shall the platform run on the cloud? Can a bank develop its own API standard or wait for an open standard from regulators? Is an outside-in approach better than an inside-out one when designing platform interfaces? How to measure the success of platform business and how to monetize the platform?

Understanding the potential value of data is the foundation of a bank's platform business model, as several chief architects concur by recommending a thorough data governance model as a key prerequisite. However, there are a variety of other considerations such as interface design, infrastructure and KPIs that banks must weigh in on.

This article talks about a five-step process for banks to review their platform strategy, and overcome any implementation challenges.

#1 Segmented Platform Strategy

Banks don't need to "create a platform from scratch."

Yes, platforms help consummate matches between suppliers and customers. But the role of a platform is more than being a modern middleman. It is about relevance, control, innovation, and monetization. Moreover, banks can use the platform to remain in control of their customer data and explore ways to monetize this data for additional revenue.

Banks do not need to create a new platform from scratch to be a matchmaker. To stay relevant to their customers' digital journey they can partner with a digital firm's ecosystem. To build innovative customer experience they

Some important questions before a bank looking to build a platform business include: Shall a bank acquire a platform, or build it from scratch? How to measure the success of platform business and how to monetize the platform?

can allow FinTechs to access their open APIs. Banks looking to gain from synergies with non-banking businesses can choose to acquire an e-commerce platform. Thus banks must zero in on their strategies according to their priorities.

Strategies segmented by data ownership and accessibility

To help banks explore strategies for platform business, we have summarized six approaches relevant in banking (refer to the Finacle document - A strategy framework for platform banks). Based on the two dimensions of data ownership and data accessibility, our segmentation model can help banks align their platform strategies and deployment models more closely to the needs of the ecosystem. Banks can choose to embed, create, curate, participate or buy a platform business. For instance, creating an API gateway, building an online car marketplace, and exchanging Amazon loyalty points.

There is no one-size-fits-all strategy. Different platform approaches come with their own unique challenges. Participating in mega-size ecosystems of digital firms could be a time-to-market hack for banks transitioning to the platform model, but it also puts them at a risk of losing data ownership. A leading bank may choose to leverage its network to curate an ecosystem, this approach may not scale as much as the bank's open APIs. Banks may choose to create marketplaces for financial products, but may find it challenging to get a large number of participants from other banks.

Whether it is creating banks' API gateway, building an online car marketplace, or exchanging Amazon loyalty points, banks need a careful evaluation from two critical dimensions – the ownership of data, and the accessibility of data (refer to the Finacle document – A strategy framework for platform banks). Banks can then select their best-fit strategies in the context of their ecosystem requirements and their infrastructure constraints.

#2 Scalable Infrastructure

Start small

Bankers have traditionally been and to a large extent continue to be risk-averse. Given the lack of experience in platform business, banks often choose to start small with respect to budgets and resources. An international bank is known to have started its open banking initiatives with a team of just five engineers and analysts. Apart from mitigating risk, starting small also endows the bank with an agility to innovate. For instance, banks can get an open API marketplace up and running in a couple of months and enrich the functions later.

Plan big

"Start-small" often leads to cost-effective solutions, such as open source tools and simple out-of-box products. While there's nothing wrong in adopting the open source approach, it must be ensured that the infrastructure – hardware, database, middleware, and traffic management – that fits a short-term solution in a start-small approach is scalable and manageable to meet the future demands. Platform business may grow at an unprecedented pace. A bold forecast estimates 80% of new transactions and services will initiate from platforms. Stepping back from estimates to the scenario today, Ant Financial is said to have sold over one hundred million insurance offers through Alibaba's platform in its Single Day campaign. So, although starting small is advisable, planning small spells doom. Banks must "plan big" and ensure the scalability of their underlying infrastructure. They should explore a traffic management component for their infrastructure or run their platform on cloud.

#3 Ecosystem-centric Design

Easy plugin

Bank CIOs have a variety of options to build platform businesses: in-house, platform vendors, ecosystem partners, and open source tools. In taking their platform businesses off the ground, banks must reach out to vendors, regulators, and partners, with an unrelenting focus on the key requirements for a good platform design: light-weight, secure, time-to-market, scalable, and importantly, ecosystem-friendly interfaces. Many of these rules could be summarized in a single design principle: easy plugin.

Architects sometimes design platforms based on legacy architecture and interfaces so that existing core capabilities can easily integrate into new products. Nevertheless, a platform, as an orchestrator of ecosystems extending across sectors without borders, should be able to plug in third parties easily and quickly. Easy plugin is an outside-in rather than an inside-out approach for designing ecosystem-friendly interfaces.

Open standard

Business consortiums and regulators have become an important catalyst to many platform business initiatives, for instance, standards for open banking. The Association of Banks in Singapore published an API playbook in 2017, and HKMA launched a consultation on the new Hong Kong Open API Framework early this year. Needless to mention Open Banking in the UK and Australia, PSD2 in EU, and UDI in India, have already got banks transforming themselves for compliance.

