

Iberian FinTech Report 2022

How should Banks position themselves in the current Fintech revolution:
follow or lead innovation?



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IBERIAN FINTECH REPORT

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FinTech Report

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Executive summary

The report is divided into 4 sections:

1. Review of the Global Fintech Market, European Regulatory Environment and Concept definition

- The digitalization of financial services opened a window for new players in the financial industry.
- The Fintech industry presents a growing number of players across the world and an increasing demand.
- In the European Union and in the U.K., regulators have been developing various initiatives to promote and embrace technological advances in the financial sector.
- In this work project, the players in Fintech were subdivided into firm clusters, according to the relationship they keep with traditional financial institutions: Collaborators, Competitors or Disruptors.
- To assess how represented each firm cluster is in the Iberian market, there was a need to understand the size of the Fintechs in each one. Different market sizing methods were used in firm clusters 1, 2 and 3.

2. Gathering of perspectives and research on current interaction between banks and Fintechs

- To better understand the priorities and concerns of financial institutions, Fintechs from different verticals and firm clusters were interviewed, alongside banks and regulators. Firm cluster 1 firms were particularly optimistic regarding their future and firm cluster 3 companies were most reliant on future regulation. Research on relevant partnerships between traditional and new institutions was also conducted, in order to access potential areas of interest and the specific dynamics of those partnerships.

3. Conclusions on the possible future outlooks of the financial environment in regards to the most relevant players

- The main opportunities and risks for each firm cluster and for commercial banks were based on previous research and conversations with industry insiders. Fintechs generally differ from banks in areas such as tech-savviness, agility, regulation and client trust.
- Design scenarios of the industry's future, key players' roles were altered to incorporate the most likely future situations, built out of the report's main conclusions. The different scenarios include the approximation of firm cluster 2 to banks, the disappearance of Bank competitors and the take-off of DeFi.

Introduction

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The digitalization of financial services opened a window for new players in the financial industry. These firms take on tasks and functions previously reserved for banks, collaborating or competing with them.

CONCEPTS OVERVIEW

What is Fintech?

Fintech (financial technology), comprises start-up companies that devote to innovation in financial services with a strong emphasis on design and productization of finance. Banks, insurance companies and other financial institutions use Fintech. (World Economic Forum definition).

What is a commercial Bank?

In this report, commercial banks will be referred to as financial institutions which deal with the general public, licensed to accept deposits from, make loans to and offer other financial products to households, institutional clients and firms. They also provide various services for depositors, including the provision of cash and credit cards, storage facilities for valuables and documents, foreign exchange, stockbroking, mortgage finance, and executor services.

Fintech Origin

Fintech firms came about in the aftermath of the 2008 financial crisis. This was a time when traditional financial institutions, that were typically responsible for the mediation of financial services, found their activity restricted. The economic hardships had made small businesses and many consumers eager for funds. Fintech alternatives were able to step up, meeting the demands somewhat neglected by banks, taking advantage of its competitive advantages: agile nature and experience in technology.

Fintech companies can be bundled in the following verticals:



Payments & Money Transactions

Firms that provide, either directly or through other entities, electronic means of payment. Examples of firms included in this vertical are neobanks and payment providers.



Digital Onboarding, Regtech & Business Process Outsourcing (BPO)

Firms that leverage on Artificial Intelligence and Machine Learning technologies to offer services in the areas of customers' onboarding, regulation, and cybersecurity.



Crypto

Firms within the cryptocurrency ecosystem, from the creation of the algorithm to sales of cryptocurrencies, as well as blockchain based technology.



Lending & Credit

Firms that compete directly with banks, providing credit from non-conventional sources. Examples of firms included in this vertical are Lending Marketplaces and Credit Scoring agents.



Capital Markets & Wealth Management

Firms that focus on investment networks, those that provide automated investment advisory services; those that provide automated management services and trading platforms.



Insurtech

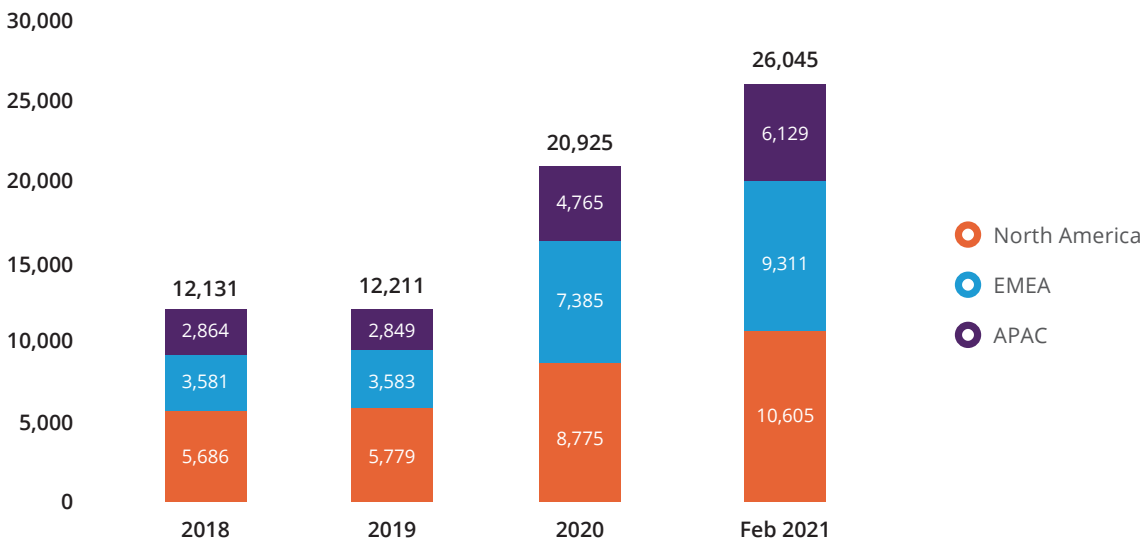
Firms that use technology to provide optimal insurance solutions to customers.



Global Fintech Market Overview

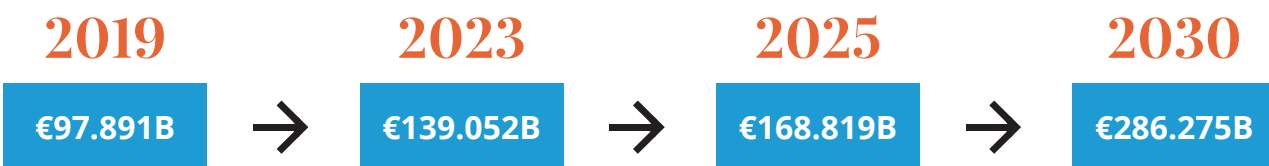
MARKET GROWTH

The Fintech industry presents a growing number of players across the world and an increasing demand reflected in the growth of the expected valuation's CAGR, which is foreseen to be around 11% from 2025 to 2030.



Graph 1 - Number of Fintech players per region
Data from Statista Research Department 2021

The number of Fintech players has been increasing globally over the past years, with a total of around 26,000 Fintech companies launched until February 2021. The Americas is the region with the highest number of players in this industry, closely followed by EMEA.

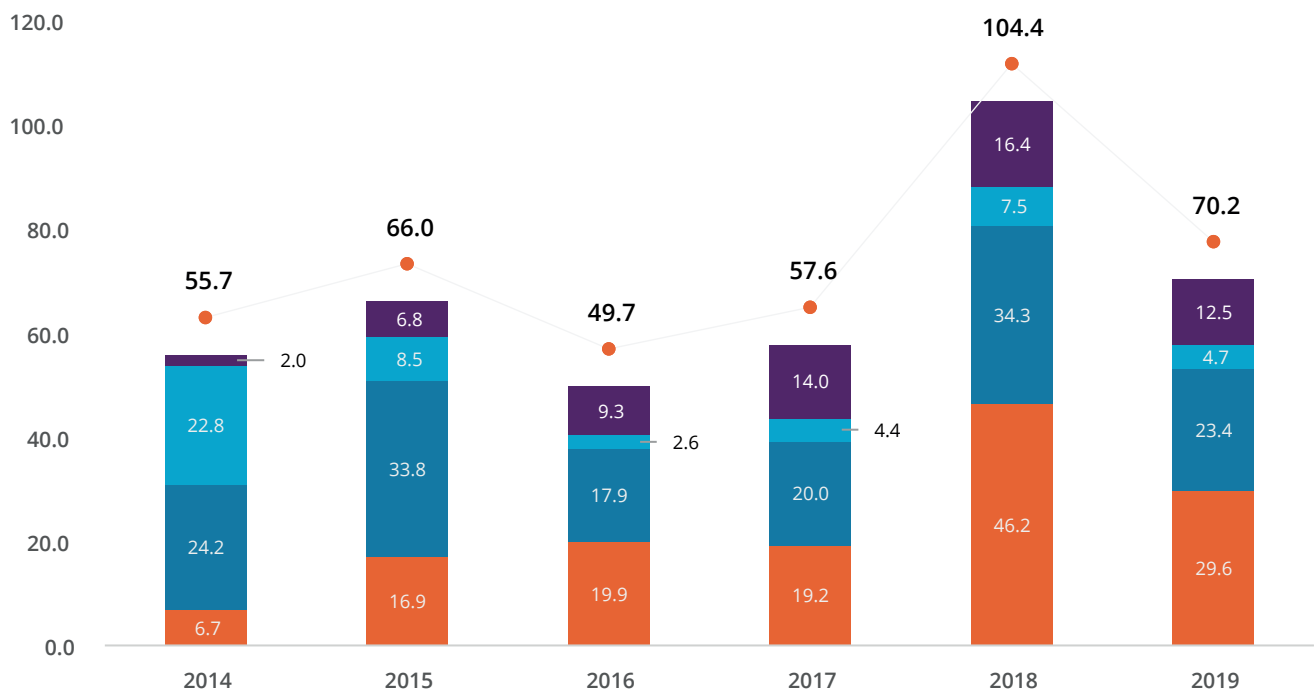


Graph 2 - Fintech Industry Valuation
Data from Penser 2021

The Fintech industry is growing and it is expected to grow even faster in the medium-term. Indeed, from 2019 to 2023, in a 4 year period, the CAGR of the industry valuation is expected to be 9.2%, whereas, in a similar period (of 5 years) – from 2025 to 2030, the CAGR is expected to be 2% higher.

