APIs, blockchain, regulation, digital transformation... are just a few of the challenges of the financial sector. In this ebook, you will find a recap with the conclusions reached around these trends in Fintech University.
“The customer should always be entitled to data supervision”

APIs: the heart of the Fintech revolution

Banks are learning to be faster and simpler

Trust: the great barrier for fintechs

Open and collaborative mentality: the key to join the digital transformation
“The customer should always be entitled to data supervision”

SHAMIR KARKAL,
HEAD OF OPEN PLATFORM AT BBVA
“The final control over this information is in the hands of our customers, who decide whether the data can be transferred to others.”

SHAMIR KARKAL
Financial APIs, the blockchain and regulation vertebrated Fintech University.

"We are living the fourth great revolution in the history of humanity and a transformational period in financial services," explained Chris Skinner ("The Finanser") an expert in the fintech ecosystem. He also added that this paradigm shift is marked by the infinite capacity to communicate from any place, any time, by virality, by the need to make everything faster and cheaper, including financial transactions... But who can we trust to do it?

Skinner took the role of Master of Ceremonies along with Shamir Karkal, Head of Open Platform at BBVA, in this "useful event for the fintech community, from which useful ideas can emerge", as Karkal put it. In an open, collaborative and dynamic atmosphere experts and entrepreneurs were able to discuss the paths along which technology is developing today.
"Trust" (in banks, fintechs, regulators and users) is the key word around which this revolution revolves. According to Skinner, "we don’t know where it’s going, but there’s no doubt it’s exciting."

The transformational moment experienced by financial services thanks to technological innovation was clearly shown by the entrepreneurs participating in Fintech University. In the great majority of cases, this innovation comes hand-in-hand with the combination of open APIs of large companies and banks, such as BBVA, Google and Facebook, which allows them to transfer data from their databases and construct amazing products that would otherwise be no more than a dream.

Increasingly, fintechs are working with banks to launch an ambitious and reliable product. This means that the big banks must be prepared to open up and transfer their data (anonymized) to external partners (startups) in any part of the world, and these companies by definition are young, small and disruptive.
"If you look at what's going on outside, you'll see that there are not many banks working effectively with startups and helping them to be successful; many banks are still trying to decide how to take that step", insisted Karkal.

"At BBVA we believe that we are one step ahead and we have already launched an alpha version of open platform that allows fintechs to access securely the data on our transactions and customers. We ensure that the final control over this information is in the hands of our customers, who decide whether the data can be transferred to others."

Karkal and his team are at the cutting edge of the sector and have anticipated the recently approved European PSD2 Directive, which within two years it will oblige EU banks to transfer customer data to third parties if the latter approve it.

With the PSD2 the European regulators aim to stimulate innovation and competition, based on the idea that bank data do not belong to the banks but their customers, who can transfer them to other companies. "We love that, but as a bank, we also have to consider what happens to the privacy of these data, how the third parties store them, what
they do with them, who is responsible if a transaction fails, etc. and that is the debate that interests us,” said Karkal.

The fintech revolution is already making its impact in aspects of our daily lives, such as payment by mobiles and instant money transfers with apps like Dwolla, Transferwise and Venmo. However, Karkal warns that financial innovation cannot be at any price.

"In this case the Silicon Valley philosophy of 'move fast and break things' doesn't work. Here we have to move fast and ensure that we don't break anything, because customers deposit their future lives in banks, their savings, their dreams..."
In the rooms of the first Fintech University there was also talk, a lot of talk, about blockchain and how financial services can take advantage of this technology that has emerged from bitcoin.

However, if anything is clear it is that there is a great deal of uncertainty and doubt about the subject ("the 50 shades of blockchain" in Skinner's words); but also promising projects in the medium term, such as the Hyper Ledger Project, headed up by the Linux Foundation and supported by major financial institutions, to establish new world standards for recordings transactions.
02

APIs: the heart of the Fintech revolution
APIs have reached the financial sector and they intend to stay. Behind the simplicity of those three letters, which stand for Application Programming Interface, a revolution is hidden that affects the way in which we consume products and services online, and also the way of working and understanding the corporate world.
Just over 10 years ago, the digital companies that have become giants today were the first to open their APIs to third parties. Any great businessman from the last century would have torn his hair out if his company had clearly shown a lot of its inside workings to other companies, but behind that decision to share information underlies a complete change in mentality: companies like Twitter, Facebook or Foursquare sought to create an ecosystem of services and products around their own offering, thus reinforcing their appeal and reach even at the cost of creating new businesses that other capitalize on.