All these frameworks and guidelines provide references to API security and catalogs. However, while harmonization of open banking interfaces is important, it may defeat the purpose of time-to-market, given that administering any kind of standardization in banking takes years to happen. If banks want to scale their platform business to thousands of partners and developers, it may be worth considering speaking with Fintechs, digital firms and IoT manufacturers who can help design APIs as the key consumers of banking APIs. Eventually, open banking is not just about banks opening up their data to each other for regulatory compliance, but also a key opportunity to grow their ecosystem business. Although the importance of regulatory standards can't be emphasized less, bank executives should design open APIs not just based on exposed core banking interfaces or regulator's API standard. What is required is an ecosystem-centric, domain-based and outside-in approach to make platform business effective, user-friendly and scalable.

#4 Driven by New KPIs

To successfully evaluate the performance of platform business initiatives, traditional value metrics of revenue, cost and risks are not sufficient. A new set of KPIs and metrics are needed to help banks measure and ascertain how well they fare on their platform strategies and API strategies. New dimensions such as traffic, conversion, and monetization are critical for effectively evaluating platform businesses.

Monetization matters but should not be a key priority at the beginning

Banking executives typically have a common question in mind before launching a platform initiative - how to monetize the platform business. Platform business is designed to reduce marginal costs so that consumers can get better products at a lower price. On the other side, monetization as a new revenue source adds extra cost for platform transactions. Experiences from other industries portend that monetization right at the start could potentially slow down the growth of platform business, and bank executives should focus on making connections and increasing traffic when starting out on their platform journey, rather than obsessing over ways to charge money from partners and third-party developers. However, banks should ensure that their infrastructure lends itself well to monetization, which might be key to the success of their platform at a later stage.

Focus on customer experience, traffic and context

Key questions that banks must answer to accurately assess the performance of a platform include - How many services and transactions pass through API gateways? How much purchasing is done by marketplace platforms?

New KPIs such as integrated customer experience, traffic, and conversion should be designed for benchmarking platform performance. Integrated customer experience gives a consolidated view of customer satisfaction. Most customer experience KPIs are measured in siloes. Measuring traffic is critical for evaluating the scalability and influence of banks' platforms and their influence in their ecosystems. Apart from being a key indicator of monetization and innovation, conversion rate is an important metric to validate that banks offer the right services in the right digital context.

#5 Be Aggressive to Make Connections

Harvard Business Review says the success of a platform strategy is determined by three factors: connection, gravity, and flow. Connection is how easily others can plug into the platform to share and transact. Gravity is how well the platform attracts participants, both producers, and consumers. A good connection and gravity could be justified by how many connections the platform makes with partners and consumers to consummate the right matches. It requires banks to get the wheels in motion for a thorough plan to actively "sell" the platform to ecosystems.

Sell the value

A recent report from Mckinsey says "companies pursuing aggressive platform strategies yield a better payoff in both revenue and growth." An elaborate API catalog and a flexible sandbox environment make a good first impression to partners and third-party developers. Meanwhile, banks also need to have a connection story ready, a story that tells how the matchmaker could create added value for third parties. To achieve that, a well conceptualized marketing and partnership plan needs to be in place to be able to actively sell the value of a platform, and make the right connections. Unfortunately, a platform working group is usually made of program managers, business analysts and architects. Banks should expand this composition to include marketing and sales specialists in the task force.

Bank executives should focus on making connections and increasing traffic when starting out on their platform journey, rather than obsessing over ways to charge money from partners and third-party developers.

Target user in a bigger ecosystem

Ecosystems comprise more than consumers and FinTechs. Customers live a digital life made possible through an ecosystem of telecom operators, digital firms, social apps and IoT device makers. To effectively promote partnerships and attract more traction and traffic on platforms, banks should understand who their target users and partners in the platform business are, and should reach out to them actively. As in all initiatives, the 80/20 rule applies to platform businesses too. In this context, typically 80% of traffic is brought in by 20% of the participants of a

platform. A successful partnership with major digital firms thus bodes well for quickly bringing in massive traffic to open banking platform. The story of how Alibaba fetches a sales figure of about 100 million insurance products to Ant Financial is proof of the value a great targeted partnership brings to a platform venture.

Recommendation

In 2018, platform business sits firmly atop the strategic agenda for banks' digital transformation. Be it creating, curating, participating or investing, banks should formulate a platform strategy that connects well and fits just write in their ecosystem. To truly realize the vision of platform business, bank executives should:

- Understand the potential value of data and assure the readiness of a data governance model
- Choose the right strategy based on the segmentation model articulated above, and the bank's business context
- Design a secure, agile, scalable, and ecosystem-friendly open platform that supports monetization
- Be aggressive to make connections with developers, partners and consumers
- Develop a new set of KPIs such as traffic and conversion to benchmark platform business

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Case Study
India Trade Connect

The India Trade Connect network won the Celent 2018 Model Bank award for Trade Finance & Supply Chain. This case study was written by Alenka Grealish, Senior Analyst at Celent, as part of the Celent Model Bank awards for 2018. Ms. Grealish has over 20 years of consulting and research experience in the banking industry with deep expertise in payments, transaction banking, and commercial banking. Her research focus is on innovation in treasury management services, trade finance, working capital finance, and the implications for customer journeys across segments, including small business.