FINTECH FUNDING

Overall, the funding of the Fintech sector increased from 2014 to 2019. Venture capital funding has experienced the highest growth, as these investors get more convinced of the value added by Fintechs to the Financial sector.



Graph 1 - Funding type of the Fintech industry from 2014 to 2019 (in billion \$)
Data from Deloitte Financial Advisory Netherlands 2020

VC PE IPO Other

- Overall, since 2016, most of the money is raised in the Fintech industry through VC funding. Indeed, it may indicate that VC investors are getting more convinced of the potential return these companies may offer.
- Furthermore, there was a peak of capital invested in 2018. On the one hand, there was a major VC investment, as Ant Financial raised a \$14B Series C round, which represents most of the 140% increase in VC funding since 2017.

Note: The term Other includes crowd-funding, investment from angel investors, and initial coin offerings.

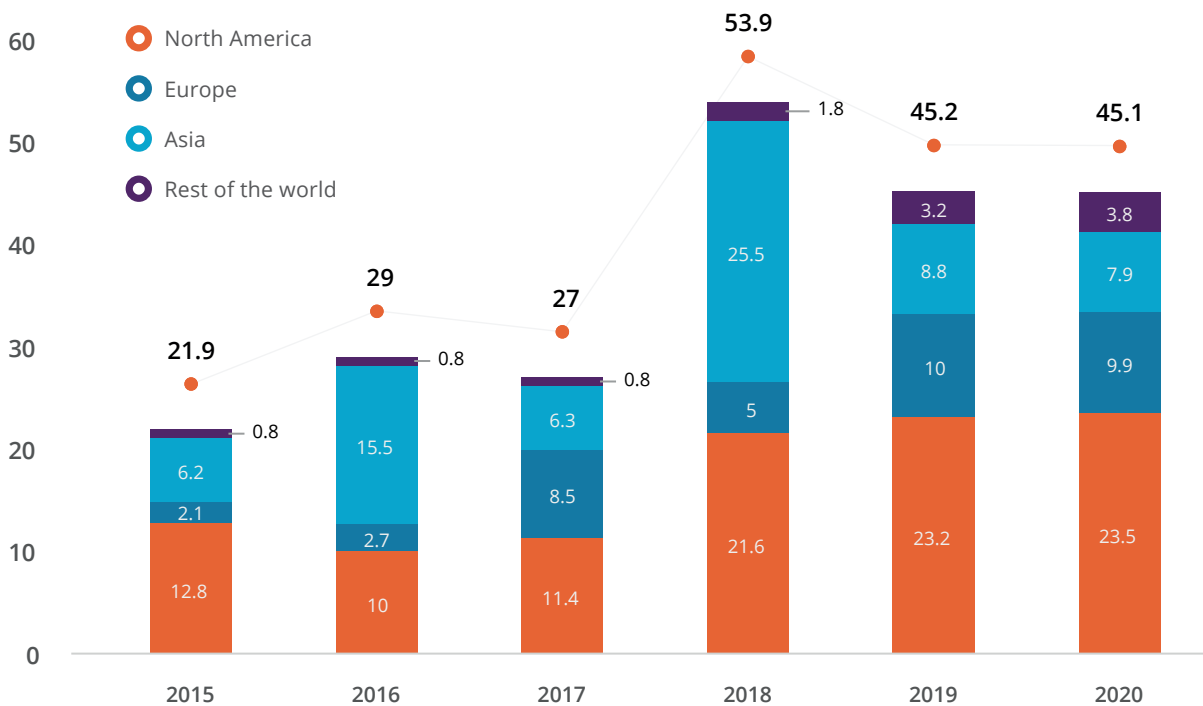
KEY FACTS

In H1 2021, global Fintech investments recorded \$98B, with 2,456 deals.

In H1 2021, Fintech companies in Asia Pacific received \$8B, with 467 deals.

In H1 2021, Fintech companies in the Americas received \$51B, with 1188 deals.

In H1 2021, Fintech companies in Europe, Middle East and Africa (EMEA) received \$39B, with 792 deals. (KPMG 2021)



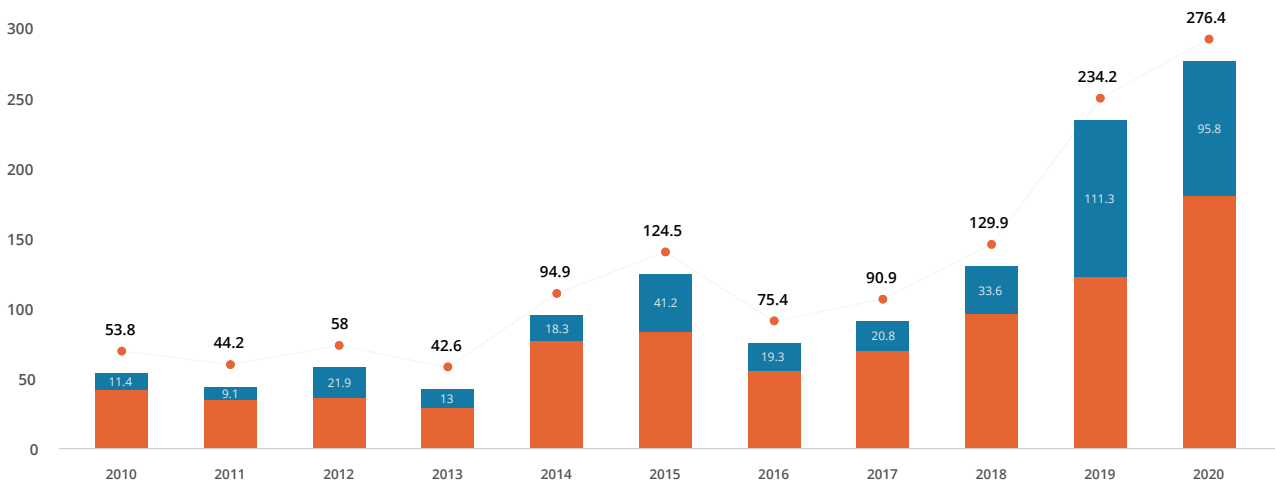
Graph 2 – Fintech funding across the world (in billion \$)
Data from FT Partners 2020

In 2020, private North American Fintech companies raised the highest cumulative total ever, European Fintech activity was on par with the record dollar volume level of 2019 and Fintech funding activity in the rest of the world continued to increase significantly.

FINTECH M&A

The global volume of Fintech M&A deals has been increasing over the past years, having registered a boost from 2018 to 2019 due to 5 major deals. In fact, this growing trend reflects the consolidation and maturity process that the industry is currently experiencing. In fact, in 2019 and 2020, only 3 deals represented 48% and 35% of each year's total volume, respectively. These events are another

indicator of the previously mentioned growing consolidation. Furthermore, as the Venture Capital funds which started to invest in Fintechs between 2008 and 2009 presented their Intention to exit between 2014 and 2015, an increased number of M&A deals was consequently observed in the same years.



Graph 3 - Volume of M&A Deals closed worldwide (in billion \$)
Data from FT Partners' Proprietary 2020

3 Major Deals

TOP 10 FINTECH M&A DEALS

Seven of the 10 biggest M&A deals from the past couple of years were closed between North-American companies. Capital Markets & Wealth Management and Payments & Money Transactions represent the most expensive deals.