Now that strategy, assumed as the basic paradigm of the digital economy, is already a reality in the most dynamic banks, which operate in a sector with very marked peculiarities, such as its systemic nature and its strict international regulation.

In Fintech University we share experiences and knowledge about the digital revolution in finance in which there is great talk, and a lot at that, about APIs. Four Spanish startups in this sector shared their experiences with APIs, key to the development of their business.
Despite his youth, José Luis San Julián, has already had an extensive career in creating and developing digital companies specializing in apps. His team’s latest project is Chances, which is an application that graphically defines: “We put the analytical capacity of large companies in an entrepreneur’s pocket, transforming it into a simple market study”.

The basis of everything are APIs, the open information of which is mixed and distilled for the app’s users in a business model that is currently free of charge, in search of volume, but will be fee-based in different layers and levels according to the degree of sophistication of the data.
“Evidently the app would not be feasible without APIs”

JOSÉ LUIS SAN JULIÁN
COFOUNDER AT CHANCE

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“An API does not stop being a source of data of a third party, which it lets you access for you to use its information. Our added value is that we can access a lot of data sources that generate a large volume of information that is as valuable as it is unwieldy. We break it down to the millimeter, and offer an extremely chewed up version.”
The application of big data to improve business management is the key to GeoBlink. It is, explained one of its creators, Jaime Sánchez Laulhé, an application aimed at companies with a network of outlets: thanks to GeoBlink they can get to know in detail how each of these points performs, which is affecting their results, where to open new stores and geotag their direct marketing campaigns.

Everything is based on open source software, such as Angular (developed by Google), Node, Postgresql and Mongo.

APIs are also crucial in the Bankast, model. This company was created in Valencia and is led by Carlos Castellanos offering immediate payments between current accounts, 24 hours a day, seven days a week.

"The connection to a bank, understood as a payment service provider and an account manager, is much more robust through an API".

In this regard, he added: "We're not talking about security, that also, but, above all, about availability and speed, which is very important to the user".

"If we have an API, the process is much more robust and scalable: In other words, people may use their current accounts to pay in many more cases. It's the best tool that you could have," Castellanos explained.
The user wins in the end, and that’s the most important thing, but the advantages for the company that uses third-party APIs are also evident. Anfix, an online management platform for SMEs and the self-employed, is a good example, as one of its sponsors Miriam Bailón explained at the Fintech University: “We have a great product, but we cannot develop all its aspects. What could be better than allying with someone who is specialized in providing such services, to provide the best possible service to our customers? I cannot spend time and money in obtaining information, and moreover very good information, that others give me such as BBVA Open APIs.”

Another computing concept that is much more common, cloud computing, is basic to Anfix because all the information of its users is stored in the cloud: “it’s not enough to simply make a back up, as many mid-sized companies believe. Cloud-based data are much more secure,” Bailón maintained.

“The world of payments is infinite and more in the digital world”
CARLOS CASTELLANOS
COFOUNDER AT BANKAST

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Sanjulián highlighted the increased security offered by APIs: "APIs also function as a series of layers of security, and in fact it’s easier to distort data through a credit card, which does not stop being a piece of plastic, than in a computing communication which is very much encrypted."

The creator of Chances understands a certain reticence, but it should be remembered that "there were also some people who didn’t trust credit cards."

In the era of open platforms, the most necessary change may be in mindset: beyond technological advances, the key is that now large enterprises and startups must work together in a relationship in which everyone wins. Only those who are able to understand this will lead the fintech revolution.
Banks are learning to be faster and simpler
The financial system is experiencing a new era: a new business model with concepts that are transforming the financial culture: APIs, blockchain, big data, Fintech...
The bankers of the 21st century no longer look like the ones depicted in 19th-century caricatures, with their suits, ties, paunches and cigars. They now dress casually, they talk about the "mobile experience" and are obsessed with speed, something which would have seemed vulgar to their predecessors many decades ago.

Banks are undergoing radical changes, as can be seen by the almost constant use in their forums of terms such as APIs, blockchain, big data, fintech... This is a new vocabulary for a new age in which we are seeing a new business model. We still don't know exactly what it will be like but we already have an idea of its general features.

First premise: no one is going to replace the banks, banks are going to adapt to a new world; but it won't be easy, and banks that are unable to do so will simply disappear.
How should they adapt? By placing concepts that traditionally have nothing to do with banking activity at the core of their strategy.

Banking began in Mesopotamia around 4000 years ago, but speed and usability are now crucial. These days very few bank customers go to their branch office; very few customers are willing to wait days for a financial transaction.

Anyone who can’t make it fast and make it easy via mobile devices should go into another business. Some of the pillars of the business change, but not all: security and trust continue to be two indispensable attributes for banks.