FINANCIAL INSTITUTIONS	ICICI Bank, Axis Bank, IndusInd Bank, RBL Bank, Yes Bank, Kotak Bank, South Indian Bank
INITIATIVE	India Trade Connect
SYNOPSIS	Domestic trade finance blockchain-based network, enabling automation and transparency, and improving risk mitigation in domestic trade and supply chain finance operations.
TIMELINES	• March 2017: Seven banks meet and demo Finacle Trade Connect • October 2017: ICICI and Axis pilot • March 2018: Consortium moves into production
KEY BENEFITS	• Single common ledger offering data integrity, transparency, traceability, auditability, and attendant trust and risk mitigation • Automation of paper, manual-intensive workflows • Cost savings • Revenue opportunities
KEY VENDORS	Infosys Finacle

CELENT PERSPECTIVE

- The bank consortium along with their technology partner, Infosys Finacle, recognized the opportunity that blockchain-based technology presented to digitize trade finance, which is mired in inefficiencies and is subject to fraud.
- They also knew that to be successful they needed to build an ecosystem of the entities involved in the trade finance supply chain.
- The seven founding banks (listed above) were able to run successful proofs of concept with Finacle Trade Connect and hence moved forward to form a consortium to pilot India Trade Connect.
- The group wisely chose a well-honed use case, raising the odds of success. The resounding success of the consortium's inland letter of credit pilot (cycle time reduced from 8–9 days to 2–3 days) was due to a winning combination of technology, willingness to embrace paradigm shifts, and strong collaboration.
- While the business side drove the initiative, ensuring that the customer experience remained at the center of the project, it engaged effectively with other stakeholders through working groups.

Detailed Description

ICICI Bank, Axis Bank, IndusInd Bank, RBL Bank, Yes Bank, Kotak Bank, and South Indian Bank form a critical mass of participants to support India Trade Connect. They all were exploring the potential of blockchain technology to solve various operational pain points and generate new services. Similar to banks in other regions, the use cases being examined included not only trade finance but also remittances (cross-border payments) and other payments. The use case that stood out was domestic trade finance, which is a huge market in India (likely around $2.45 trillion in trade). In addition, this use case would be welcomed by the government since it would contribute to its broader "Digital India" campaign.

ASSETS	~$250 billion in sum
GEOGRAPHICAL PRESENCE	India
OTHER KEY METRICS	• India is the world's fastest growing large economy with GDP growth forecast of 7.3% for 2018-19 • Indian Industrial Production grew by 7.5% YoY

Source: Consortium banks.

ICICI and Axis met in February 2017 and agreed that the domestic trade finance use case merited taking to the next level, a pilot with a bank consortium. In March, they met with five other banks, including relevant business and technology heads, and Infosys demonstrated Trade Connect. Consensus was to move forward and develop a letter of credit module. After a successful pilot between

ICICI and Axis bank in October 2017, Trade Connect is slated to go into production this March.

Opportunity

While trade finance provides banks with an attractive annuity revenue stream and has relatively low default rates, it is a tough business to run. Trade finance (both open account and documentary) is plagued by slow, opaque, paper-heavy processes involving multiple entities. Because these entities interact with each other through siloed channels, there is no common view of the status of a trade instrument (e.g., purchase order, invoice, and letter of credit). In addition, the processes are vulnerable to document fraud (e.g., fraudulent invoices) and duplicate invoice financing. Cumulatively, these inefficiencies result in hidden costs of up to 15% of the value of traded goods (Organisation de Coopération et de Development Économiques). For banks, they drive up labor, transaction costs (in particular, messaging costs), and reconciliation costs. Blockchain-based technology could eradicate these inefficiencies as well as mitigate risk (Figure 1). It brings numerous advantages: digital, persistent data, immutable ledger (a single common truth), traceability, and auditability. Invoices and purchase orders received on the platform are uniquely identified and stored on the blockchain platform. Cumulatively, it can dramatically lower processing costs and time and push fraud to zero. While cost savings was a key driver for bank participants, revenue generation potential was a greater driver. Banks are losing material revenues as a result of paper-based trade finance processes and attendant fraud exposure. Each document on the blockchain represents a new financing opportunity for a bank.