	Acquirer Company	Target Company	Deal Size (\$ in B)	Acquirer	Target	Vertical
2019	 FIS	 worldpay	\$43	USA	UK	Payment & Money Transactions
	 fiserv.	 First Data.	\$41	USA	USA	Payment & Money Transactions
	 LSEG	 REFINITIV	\$27	UK	USA	Capital Markets & Wealth Management
	 charles SCHWAB	 ID Ameritrade	\$26	USA	USA	Capital Markets & Wealth Management
	 globalpayments	 TSYS	\$25	USA	USA	Payment & Money Transactions
2020	 S&P Global	 IHS Markit	\$44	USA	UK	Capital Markets & Wealth Management
	 AON	 Willis Towers Watson	\$36	UK	UK	Insurtech
	 TGG	 UWM	\$16	USA	USA	Lending & Credit
	Morgan Stanley	 EXTRADE	\$13	USA	USA	Capital Markets & Wealth Management
	 ice Mortgage Technology	 EllieMae	\$11	USA	USA	Lending & Credit

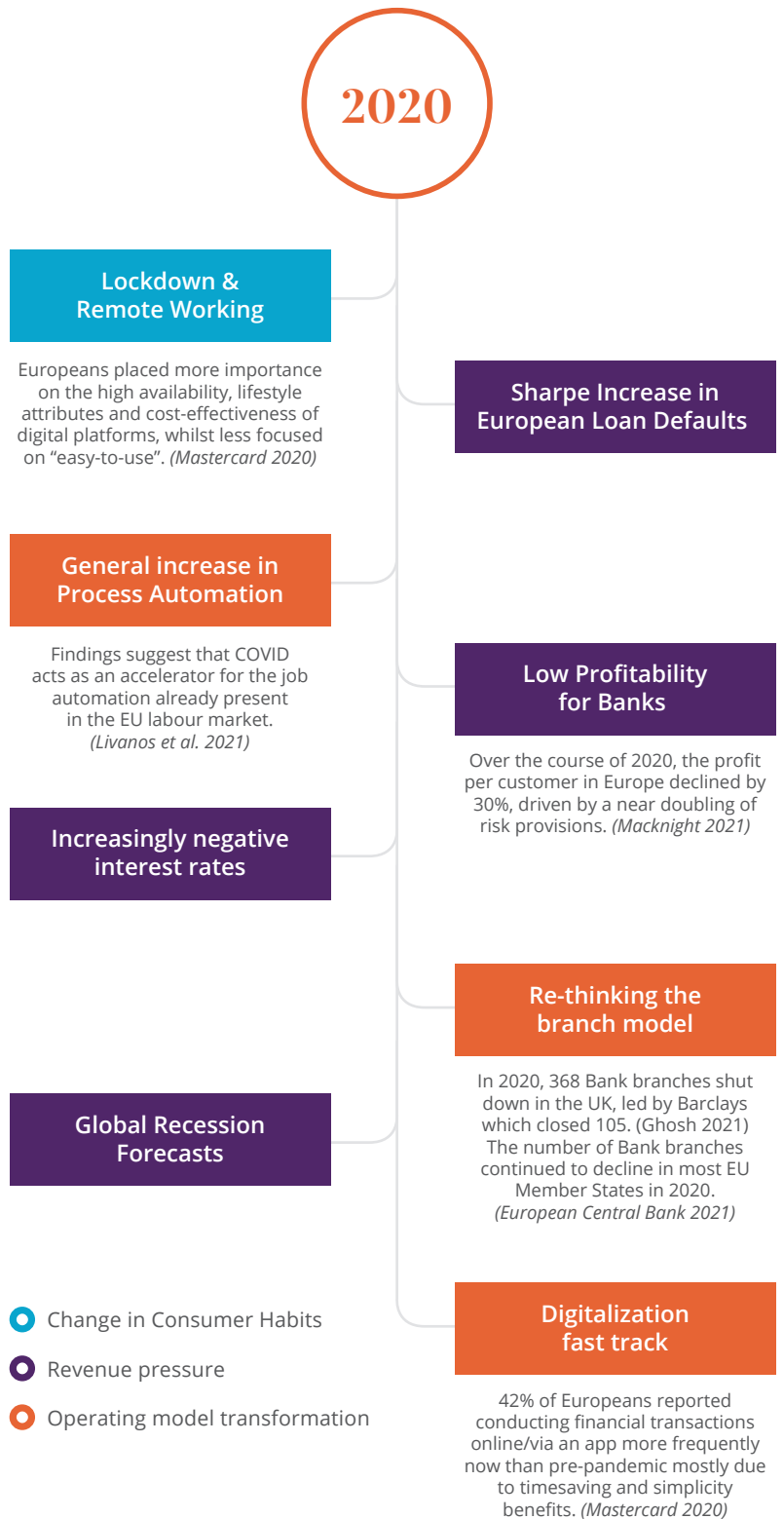
Table 1 - Fintech M&A Deals
Data from FT Partners' Proprietary 2020

European Regulatory Environment

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BANKING INDUSTRY

In Europe, the Covid-19 pandemic brought about various challenges for banks (change in habits, revenue pressure and a changing business model), which led to the acceleration of the digital revolution.



REGULATORS' INFLUENCE

The European Union and the United Kingdom have worked on many initiatives to accommodate the digital transformation in the financial sector (PSD2, MiCA, Digital Euro, Regulatory Sandboxes).

Open banking push

Open banking is a practice that gives third-party financial service providers open access to consumer banking, transaction and other financial data from financial institutions through the use of application programming interfaces (APIs). Open banking will allow the networking of accounts and data across institutions for use by consumers, financial institutions, and third-party service providers. *(Open Banking Europe 2021)*

- **PSD2** is an European regulation for electronic payment services, seeking to make payments more secure and boost innovation. It is evidence of the increasing importance of APIs in the financial sector. PSD2 compliance has two key components: Open Banking and Strong Customer Authentication. PSD2 access to an account is a mandatory regulatory component, under which all institutions that offer payment accounts, must offer access to regulated third party providers. *(BBVA 2019)*

Regulatory Sandboxes

Regulatory sandboxes enable a direct testing environment for innovative products, services or business models, according to a specific testing plan. Several jurisdictions in the EU and beyond have adopted innovation facilitators to incorporate technological innovations in the financial sector. *(Parenti 2020)*

Leading crypto regulator

- **MiCA - Markets in Crypto-assets**

The European Commission's Regulation of Markets in Crypto-assets (MiCA) proposal is a regulatory framework developed in 2018 to help regulate currently out-of-scope crypto-assets and their service providers in the EU and provide a single licensing regime across all member states by 2024. *(Vermaak 2021)*

- **ECB Public Consult on the Digital Euro**

The consultation was launched on 12 October 2020 and concluded on 12 January 2021, receiving over 8,200 responses – a record participation. 94% of respondents were private citizens. The remaining were professionals (Banks, payment service providers, merchants and tech companies). Its purpose was to obtain input from the wider society on the economic and societal implications of issuing a digital euro and, if it were to be issued, on its design. *(European Central Bank 2021)*

OPEN BANKING

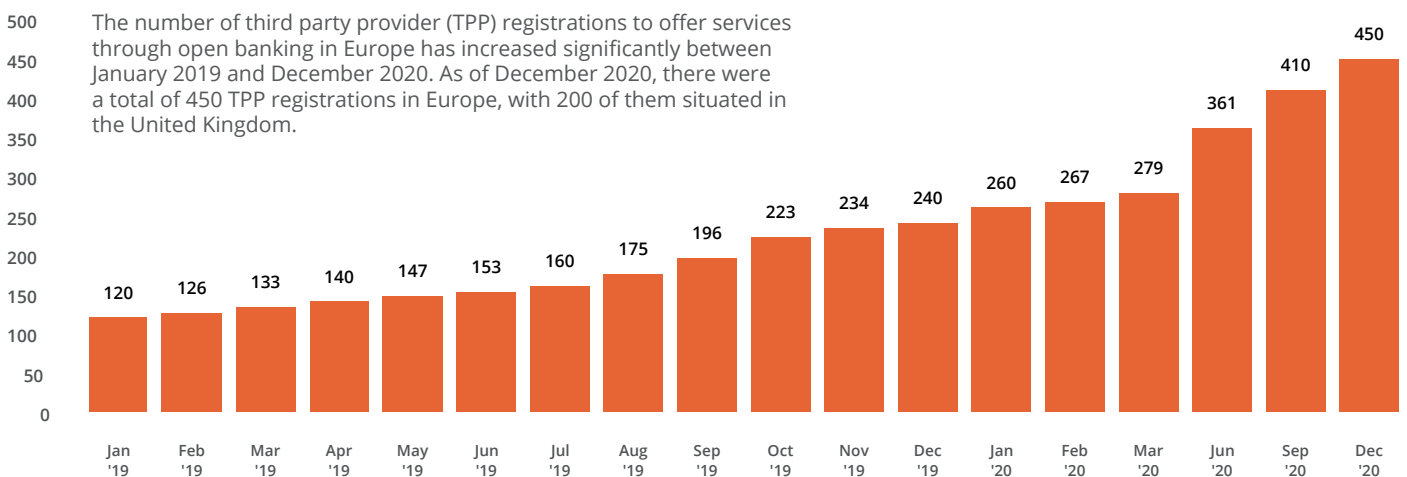
In the EU, Open Banking is promoted by the European Commission. The number of third party registrations to offer services through open banking in Europe has increased significantly, especially in the U.K.