According to Chris Skinner, one of the world’s top financial experts, there is one question behind every financial transaction: “Who are you? Without secure digital identities verified by secure institutions like the banks themselves there is no possible activity”.

This is however a new concept of security, “which no longer depends on pistols, but on mathematics”, says Ben Milne, referring to encrypted information and the algorithms that sustain the fintech framework.

Milne himself is a good example of where the sector is heading. Born in the United States 32 years ago, nobody would guess his profession from his appearance: jeans, trainers, black T-shirt and a hipster beard.

He looks like a graphic designer, and he has the confidence of rockstar, but he works in finance. In 2010 Milne created Dwolla with one very clear goal: to build the best platform for moving money.
“Financial security no longer depends on pistols, but on mathematics”

BEN MILNE
FOUNDER AND CEO AT DWOLLA
Today his online payments company without credit cards, a direct competitor of Paypal, has captured 32 million dollars of investment and expects to process transactions for a volume of 2 billion dollars this same year. Companies like his, he claims “are not going to replace banks, but accelerate their transformation. Banks are at the center of everything, and sometimes we underestimate something that’s really evident, like how money starts off in one bank and ends up in another”.

The financial system will continue revolving around the banks, on a model based on speed, security and ease of use. But what will these banks be like, apart from being more agile?

In the opinion of Casey Kuhlman, CEO of Eris Industries and an expert in the legal implications of blockchain -the technology which serves as the basis for the virtual currency bitcoin-, it will be essential to create ecosystems in their businesses, “because it’s becoming more and more difficult to create value individually. But these ecosystems will take some time to take shape, they won’t just spring up overnight”.

APIs will be key to the development of financial products and services, so much so that some see banks like a type of car manufacturer that will assemble parts (in this case products and services) made by others.

This is the view of Mark Mullen co-founder of the British company Atom Bank, one of the so-called ‘neobanks’: “The banks of the future will be dedicated to assembling and reassembling continually, thanks to technology. The consumer doesn’t care who the products and services come from: when you get into a car you’re not thinking about who made the suspension.”
“The sweet spot in the short term and medium term is around B2B technology”

CASEY KUHLMAN
CEO AT ERIS INDUSTRIES
The challenge of regulation

All this new world must be regulated to avoid systemic abuse and risks. The problem, as Milne highlighted, is that “innovation is global and fast, while regulation is local and slow”. John Collins, an expert in financial regulation who has worked with the United States government, took a closer look at the differences between two worlds that have to understand each other.

“Technology deals with short time periods and seeks risk: for governments, the periods are much longer and there is risk aversion”. However, Collins sent an optimistic message: “We’re heading for a much closer convergence between technology, banking and government. They will all work together and I believe that the future involves a global legislation tailored to fintech companies”.

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For the time being, the most important change in the legislation is the approval of the European directive PSD2 (Payment Service Directive), the second European regulation on payment services which must be transposed to the legislations of the member countries by 2018 at the latest. The regulator aims to advance the creation of a single market for electronic payments and will give the TPP (third-party payment services – payment initiators and information aggregators) access to customers’ accounts.

This will allow them to offer their services through the banks’ own infrastructure, a fundamental change that is already becoming widespread thanks to APIs.

The new regulation will eliminate entry barriers and increase competition, which will be an even greater incentive for banks to reinvent themselves digitally: the revolution has begun, and as they say, “If you’re not at the table, you’re on the menu”. The more dynamic banks are in no doubt.
04

Trust: the great barrier for fintechs

TAAVET HINRIKUS
FOUNDER AT TRANSFERWISE
In 10 years the way that fintech startups and the banks collaborate and compete will be very different, forecasts the founder of Transferwise, Taavet Hinrikus.
Good projects, with sound teams and scalable ideas, will sooner or later end up finding investors. Although with caution and insisting on the importance of having a clear business model, major investors and fintech executives brought together in this event have ratified the good time for the sector, with revolutionary projects making progress and business angels and institutions prepared to commit to them.

"The key is to persevere. If you have passion, nothing will stop you. Focus and don’t try to do too many things at the same time; solve your problems one by one," was Reshma Sohoni’s advice to the participants.

Executive director of the seed capital fund Seedcamp and one of the most powerful women in the European fintech ecosystem, Sohoni explained that when financing startups your team should essentially value two aspects: they should have disruptive technology and they should democratize services.