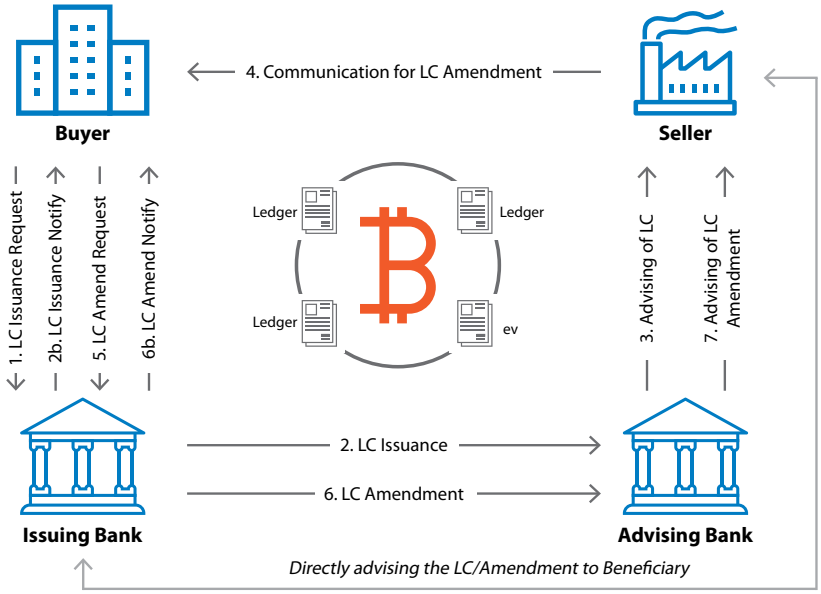
Solution

India Trade Connect's success rests on technology, effective governance, and strong business-IT collaboration. Technology Infosys Finacle began examining the potential for blockchain to solve inefficiencies and mitigate risk in banking four years ago. It found that trade finance in particular could greatly benefit from a blockchain-based solution, not only to improve efficiency, but also to generate new revenue streams. As a result, it developed Trade Connect specifically to address the trade finance

Figure 1: Contrasting the Traditional Trade Finance Process with Finacle Trade Connect

Existing Trade Finance Process	Trade Finance Process on Finacle Trade Connect	Benefits
Buyers and sellers have relationships with each other and separately with their banks.	Banks, buyers and sellers maintain the same direct relationship with each other.	No material change in the relationship process. Engagement with each other is direct and on digital channels, reducing dependency on physical documents.
Only the correspondent banks have relationships with each other.	Message and document sharing is done on a real-time basis for all involved parties increasing trust, reducing costs, and time.	This ensures a single source of truth and increases trust between the parties.
Each party deals separately with its counterparty through a siloed channel and no one is sure of the status of granular trade.	The flow of goods and information is visible to required parties in the transaction, all at the same time.	This provides a shared picture of granular trades and ensures efficient risk management.
Low automation, limited visibility.	Higher automation, increased transparency and immediate availability of data.	This ensures superior awareness for better decision making. The open data picture also helps open up the possibility of new business avenues for both banks and corporates.

Source: Finacle Trade Connect



Inland Letter of Credit functional flow

Source: Finacle Trade Connect
Note: All the above flows are on the blockchain

process requirements of banks. India Trade Connect's goal is to digitize trade finance workflows within a distributed, trusted, and shared network (as illustrated in Figure 2 for a letter of credit). It is agnostic to which blockchain infrastructure is used (e.g., Hyperledger, Corda, Ethereum, and Bitcoin). Workflows include validation of ownership, certification of documents, and payments. It covers a wide scope of transaction types: purchase order, invoice, bill lodgment request, bill acceptance request, documentary credit request, documentary credit, advance payment, bill payment transaction, customer-to-customer (both use same bank), and open account. All documents received on the platform are uniquely identified and stored. In addition, Finacle Trade Connect provides real-time dashboards, which track trade instruments across lifecycle stages and actors. The biggest tech challenge was using an independent data center in the cloud and establishing security requirements. There were few benchmarks available on how a distributed storage and distributed computing system can be integrated with host systems in a secure way, which was compliant with the security standards at the participating banks. Infosys worked extensively with the participants to explain how an independent data center would work, implement the security they required, and acquire third party certification.

Governance and Collaboration

Close coordination between bank participants and a multi-stakeholder approach have been paramount to optimizing functionality and satisfying information security requirements. Given India Trade Connect's success rests on consensus across participants, close coordination was undertaken between participating banks and Infosys Finacle. Each bank had two members on the team, a business product owner, and an IT leader whose core responsibility has been trade finance systems. Infosys Finacle had 15 people from its product development and delivery groups.

The business side drove the initiative. As a result, the project had a strong focus on maximizing improvements in customer experience, ranging from what the customer sees to what they do not see but should have visibility into (e.g., timing of a letter of credit). Importantly, the consortium invited corporations (both buyers and suppliers) to test the functionality and received very positive feedback as well as recommendations for enhancements. For example, corporations were concerned about authentication and authorization security and administrative control. While the business side drove the initiative, they recognized that they must have buy-in from other stakeholders. Hence, they formed four working groups: business, operations and process, technology, and information security. The business team engaged heavily with the operations team to reimagine the end-to-end back office processes. Through monthly meetings to review progress, assess the direction, and measure against criteria set up at the beginning of the initiative, these groups kept the process on track. Moreover, they assured that participants addressed and solved any issues as swiftly as possible. Infosys worked in parallel to develop

necessary functionality and security.