The impact of Open Banking in Europe

Swedish Fintech Tink has found that for financial institutions in Europe, the median spending on open banking lied between €50-€100M in 2020. Tink’s report showcase the growing importance of open banking within firms across Europe, as 63 per cent of firms reported that their budgets for open banking have increased from 2019 to 2020. The average annual open banking spending growth rate is 20%-29%. (Tink 2020)

The U.K Case

- As of December 2020, there were 109 firms with live-to-market open banking-enabled products and services. Each month since its launch in January 2018, on average 3.2 services have come to market.
- Successful API calls have grown by over 450% between 2019 and 2020, which points to strong growth in end user adoption. (Open Banking Implementation Entity 2021)



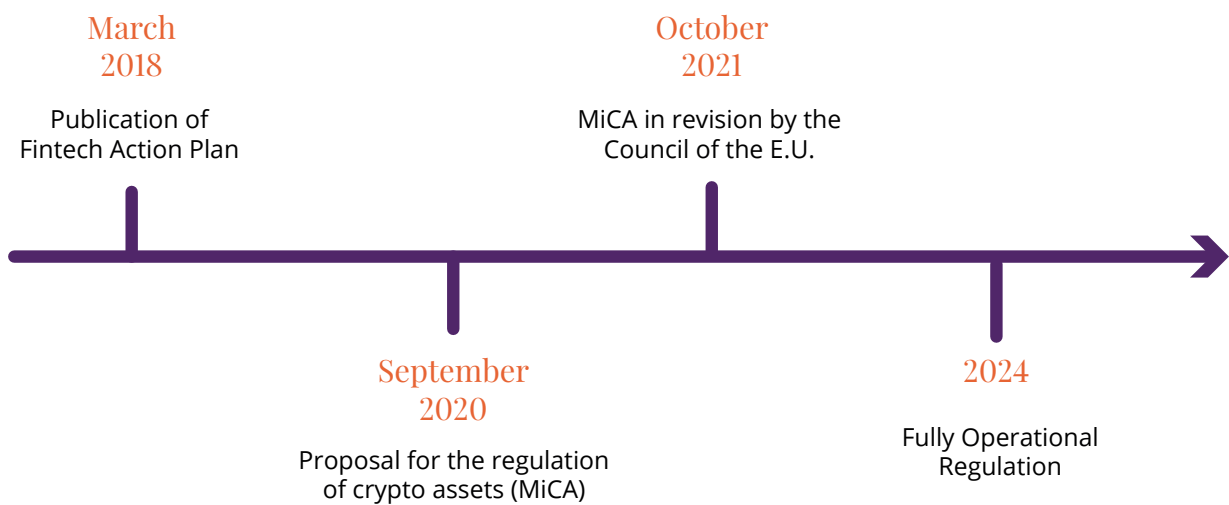
Graph 6 - Number of open banking third party registrations in Europe
Data from Statista 2021

MiCA TIMELINE AND MAIN GOALS

MiCA is set to become a milestone in crypto adoption, as it establishes regulatory certainty for crypto-asset issuers and service providers.

“This proposal seeks to provide legal certainty for crypto-assets not covered by existing EU financial services legislation (...). The proposed Regulation will replace existing national frameworks (...) and also establish specific rules for so-called ‘stablecoins’”

(European Commission 2020)



The Regulation lays down uniform rules for transparency; disclosure requirements for the issuance and admission to trading of crypto-assets; the authorization, supervision, operation and organisation of crypto-asset service providers and issuers of tokens; consumer protection rules and measures to prevent market abuse to ensure the integrity of crypto-asset markets.

It applies to persons that are engaged in the issuance of crypto-assets or provide services related to crypto-assets in the European Union (U.K. not included).

INNOVATION FACILITATORS

Initiatives such as Innovation Hubs and Regulatory Sandboxes are essential to help innovative ideas thrive in highly regulated systems. In 2016, the UK was one of the first countries in Europe to deploy a regulatory sandbox.

In Spain and in the Netherlands, efficient Regulatory Sandboxes are already meeting the needs of disruptive business models. Portugal has a full-functioning, successful Innovation Hub and shall soon have a Sandbox.

What is a Regulatory Sandbox?

A regulatory sandbox is the experimentation of a regulated financial, banking or insurance activity, such as launching a new service in the market. Depending on how the Sandbox is configured, the supervisory Authority allows the promoters to disapply some rules during the implementation of the project. Furthermore, the supervisory authority also helps in the interpretation and application of the regulation, as doubts emerge during the experimentation period. *(Grassi et al. 2020)*

Why are Regulatory Sandboxes being created worldwide?

Financial activities are often regulated as they impact matters of public interest, such as consumer protection and prevention of money laundering. Therefore, these activities need an authorization or registration by the competent authority. In fact, most Fintechs are innovative by nature, which complicates the identification of whether and how the proposed activity falls within the regulated space. A regulatory sandbox is a valuable instrument for that assessment, giving the new-born Fintech an opportunity to develop itself in an already regulated system, where, most likely, wouldn't fit otherwise.

What is an Innovation Hub?

Similarly to a regulatory sandbox, it acts as an innovation facilitator. Through the cooperation between the regulatory authorities, an innovation hub provides advice and guidance on FinTech related-issues, such as on the licensing and registration requirements for innovative financial products, services and business models.

Nonetheless, it does not offer a real-life testing system, where the innovative projects can be spared from some of the current regulation, during the trial period. *(ESAs Joint Committee 2021)*



The British Sandbox

The **Finance Conduct Authority (FCA)** is a regulator and prudential supervisor for financial services firms and markets in the UK. In 2016, FCA launched the first successful sandbox in the UK, which provides firms with the ability to test products and services in a controlled environment; reduced time-to-market at a lower cost; support in identifying appropriate consumer protection safeguards to build into new products and services and better access to funding. With the Sandbox, firms test their projects in a limited period, with a limited number of customers.

In **August 2021 it was decided that, unlike before, the regulatory sandbox would always be open, allowing firms to submit their applications throughout the year.** Indeed, firms can currently access the FCA sandbox testing services at the right point in their development lifecycle, to maximize the benefits of live market testing for progressing their innovative models. (FCA 2021)



The Portuguese Innovation Hub

In September 2018, the Portuguese regulatory and supervisory authorities of the financial sector (Banco de Portugal, Comissão do Mercado de Valores Mobiliários, and Autoridade de Supervisão de Seguros e Fundos de Pensões) launched **Portugal FinLab, an Innovation Hub**, alongside the Portugal Fintech association. It aims to **support the development of innovative solutions in the Fintech sector** through the cooperation between Portuguese authorities. This provides innovators with **clarifications on the regulatory requirements applicable to their projects** and on **how to operate** within the applicable legal framework. The independent remark of each Authority is compiled in a single report, and delivered to the participants.

Established by a Resolution of the Council of Ministers in July 2021, **the decree-law 67/2021 sets the legal framework for the constitution of regulatory sandboxes in Portugal. The decree-law does not create the sandboxes** itself, but it determines the conditions for their creation across the different technologies and industry sectors. The responsible authority for the creation of each regulatory sandbox is Agência Nacional de Inovação, ANI. In fact, ANI may create a regulatory sandbox upon a request realized by an independent individual, who must fulfill and submit an online form, stating his/her interest in the creation of a specific regulatory sandbox, whose acceptance and future creation will be later assessed by Autoridade de Testes, which is ANI's department focused on the topic. (ANI 2021, Presidência do Conselho de Ministros 2020)



The Spanish Innovation Hub and Sandbox

In **December 2016**, Comisión Nacional de Mercado de Valores set up the **FinTech Portal**. CNMV has provided financial institutions with regulatory information and criteria regarding the interpretation and application of any regulatory aspects of the market which may affect their projects.

In July 2018, following the UK's example, the Spanish government proposed a new law to boost technological innovation in the Fintech sector. The DTFS Law was passed on 4 **November 2020**. The **sandbox** enables technological innovation projects developed by any individual or firm that are granted entry to carry out tests in a special regulatory environment. (CNMV 2021)

Iberian Market Sizing Firm Cluster Analysis Purpose

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FIRM CLUSTERS' DEFINITION

The players in Fintech were subdivided into firm clusters, according to the relationship they keep with traditional financial institutions: Collaborators (firm cluster 1), Competitors (firm cluster 2) or Disruptors (firm cluster 3).



When typical Fintechs and incumbent banks constitute different nodes of the same value chain, they collaborate with one another.

The fintech players providing services to banks constitute the "1st firm cluster".

When typical Fintechs and banks belong to the same node of the value chain, the two entities behave as direct competitors.

The group of Fintechs which competes directly with banks belongs to the "2nd firm cluster".



3rd Firm Cluster

Additionally, there is an emerging type of Fintechs, a disruptive group of entities which aim to perform financial services without the assistance of central intermediaries that control the operations: these players belong to the group of Decentralized Finance (DeFi).

The DeFi entities, i.e., Fintechs which do not believe in the financial system as it is now, denying it, do not compete with its players. **DeFi entities are totally segregated from the others and belong to the "3rd firm cluster".**

THE 1ST FIRM CLUSTER: FINTECHS AS SERVICE PROVIDERS

As the banking industry suffers a digital revolution, there is an increasing number of tech-native Fintechs serving banks, in order to help them face the current digital revolution. These are considered firm cluster 1 firms.

Who is providing digital solutions to Banks?

In order to keep up-to-date in the ever-evolving digitized financial sector, banks typically rely on tech-native Fintechs focusing on areas such as digital onboarding processes, automated procedures relating to regulatory reporting, automated business processes, cybersecurity issues, and data analytics and forecasting. Most banks struggle to deal with these problems through in-house solutions, and so they rely on Fintechs who can provide them with the digital cutting-edge solutions they need.

How can Fintechs work alongside banks?

○ Regulation

While banks are still more strictly regulated and face barriers to innovation, Fintechs operating in the B2B sector are typically highly agile technology players that operate outside of the regulated domain.

○ Digitization Focus

Fintechs are more equipped than banks for the deployment of digital infrastructures, allowing banks to focus on their core businesses.

REAL SUCCESS CASES



Atticus offers easy-to-use and affordable digital services for probate, estate settlement, and estate planning. Bank partnerships with Atticus allow the incumbents to focus on the wealth management implications, such as assuring that the wealth remains managed by the bank once it's inherited, by offering wealth transfer management solutions to the new owners.