"Can you create a global digital brand? And can you do it faster than other companies, media or institutions? Those are the key questions we ask ourselves," explained the British investor, adding that to do so it is essential to have a solid team and a platform strategy.
Learning from mistakes

For Juan López Carretero, head of Digital M&A at BBVA, "perseverance is all well and good," but he recommended that technological entrepreneurs should look on each failed meeting with investors as an opportunity to learn.

"If a fund rejects your project, try to discover the reasons why. If investors agree about something that does not work in your project, that they don't see clearly.... perhaps you should analyze it in depth and look for a solution," he said.

Speaking to an auditorium full of entrepreneurs eager to discover keys for taking the great leap forward, the personal account of Taavet Hinrikus and his experience as creator and CEO of Transferwise, a poster child of the sector, was one of the day's highlights.
Introduced by Shamir Karkal, head of Open Platform at BBVA and host for the event, Hinrikus explained in simple terms how his case is not so different from other great success stories. "Our beginnings were tough, and it took us time to get the figures to balance. We managed to get people to start talking about us thanks to a friend, who knew someone in Techcrunch and who mentioned us in a post... that’s how we got our first client," he recalls.

Hinrikus, one of the creators of Skype, believes that one of the major differences between fintechs and other startups is the trust that they must generate. As was seen in other panels and presentations during the day, the trust factor is key to the successful construction and launch of financial services in the digital era.

"All fintechs have to find a way of winning users’ trust. It is a major barrier, and it will always be one for us. At the end of the day, if users don’t fully trust their banks, why should they trust you?” he pointed out.

Thus he recognized that the best marketing technique and what works best to overcome the lack of trust is word-of-mouth and recommendations from service users.

"If you have a good product, they’ll end up talking about you” is his motto, and that is how they have managed to win the trust of more than a million clients.
The relationship between banks and fintech startups

With respect to the relationship between fintechs and traditional banking, Hinrikus insisted that it is a difficult combination, as "we are working and competing with them". "But banks are not stupid, they know that they have a limited time to get their act together. So the smartest have decided to work with the fintechs. It’s difficult, but it’s the most reasonable thing to do."

In his opinion, one of the competitive advantages is speed of transactions. In 10 years’ time, he forecasts, banks will have transformed themselves and when that time comes, "the way we compete will be very different."
Open and collaborative mentality: the key to join the digital transformation
Banks that do not integrate collaborative and open financial technology are doomed to failure, warns Chris Skinner.
Chris Skinner, the master of ceremonies and moderator of many of the panels of the Fintech U, was one of the people who best know the ins and outs and the health of financial technology in the world. Communicator, networker and advisor, from his privileged view maintains that humanity is experiencing a fourth revolution, a drastic change with no way back that thanks to hyperconnectivity is transforming the way of doing banking, making payments and transactions.

“Apps, APIs, artificial intelligence, blockchain, cloud, big data, etc. all these technologies are opening the flood gates to integrated structures of traditional financial services,” Skinner informed.

Before this he emphasized that banks are not able to assimilate this revolution of opening up to open and collaborative technology, "and still think they can continue to develop on their old infrastructure... are going to fail".

For most banks this change in mentality entails "a genuine cultural nightmare", accustomed to working with own internal systems that control from the front office to the back office. The key, according to Skinner, is not to view fintechs as a threat but as an enriching travel companion that is doing "a fantastic job; they will not replace the banking sector, but add a new layer to the system."
“Hyperconnectivity is transforming banking, payments and transactions”

CHRIS SKINNER
EXECUTIVE DIRECTOR AT FINANSER
The huge noise and expectations around fintechs is justified in his opinion in their transforming and democratizing role, as they are "attacking a lot of areas that traditional banks do not cover particularly well or have completely ignored, such as SMEs or high-risk or unbanked customers, because it was very expensive to serve them."

Examples include many of the projects presented at the Fintech U, such a Dwolla, Transferwise, Bankast and Number26, which in many cases make it possible to invest, borrow money, make transfers or pay anyone instantly anywhere in the world, regardless of their banking history.
Trust

According to Skinner, one of the major issues still to be resolved is "trust". The banking system is fundamentally based on that, on the trust and security that supports it and guarantees our financial transactions, and today "the only place where you can put your money with the guarantee that you will not completely lose it is in the banking system."

That level of trust, according to Skinner, "is still very difficult to achieve on the internet". Partly because there is still no international regulation that defines with which licenses and structures fintechs should operate.

Governments and regulators working in the US and Europe, with diametrically opposed approaches, search formulas to clarify how fintechs should work and be integrated in the banking sector to provide security and guarantees to the sector (and the end user).

For Skinner, "the question really is: What should the regulator's role be: to stimulate growth or control risk? I think it should do both," he added.
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BRIAN KOLE