The consortium's ability to move relatively fast has been underpinned by efficient communication and agile testing. Infosys established a WhatsApp group and a "testnet." The WhatsApp group enabled the banks to quickly seek help, clarify points, and provide direction. The "testnet," a cloud-hosted environment and network, enabled the banks to rapidly explore and test the functionality. Monthly releases with the latest functionality were refreshed into the "testnet." This enabled the banks to see how their feedback was incorporated and to continue to test and pilot the solution. This approach also allowed the banks to conduct pilots with no direct infrastructure cost.

Results, Lessons Learned, and Future Plans

The benefits to the banks and their customers of India Trade Connect will be significant as indicated by the pilot:

Operational efficiencies: By cutting the cycle time for an inland letter of credit by 75% from 8–9 days to 2–3 days, India Trade Connect proved that blockchain-based technology can solve real world bank operational challenges. It also promises to improve the cycle times on related products. For example, invoice financing, which is plagued by a slow, paper-based process, could be transformed into a swift, digital process.

Cost reduction: The digitization of information is reducing costs in two important areas. First, it allows the bank participants to reduce document courier fees. Second, it eliminates the per transaction cost associated with intermediary messaging systems.

Operational risk mitigation: Invoices and Purchase orders received on the platform are uniquely identified and stored on the blockchain, leading to lower risk associated with duplicate financing. In addition, dashboards enable real-time tracking of trade instruments across lifecycle stages and actors.

New business opportunities: Most importantly, India Trade Connect will likely generate new revenue streams as banks will have ready and trusted access to documents required to underwrite credit.

On its 2018 and 2019 road map, the consortium hopes to onboard other banks as well as nonbank intermediaries involved in trade (e.g., logistics and insurance providers). It is also seeking a network provider partner to facilitate broader bank adoption. The next product that will likely be piloted is open account, which makes sense given the gradual decline of lines of credit. Eventually it wants to move beyond being a banking solution and have a global coverage.

Further on the horizon, Infosys Finacle sees potential to enhance Trade Connect with artificial intelligence (AI) and machine learning. Both could contribute to digitizing the remaining paper documents (e.g., bill of lading, airway bill, packing list, insurance documents), automate manual processes, and tackle fraud and compliance challenges. They could also automate document validation and matching per banks' rules. In addition, machine learning could enable sophisticated credit decisioning (e.g., for purchase order, invoice, or supply chain financing).

The India Trade Connect initiative overall proved that critical paradigm shifts are possible (using a cloud-hosted environment and distributed ledger) when all stakeholders are striving for a winwin and the technology provider excels on the security front. It showed that increasing the odds of a successful pilot by tackling a well-honed use case is wise. In terms of the organizational dynamic, it demonstrated how valuable it is to have the business side drive a project with profound customer experience and revenue potential. It also showed that key stakeholders (operations, IT, information security) need to be involved and collaborate effectively. On the tech front, it demonstrated the importance of being agnostic to core banking system and having API services to facilitate integration.

FinTech Future and Forward

In a few short years, the narrative around FinTech in banking has softened noticeably from competition to collaboration.

[9]Anthony Jenkins, ex-CEO, Barclays, warns that banks will be dealt a "Kodak moment" by FinTech companies if they are not careful. His is a minority opinion amidst a growing belief that FinTech is more friend than foe of banking institutions, a source of complementary strengths that incumbent banks would do well to leverage.