Minna Technologies partners with retail banks, such as Swedbank and Spare Bank, to help those banks' customers manage the entire subscription lifecycle, (which includes purchasing a new subscription; tracking how much is spent; comparing and switching providers and cancelling unwanted subscriptions). Banks benefit from Minna's subscription management services, by eliminating customer service costs related to "unwanted" subscriptions, chargebacks and disputes.



Feedzai is a cloud platform, which scores financial fraud risk of money transactions. With artificial intelligence techniques, it protects banks from fraud and money laundering situations.

Principal collaborators of banks

Payments



Regtech



Cybersecurity



THE 2ND FIRM CLUSTER: FINTECHS AS BANK'S COMPETITORS

Banks, which maintained their dominant position due to highly regulated environments, are seeing the emergence of new competitors (firm cluster 2) that threaten to steal market share and take leadership positions.

Who is competing with banks?

Fintechs are considered bank's biggest competitors. The financial system that banks use today is made up of some very traditional practices and procedures. As consumer demand continues to shift towards faster and easier solutions, people look for financial solutions that meet their needs. When it comes to innovation and advancement, Fintechs offer excellent solutions to the public.

Why can Fintechs compete with banks?

○ Regulation

- Alternative lenders can approve riskier loans due to more flexible systems in terms of adjusting rates and covenants on the deals.
- Some Fintechs have the ability to accept non-conventional sources of collateral

○ Information

Fintechs have better tools to process and analyze data, this enables them to make better decisions.

○ Focus

Fintechs focus on a single product or service, which is translated into a better quality, lower costs and exceptional user experience. (Ezrati 2018)

REAL SUCCESS CASES



The massive use of mobile phones has allowed great successes, such as that of M-Pesa in Kenya and ten other African countries, which over the past decade has **enabled more than 30 million users to transfer money, take out loans and make deposits using mobile phones**, from the remotest rural areas.



In China and neighboring countries, platforms such as WeChat have more than **a billion users who perform all kinds of financial transactions** using mobile phones with no need to open a bank account.



Another Asian non-bank finance giant is Ant Financial, the financial arm of Alibaba, a high-tech company **that allows hundreds of millions of users to pay immediately, borrow money** in just three minutes or make investments in the world's largest monetary fund. (Noya 2019)

Principal competitors of banks

Neo-Banks

Revolut

Crowdfunding

 **SEEDRS**

Credit SME

 **prazo.pt**

Consumer Credit

 **creditea**

THE 3RD FIRM CLUSTER: FINTECHS AS DISRUPTORS

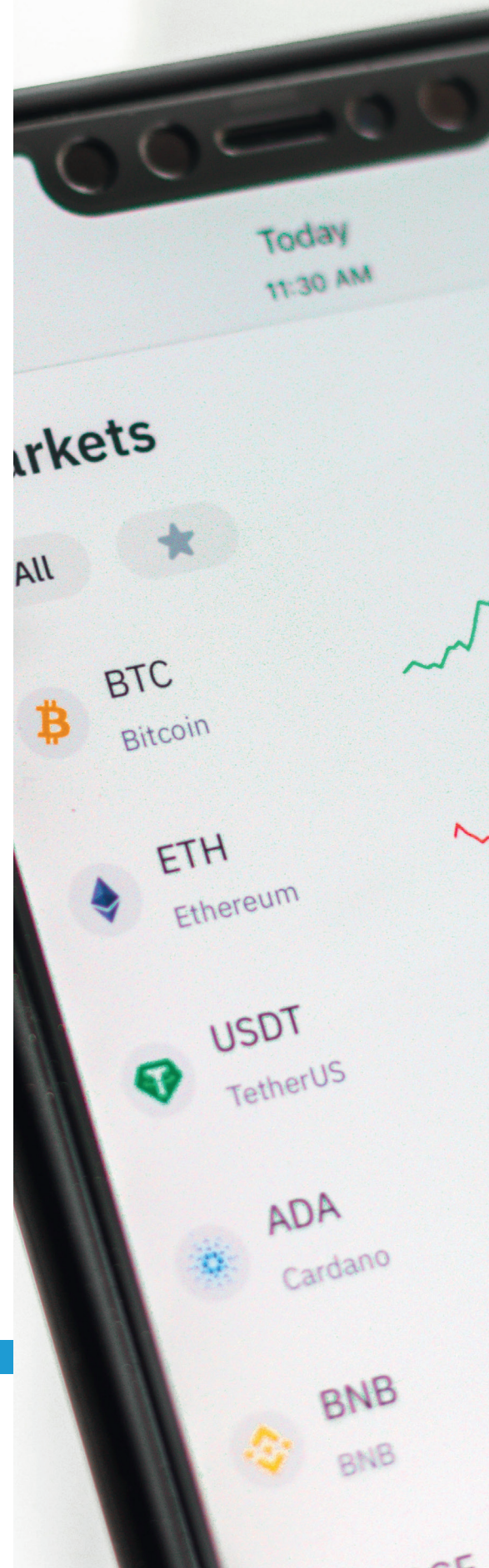
Firms in the 3rd firm cluster encompass both gateway firms that facilitate access to the crypto space, regulated firms working in assistance to DeFi and DeFi protocols that offer financial services without an intermediary.

What is DeFi?

The third firm cluster of firms covered are those which provide options that recreate traditional financial systems without the assistance of central intermediaries controlling the operations.

Decentralized finance, or DeFi, is a system by which financial products become available on a public decentralized blockchain network. This happens through the use of decentralized applications (Dapps) which provide financial services in areas such as payments, lending, trading, investments, insurance and asset management. Platforms operating in this sphere aim to create a decentralized form of finance in which entities such as banks become unnecessary. Multiple technologies and protocols are used to achieve the goal of decentralization.

DeFi services have defining characteristics directly mediating financial services, following the principle of trust minimization and aiming for a non-custodial design and programmable architecture. (Gogel 2021)



REAL SUCCESS CASES



Service protocols: Aave is a decentralized credit protocol that pools various tokens, giving lenders an interest rate net of transaction fees.



DeFi firms: Nexus Mutual is a regulated UK company that offers insurance cover against smart contract bugs, and provides a payout in ETH or DAI.

Gateway Firms: Coinbase is a fully regulated and licensed decentralized cryptocurrency exchange

Relevant Regulatory Moves



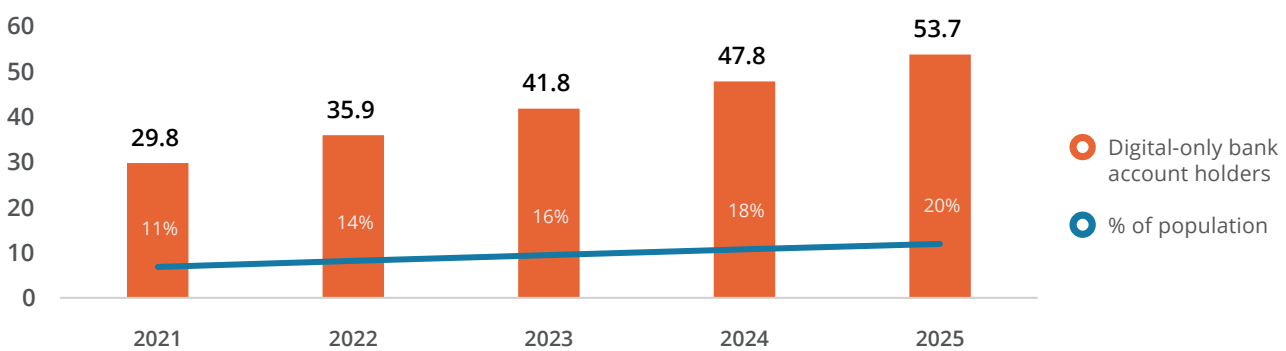
Mining crackdown: China's largest bitcoin-producing provinces emitted a halt on a computer-powered crypto mining in June 2021, in an attempt to cut carbon emissions and push against private cryptocurrencies as the country works on its own official digital coin. China also banned financial institutions from providing services related to crypto transactions in May. (*Szalay 2021*)



Regulation on Markets in Crypto Assets (MiCA): The EU is working on its response to the emergence of crypto-assets and their effect on how financial assets are issued, exchanged and accessed. This includes mitigating risks such as fraud, cyberattacks and market manipulation. MiCA is proposed regulation intended to help streamline activity while protecting users and supporting the usage of DLT. It will enter into effect by 2024. Its compliance requirements for companies could pose a serious threat to DeFi. (European Commission 2021).

FIRM CLUSTERS 1 & 2

Both American and European users have shown an increased interest in digital-only Banks and digital banking solutions, a trend accelerated by the pandemic. This may greatly foment firm cluster 1 and 2 activity.



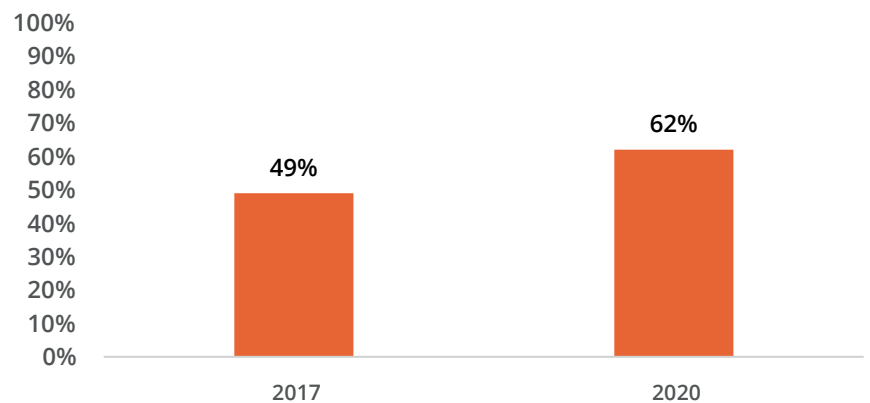
Graph 7 - U.S. Holders of Digital-only bank accounts millions and % of population
Data from Insider Intelligence 2021

Insider Intelligence forecasts that holders of accounts in digital-only Banks in the United States will grow to 53.7 million in 2025, up from 29.8 million in 2021.

For comparison purposes, one may note that the Bank of America and Citibank combined had only 45.3 million active mobile users in Q2 2021 – considering that Citibank reported user numbers for North America, while Bank of America reported broadly. (Magana et al. 2021)

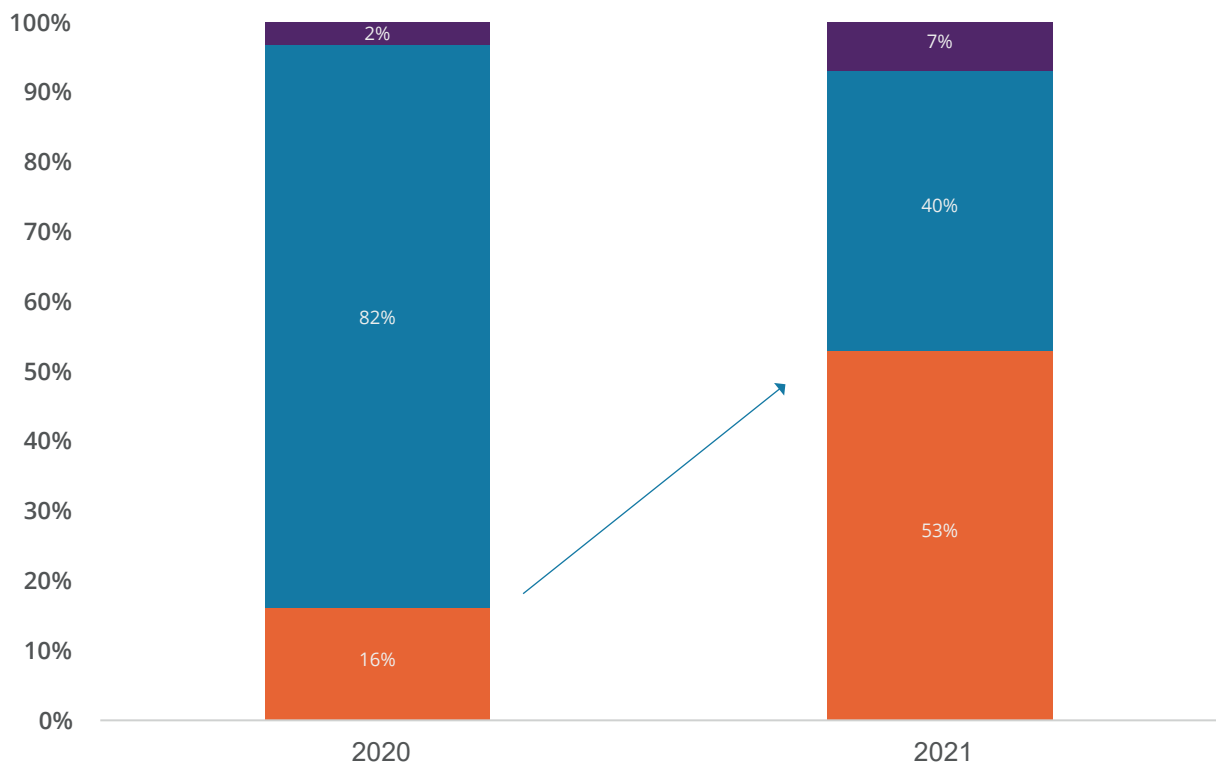
The COVID-19 pandemic has brought about physical restrictions that made digitalisation even more inevitable. In this period, customers turned to digital banking services as a way to access funds and manage personal finances.

Mastercard's Evolution of Banking study looks at digital banking trends across 12 European markets and reveals increased demand for online solutions.



Data from Mastercard 2020

Of the Europeans surveyed, 46% said they were highly interested in new digital banking solutions, while 42% showed interest if there was an assurance of advanced security measures. However, only 23% would switch from their current Bank to a digital-only one in the next year, driven in part by many traditional banks increasingly offering digital solutions. (Mastercard 2020)



Graph 9 - Channel used for purchases across all banking products in Spain
Data from Kearney 2021

The responses displayed in the graph are the result of a survey conducted across Europe in February 2020 and again on March 2021. The questions asked were the same in the two dates, and the results provide a **strong indication of the pandemic's effect on customer behavior.**

The percentage of Spanish clients who purchased banking products through digital channels (meaning, banking websites, mobile apps, price comparison platforms, social media, among others) **rose from 16% to 53%**. This increase is particularly noticeable as Spain was a country with a relatively **low digital adoption before Covid-19** when compared to other member states.

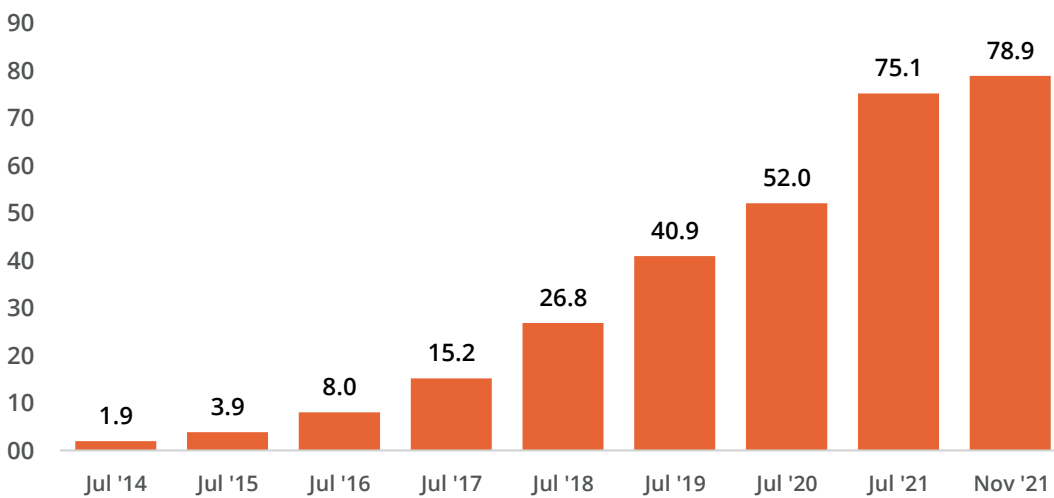
When considering Europe in general, the survey found that customers willing to buy **financial offerings via a digital solution went from 33 percent in early 2020 to 50 percent in 2021**. Furthermore, only 41 percent of clients still visit their branch or utilize call centers (this figure was 53 percent in 2020).

Some factors may explain the predominant use of physical channels in a country such as Spain in 2020. These are related with:

- how entrenched branches are within the culture of the region;
- how customers are used to behaving;
- how important personal attention is considered to be;
- how comfortable the general public is with online solutions;
- how strong are the regional banks' digital offerings.

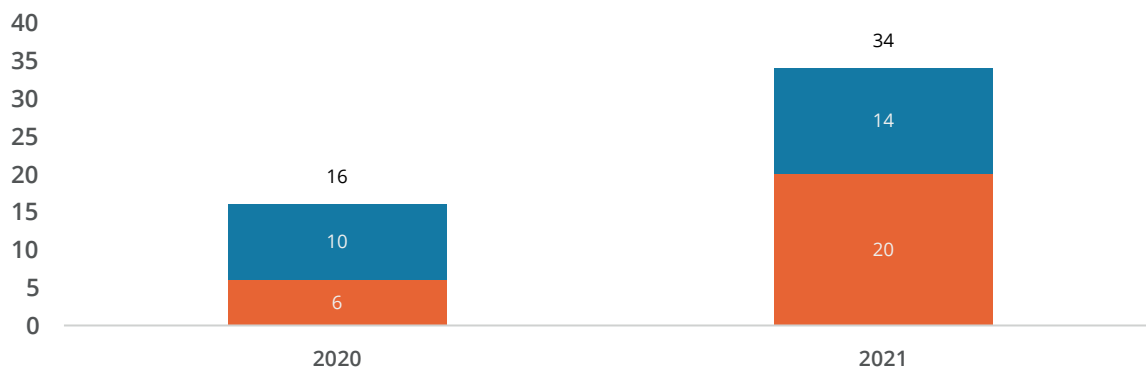
FIRM CLUSTER 3

Cryptocurrency usage has been growing at a very high pace across the world. This can be seen by the increasing number of worldwide cryptocurrency wallets and owners of digital assets.



Graph 10 - Number of Blockchain.com wallet users worldwide (in millions)
Data from Blockchain 2021

A blockchain wallet is a digital wallet that allows users to store and manage their cryptocurrencies. There are different types of wallet apps, each with its own advantages, in fields such as levels of security and accessibility. Blockchain.com, a firm that makes purchasing Bitcoin possible, reached over 70 million wallet users at the end of March 2021. Multiple cryptocurrency apps worldwide grew significantly in number of users in 2021, as revealed when comparing download figures from the Coinbase, Blockchain Wallet, Crypto.com, BRD, Trust, Luno, Binance, Bitcoin Wallet, Bitcoin Wallet by Bitcoin.com, and Coinbase Wallet apps.