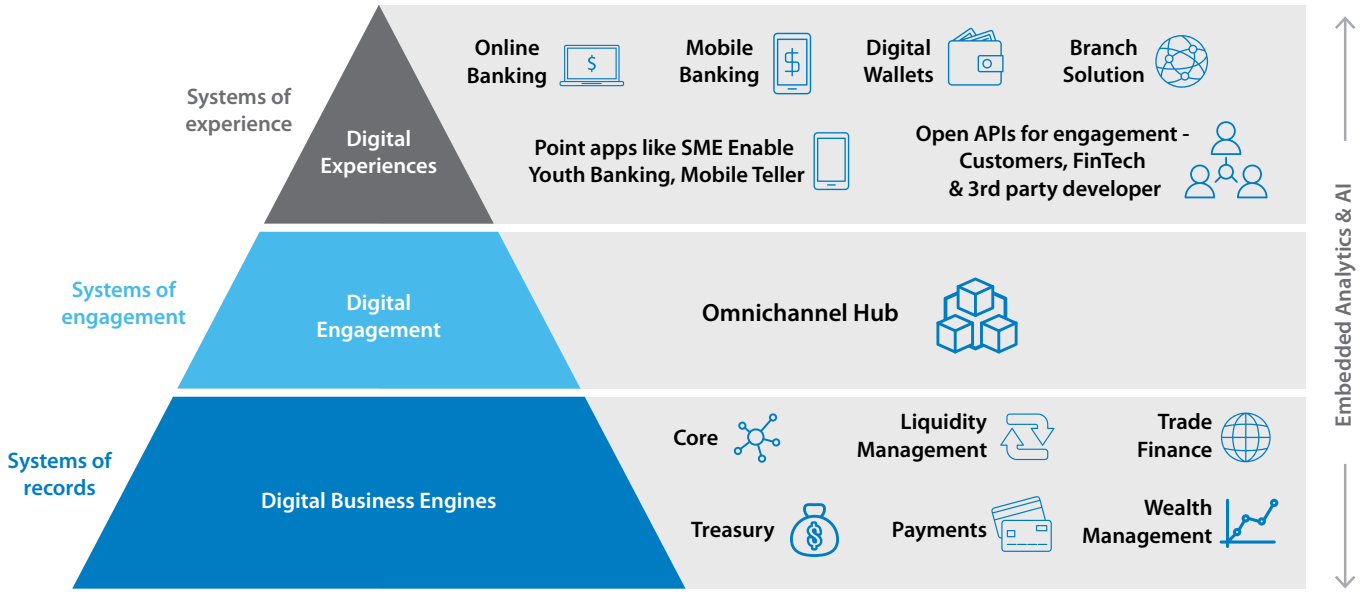
In a few short years, the narrative around FinTech in banking has softened noticeably from competition to collaboration. The 2017 edition of an annual global retail banking study reported that more than 90 percent of bankers were keen on collaborating with FinTech firms, while 75 percent of FinTech companies said they would work with banks. But collaboration is only one among several factors shaping the FinTech landscape. This article briefly explores the evolution in this space.

Banks and FinTechs collaborate for mutual gain

Their respective (complementary) capabilities make banks and FinTech firms natural allies. Banks, whose ability to respond to market needs is severely hampered by legacy, can tap the agility and innovativeness of FinTech to overcome those limitations. Likewise, their FinTech partners can benefit from their (banks') knowledge of regulatory compliance besides piggybacking on their distribution network to compensate for their own lack of scale. Also, synergies emerge when banks join their huge resources of data with FinTech's expertise in analytics.

Banks have very strong systems of record that are responsible for basic banking operations such as core banking, treasury, payments, trade finance, wealth management, etc. Banks also possess strong systems of engagement. However, when it comes to systems of experience, FinTech firms clearly have the edge.

Another way of looking at how banks and FinTech share space is depicted below:



9. CCN: Barclays' Former CEO Says Banks Face a "Kodak Moment" in FinTech Threat

Banks are clearly the engines of the digital business. They have very strong systems of record that are responsible for basic banking operations such as core banking, treasury, payments, trade finance, wealth management, etc. Banks also possess strong systems of engagement, an example of which is the omni-channel hub, which enables them to add new channels with ease, as well as provide the same information, products and experiences to customers on all channels.

However, when it comes to systems of experience, FinTech firms clearly have the edge. They offer a variety of solutions based on artificial intelligence, biometrics, user experience technologies, etc. that connect with consumers at the last mile. Systems of experience are witnessing a lot more innovation and growth than systems of record and engagement, because of FinTech firms' expansion into areas ranging from AI and deep learning to Blockchain and from ecosystem components to digital sales and marketing. A leading consulting firm observes that FinTech offerings in favorite niches such as payments and lending are maturing, and firms are now looking at innovating in other areas and even at offering full stack solutions.

Along with FinTech capabilities, the modes of bank-FinTech collaboration are also expanding. Popular models include:

Sandbox environment: Open Banking is exposing banks to a new level of competition where they have to pitch not only their own products but also those from other providers because their customers demand it. Regulations, such as Europe's Payment Services Directive 2 (PSD2) mandate that banks must allow qualified third parties to access customer transaction data and initiate payments on their (the customers') behalf. It goes without saying that a number of those qualified third parties will be FinTech companies.

To comply with Open Banking, banks are publishing open APIs (Application Programming Interfaces) and building an ecosystem of external partners. They are testing the waters by providing a cloud-based sandbox environment where developers, application providers, FinTech innovators and other parties can use "test" or dummy data to create innovations on top of the banks' services.

Close integration: Some alliances have outgrown the sandbox and entered the real world. A great example is the tie-up between India's RBL Bank and a FinTech firm called MoneyTap where the latter uses the Bank's APIs to provide loans to young, urban, middle-income Indians who can't get a bank loan for want of a credit history. MoneyTap assesses the creditworthiness and loan eligibility of prospective borrowers in a few minutes, based on which they can choose an EMI plan that suits them. Borrowers are charged a nominal fee upon approval besides the usual interest and processing charges.