Graph 11 - Cryptocurrency Penetration % of total respondents
Data from McKinsey & Company 2021

- Owners
- Interested in owning / Potential users

Cryptocurrency penetration has more than tripled among American Consumers, primarily due to its use as an investment vehicle.

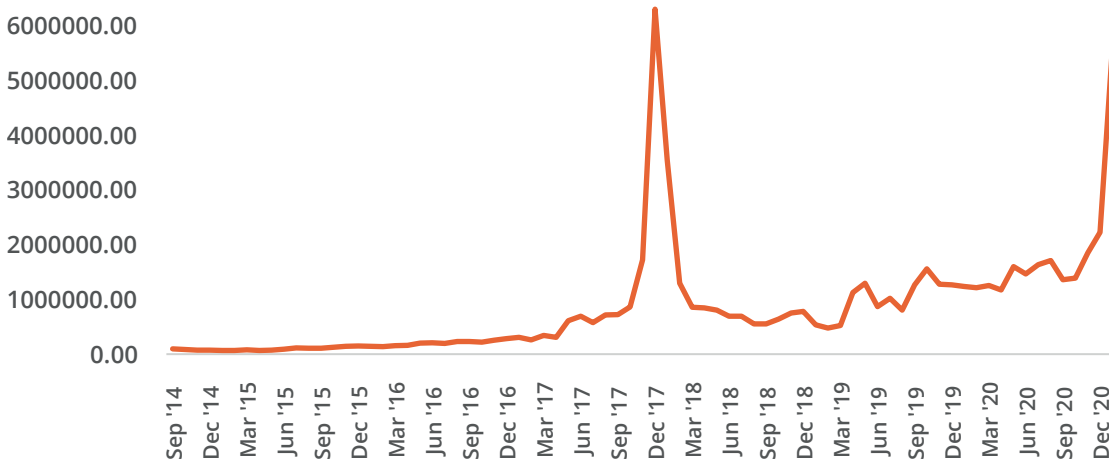
The adoption curve of cryptocurrency is quite steep. One in five respondents report holding or having held crypto assets, up from 6 percent just a year earlier.

Among the 74 percent of respondents familiar with but not owning crypto, 41 percent say a key reason for not yet having used crypto is their lack of functional understanding—an indication of further room for growth. (Goel et al. 2021)

FIRM CLUSTER 3

Portugal is among the countries that are most embracing the new economy, based on decentralized finance, occupying the top 20 worldwide countries with most DeFi activity.

Worldwide DeFi adoption



Graph 12 - Number of downloads of the 10 largest apps that allow for cryptocurrency storage worldwide Data from Blockchain 2021

By considering the number of worldwide downloads of cryptocurrency storage apps, it is possible to conclude there is a fast and accentuated growth of this space in the last few years. In particular, users of cryptocurrency apps in January 2021 surged to a number that was only surpassed by figures reached in December 2017.

The ten most popular cryptocurrency wallets were downloaded about 2.2 million times in December 2020, a number that grew to over 5.6 million only a month later.



DeFi in Portugal

Portugal's position in the DeFi Rankings reported in the Geography of Cryptocurrency 2021 by Chainalysis:

European Countries driving cryptocurrency activity

#9

Portugal rank

received almost **€30B in 2020** in cryptocurrency value

Value received through DeFi Protocols - Europe

#8

Portugal rank

this ranking is led by UK, followed by France and Germany

Decentralized Finance based on Ethereum usage - Europe

#1

Portugal rank

Europe has become the world's biggest cryptocurrency market, and its growth over the last year was largely driven by institutional investors and other whales moving into DeFi. *(Chainalysis 2021)*

Revolut

Complementary information:

Revolut reported having more than 100,000 Portuguese users actively trading Cryptocurrencies through its platform. *(Almeida 2021)*

FIRM CLUSTER 3

TRADITIONAL FINANCE + DEFI M&A DEALS

Both traditional financial institutions and firm cluster 1 & 2 Fintechs have shown increased interest in digital assets. Many started offering crypto solutions and some are collaborating with firms working in the space.







	Acquirer Company	Target Company	Deal Size (\$ in M)	Acquirer	Target	Activity
2021			Undisclosed	USA	USA	Payment enabler institution acquired a blockchain analytics firm. <i>(Murphy 2021)</i>
	 <small>Payment Technology Partner</small>	 <small>a nuvei company</small>	\$250	CA	LH	Large electronic payment processing company acquired a fiat-cryptocurrency gateway firm. <i>(Wintermeyer 2021)</i>
	 <small>ธนาคารไทยพาณิชย์</small>		\$535 (for 51%)	TH	TH	Bank acquired majority stake in the largest crypto exchange in Thailand. <i>(Nguyen et al. 2021)</i>

Table 2 - DeFi M&A deals

“Most people agree that in the future — it might be 10 or 20 or years or it might be sooner — effectively all assets are going to be in a digital format”

Thomas Olsen, partner at Bain & Company

VERTICALS VS. FIRM CLUSTERS

When Incumbent banks and Fintechs make part of the same vertical's value chain, they either act in the same activity, acting as competitors, or they act in different stages of the value chain, collaborating with each other.



Payments & Money Transactions

1st firm cluster

- Merchant Services (Unless a Fintech offers Bank Acquiring)

1st and 2nd firm clusters

- Transaction Security
- Online/Mobile Payments
- Telcos, Carrier Billing & NFC Infrastructure

2nd firm cluster

- International Money Transfers

2nd & 3rd firm clusters

- Peer-to-peer Transfers



Crypto

3rd firm cluster

- Crypto exchanges
- Payment processors
- Crypto wallets
- Cloud-based Mining



Insurtech

1st firm cluster

- Policy Administration, Subrogation, Claims & Losses, Underwriting and Billing & Payments
- Data & Analytics - Data Provision, Marketing, Pricing/ Rating and Telematics

2nd firm cluster

- Brokers & Agents and other types of Sales & Distribution



Lending & Credit

1st firm cluster

- Credit Scoring

2nd firm cluster

- Lending Marketplaces
- Consumer (including Student) Loans
- Housing Credit
- Corporate Loans

1st and 2nd firm clusters

- Merchant Cash Advance & Buy Now Pay Later (BNPL)



Digital Onboarding, Regtech & Banking Technology

1st firm cluster

- Know Your Customer (KYC) Processes
- Anti-Money Laundering (AML) Checks
- Fraud Management & ID Verification
- Compliance Advisory and Reporting
- Account Opening & Card Origination
- Accounts Aggregation



Capital Markets & Wealth Management

1st firm cluster

- Market Data Aggregation, Corporate/ Equity/ Investment Research, Data Providers (Historical Market Data), Big Data Analytics

2nd and 3rd firm clusters

- Online Brokers, robot-advisors and specialized custodians
- Liquidity Pools – exchanges and crowd-funding platforms

1st, 2nd and 3rd firm clusters

- Wealth & Risk Management/ Planning Tools for Advisors, Personal Finance, Clearing & Settlement and Deposits & Withdrawals

MARKET SIZING METHODOLOGY

In order to assess the strength of each firm cluster in the Iberian Market, there was a need to understand the size of the Fintechs in each one. Different market sizing methods were used in firm clusters 1, 2 and 3.



It was decided that there was no good way of calculating global market size using past reports, since the firm clusters are not fully reflected by the previous market segmentations. Additionally, the group could not identify good sole proxies which encapsulate all types of firms in the firm clusters.

Methodology Chosen

Getting to the size of each firm cluster by analyzing and quantifying the **current environment** in the **Iberian Market**

- #1 Attribute each company in the database to a firm cluster, according to the previously set definitions.
- #2 Pre-select companies belonging to firm clusters 1 and 2.
- #3 Use available databases to gather information on the last round of funding for these companies and conduct a 20% stock dilution* to get to their market value.



It was considered that it would be reasonable to use the market estimations currently available for DeFi activity in order to understand the market size of this firm cluster at a global level. Numbers obtained are global, as firm cluster 3 typically operates across borders and has no physical limits.

Methodology Chosen

Getting to the size of each firm cluster by using **global** reports and proxies and adapt in size to capture Iberia

- #1 Clearly define the various types of companies included in the firm cluster.
- #2 Select several reliable sources of information regarding the size of the DeFi market and take the most conservative one.
- #3 Adapt the size of this segment to reflect the size of the Iberian economy.

FINTECH MODEL – DATABASE

The market sizing was done through the use of the Fintech Model. This model, built throughout the project, presents detailed information on more than 426 Fintech companies operating on Iberia.

Document Details

Document name: Fintech List Data Base

Type of Document: Excel File

Number of sheets: 3

Company Reporting

Firm cluster 1 Sizing

Firm cluster 2 Sizing

N° of companies sourced: 426

Conversion rates used:

\$1 = €0.88 | £1 = €1.18

Excel Sheets - Description

Company Reporting

In this sheet, one can find the information presented in the table below for a sample of 350 Fintech companies based/operating in the Iberia market. This list was the starting point for all the methodologies developed during the WP.

Firm cluster 1 Sizing

In this sheet, one can find the sample of firms used to measure the size of firm cluster 1. This list comes from the sample of firms already presented in the Company reporting sheet. One can also find more specific details about how measurement was done.