Monetization opportunities: The opportunity to generate new business is an important motivator in bank-FinTech collaboration. By allowing third parties, including FinTech, to build applications on top of their APIs, banks can earn additional income. DBS Bank's cross-referral alliance with a couple of peer-to-peer lending platforms, namely, MoolahSense and Funding Societies, is a good example. The Bank sends small business customers that it cannot service to its partners, who return the favor by referring their successful borrowers now in need of larger loans or more sophisticated financial solutions to DBS.

FinTech thrives globally on the back of regulatory support

There is a vibrant FinTech scene around the world. While the United States is still the leader, with 57 percent of the worldwide FinTech market, Asia (31 percent) is clearly more progressive. Singapore is one of the top FinTech hubs in the world, while Chinese FinTech is among the most innovative as well as a top destination for VC investment.

Everywhere, the support of regulators has been a key factor in FinTech success. Recently, the innovation units of regulatory bodies in the United States and the United Kingdom – LabCFTC and FCA Innovate – said they would collaborate to support FinTech by sharing information with each other, and referring FinTech companies trying to enter the others' market.

After a phase of explosive growth, China's FinTech sector is now benefiting from a tight regulatory framework that curbs fraud even as it drives consumption. [10] Singapore, where the Monetary Authority of Singapore launched the FinTech and Innovation Group as early as August 2015, is probably the benchmark when it comes to providing regulatory support for financial innovation.

10. Asia Finance: Singapore's Continued Support for FinTech Startups

With venture funding and customer share of wallet ending up with a select few, a large number of firms are up for grabs, mainly by large organizations.

And in India, a quasi-regulatory body called the National Payments Corporation of India has revolutionized the nation's payments infrastructure with its Unified Payments Interface to set the stage for financial innovation.

The market consolidates as FinTech firms are acquired

Low entry barriers have allowed FinTech firms to proliferate, with the result that now there are too many players with similar propositions. With venture funding and customer share of wallet ending up with a select few, a large number of firms are up for grabs, mainly by large organizations. In 2017, global venture capital in FinTech saw many sell-offs – 59 strategic acquisitions and 11 buyouts valued at US$ 2.38 billion. Notable deals included Trayport's acquisition by TMX Group for US$ 727 million and the US$ 150 million PlayTech paid for TradeTech Alpha. On 12th May 2018, Softbank, which already holds a US$ 400 million stake in India-born PayTM Mall, indicated it could increase its investment to a massive US$ 3 billion.

This, then, seems to be the way forward for global FinTech – to draw strength from collaboration and partnership with large financial institutions and to merge with them when the time comes.

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Infosys Finacle

11. Banking Exchange: U.K., U.S. Regulators Collaborate on FinTech

Kaleidoscope

United Kingdom: Data Protection Decreed

The UK has long been a leader when it comes to financial technology. Surveys from different consulting firms continue to reaffirm London's top spot as the FinTech capital of the world, alongside Singapore.

2017 was a record year for UK tech investment. The trend seems to be going stronger in 2018.

UK's growing challenger bank Revolut has recently raised $250 million (£179 million) in Series C funding and is now worth $1.7 billion (£1.2 billion). FinTechs based out of London are active in almost every sector: digital only banking, P2P payment, open API, blockchain, risk management, wealth management, and AI, not to forget Google's DeepMind is based in London too. Not just this, Government in the U.K. has also released its FinTech Sector Strategy, setting out plans for preserving and increasing the UK's presence and influence in the sector globally.

Apart from all the progressive action, one major initiative that has captured everyone's attention and channeled their efforts for compliance is the General Data Protection Regulation (GDPR). GDPR came into force in the EU and UK (despite Brexit) on 25 May 2018. In this short article we take a look at the regulatory mandate, explore its impacts on innovation and digitalization, and provide our recommendations.

Quick facts about the GDPR

The GDPR is a new law to give individuals, such as customers and employees, increased rights and transparency over their personal information. The law gives individuals the ability to exercise their rights such as correcting or accessing their data. The GDPR applies to organizations located within the EU and the UK, and also applies to organizations located outside of the EU that process the personal data of EU residents as part of their business transactions. Of course, the GDPR will not be the only law about data protection in the UK. The UK Data Protection Act 2018 is also on the anvil, which will further bolster the purpose of GDPR.

The GDPR is by far the strictest data protection act in the world. It has very detailed policies about personal rights. Organizations that fail to meet the requirements such as providing the desired proof of proper handling of sensitive data are liable for penalties as high as £17 Million or 4% of global turnover from the previous financial year, whichever is higher.

The GDPR includes a set of exemptions to balance privacy and other rights such as the right to conduct medical research based on personal data. It also defines conditions to implement the clause "right to be forgotten". Other exemptions include policies for small-medium enterprise (enterprises with employee strength 250 or less than 250), and locally defined rules from individual countries. Banks and FinTechs need to study these exemptions carefully to optimize the effort spent.

Bank CIOs should carefully evaluate the impact of the GDPR on its existing data protection policy, in particular, in the area of digitalization, cloud, big data and blockchain initiatives.

1. User consent is critical to process data

After May 25, 2018, organizations in the EU are required to obtain clear, unambiguous and freely given consent from users for each data-processing activity (e.g., behavioral targeting and remarketing). They are required to tell users exactly what their data will be used for, list the companies they'll share the data with, and state how long they'll keep the data.

Banks and FinTechs heavily using customer data must obtain user consent, and ensure and provide pro-active privacy notice. Meanwhile, the GDPR also defines other alternatives for exceptional scenarios in the event that an organization faces challenges in securing consent from individuals. For instance, organizations could consider relying on legitimate interests (GDPR Article 6.1(f)). However, these shouldn't be viewed as easy alternatives. They merit careful consideration as banks walk the tightrope between their interests and the privacy rights and freedom of individuals.

2. The Right to be Forgotten - the most crucial clause of GDPR

"The right to be forgotten" is probably one of the most important concepts introduced by the GDPR. Not only new requirements for gaining consent for data capture and processing, the GDPR makes it abundantly clear that consent can be withdrawn and revoked at any given point in time. The responsibility of deleting and removing data 'without undue delay' or specifically within a month unless specific circumstances apply, lies on the shoulders of the data controller. It means banks and FinTechs need a better way to store and delete customer data when required.

Where personal data has been shared with other third parties by the data controller, it makes the situation even more challenging. The GDPR states that it is the data controller's responsibility to take 'all reasonable steps' to inform other outlets of the request for erasure and ensure they comply with deletion or removal. Implementation could potentially be a challenge and a lot of questions remain unanswered from both legal and technical perspectives.

3. Impacts on FinTech innovation

Data protection and customer privacy are always challenged by new technologies. Digital, social, internet of things, cloud, big data, machine learning, and blockchain bring new challenges to protect data, spanning the consent mechanism, any conflicts or grey areas regarding data processor's responsibilities, and the boundaries of personal data. Below we summarize the GDPR's impacts on Cloud, AI and Blockchain.

Cloud

Prior to the GDPR, the exact responsibility of a cloud service provider was largely determined by common sense and business contracts. Now the GDPR has made it clear that data controller and processor, both need to share the responsibility for data protection. As per the GDPR, clouds service provider (as a data processor) should take necessary measures to be GDPR compliant. The current operating model may conflict with the GDPR (e.g. the right to be forgotten). The GDPR has specific details of different tasks owned by a data processor (that is, a cloud service provider or a FinTech) and a data owner (that is, a bank). For instance, data processors should not outsource any activity to another data processor without the consent of the data owner.

Overall, the GDPR will have major impacts on cloud ecosystem. The GDPR requests cloud service providers to re-think their data processing mechanisms, including breaching response and coordination, processing of personal data outside the European Economic Area, and data portability for the controller.

AI

A famous tweet by Prof. Pedro Domingos surfaced some time back: "Starting May 25, the European Union will require algorithms to explain their output making deep learning illegal." Though machine learning has its own challenges in explaining how algorithms get to the result, the tweet by Prof. Pedro exaggerates the impact of the GDPR on AI. GDPR does not explicitly request data processor to explain their automated decision about data processing. Nevertheless, banks and FinTechs should continue their efforts to improve the transparency of AI algorithms, and must ensure notifying users about the basic rules behind the decisions about customer data.

Blockchain

The blockchain itself is a distributed database based on consensus algorithms. It is a revolutionary approach for not only operating models but also for data protection. However, the GDPR is still fundamentally a centralized mechanism for data protection. Blockchain is a de-centralized data processing model, which requires a more holistic approach towards compliance with GDPR. Most of the data in blockchain, including key transaction data, are personal data. Miners and node owners on blockchain are considered data processors. Thus, they need to comply with GDPR requirements. For example, blockchain may be requested to execute "the right to be forgotten" but technically this is impossible. Data processor simply cannot (even they want to) "erase" data from blockchain given the nature of blockchain architecture. Banks and FinTechs should keep an eye on relevant discussions to exempt blockchain from specific GDPR policies.

The Journey of the GDPR is a marathon

Banks are actively preparing for the GDPR. For instance, HSBC has updated its privacy notice to customers. The notice explicitly says that GDPR does not change the way the bank's customers use personal information, and that their commitment to looking after customer data stays the same. Barclays has also taken a similar step.

On the other side, there are still numerous challenges to implement the GDPR effectively. Bank CIOs should carefully evaluate the impact of the GDPR on its existing data protection policy, in particular, in the area of digitalization, cloud, big data and blockchain initiatives. The changes brought about by the GDPR have just begun. Banks should keep their eyes and ears open, and be prepared for a long journey to implement the GDPR.

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Finacle solutions address the core banking, omnichannel banking, payments, treasury, origination, liquidity management, Islamic banking, wealth management, analytics, artificial intelligence, and blockchain requirements of financial institutions to drive business excellence. An assessment of the top 1250 banks in the world reveals that institutions powered by the Finacle Core Banking solution, on average, enjoy 7.2% points lower costs-to-income ratio than others.

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