Firm cluster 2 Sizing

In this sheet, one can find the sample of firms used to measure the size of firm cluster 2. This list comes from the sample of firms already presented in the Company reporting sheet. One can also find more specific details about how measurement was done.

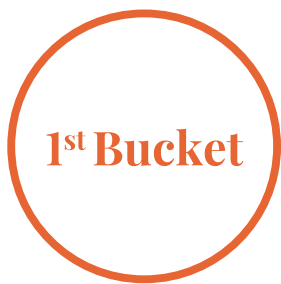
Company Reporting Structure

Company name	Bucket	Vertical	Country HQ	Revenues 2019 (€ '000)	Revenues 2019 (€ '000)	Last Round Financing	Round Date	Valuation Model	Website	Description
Feedzai	1	Payments & Money Transfers	Portugal	€ 27,199	€ 33,319	€ 200M	24/03/21	€ 176M	feedzai.co	**

**Feedzai is the market leader in fighting financial crime with AI. It's coding the future of commerce with today's most advanced risk management platform powered by big data and machine learning. Founded and developed by data scientists and aerospace engineers, Feedzai has one mission: to make banking and commerce safe.

FIRM CLUSTER 1 & 2 - MARKET SIZING

It was determined that firm cluster 1 and 2 represent about 49% and 35% of the total Iberian Fintech market, respectively.



68

Number of considered firms

- Spain
- Portugal
- Other



Firm cluster 1 Iberian market size
€4,584,622,600

Total value of Fintech market in Iberia
€9,269,702,229

49%

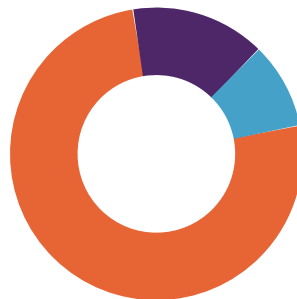
Approximate weight in total Fintech market



71

Number of considered firms

- Spain
- Portugal
- Other



Firm cluster 2 Iberian market size
€3,271,396,169

Total value of Fintech market in Iberia
€9,269,702,229

35%

Approximate weight in total Fintech market

FIRM CLUSTER 3 - MARKET SIZING

The DeFi Market was used as a proxy for the firm cluster 3 market. It was determined that, in Iberia, it represents about 15% of the total Fintech market.

Relevant values considered:

DEFI PULSE

DeFi market size is measured by TVL (total value locked). In the 10th of October 2021, TVL was **90 billion USD**

Data from defipulse.com

Others:



CoinGecko

TVL in the 10th October 2021: **162 billion dollars**

DappRadar

TVL in the 10th October 2021: **135 billion dollars**

Data from: dappradar.com

Increasing digital asset prices contributed to the rise in market size, but organic growth was also very strong. The number of DeFi wallets grew from 100,000 to 1.2 million during 2020, and new DeFi applications went from eight in 2019 to over 230 in 2020.

Data from DeFi Beyond the Hype

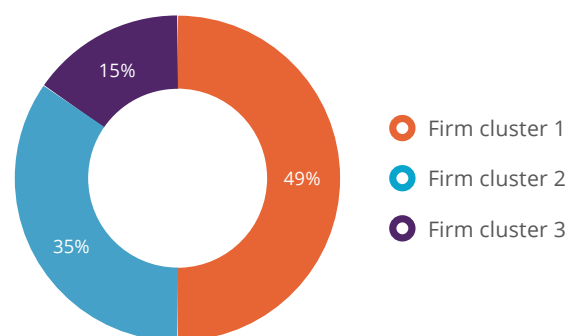
Iberian Market Size relative to Global Market (based on 2020 GDP):

$$\$1.509T / \$84.54T = 1.785\%$$

DeFi Presumed Market Size (conservative approach):

\$90B

Iberia Market Size: €1.41B



Note: Total value locked (TVL), in the context of cryptocurrency, represents the sum of all assets deposited in DeFi protocols

REVENUES IN THE IBERIAN FINTECH INDUSTRY

Firm cluster 2 has the most players, counting with 184 companies out of 426 collected. However, it is firm cluster 1's 2020 revenues, which present a higher amount: €202,002, against firm cluster 2's 2020 revenues: €139,045.

	Payments & Money Transactions	Digital Onboarding, Regtech & BPO	Lending & Credit	Insurtech	Capital Markets & Wealth Management	Crypto	Firm Cluster 1	Firm Cluster 2	Firm Cluster 3
Players	82	61	100	36	133	25	211	184	31
Revenues in 2019 ('000€)	125,926 (44 players)	112,369 (37 players)	343,710 (71 players)	20,257 (19 players)	76,876 (75 players)	50,378 (7 players)	264,249 (125 players)	424,738 (120 players)	50,685 (11 players)
Revenues in 2019 ('000€)	70,809 (24 players)	86,603 (25 players)	114,344 (37 players)	3,041 (11 players)	52,650 (50 players)	2,146 (4 players)	177,738 (76 players)	159,732 (71 players)	2,417 (7 players)
Revenues in 2020 ('000€)	83,217 (24 players)	101,831 (25 players)	88,132 (37 players)	3,454 (11 players)	56,799 (50 players)	18,955 (4 players)	202,002 (76 players)	139,045 (71 players)	20,316 (7 players)

Table 3 - Revenue Market sizing

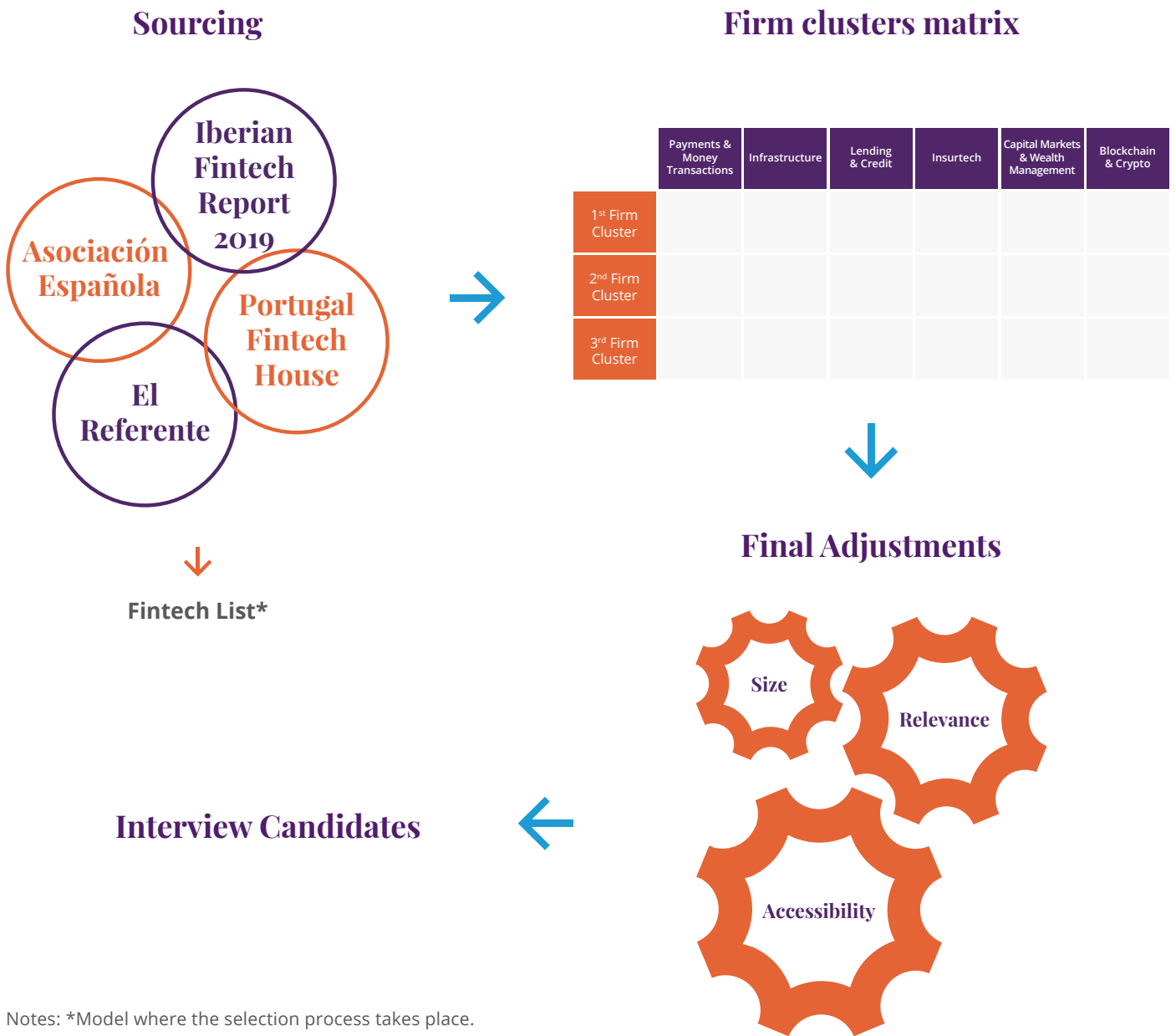
There are more publicly disclosed revenues from 2019, than from 2020. Therefore, it would not be reasonable to compare 2020's total revenues with 2019's total revenues, since the number of disclosed revenues

is bigger in 2019. Hence, only the revenues coming from companies whose financial data was publicly disclosed both in 2019 and 2020 were considered in the third line.

Firms Interview Methodology

FIRMS INTERVIEW METHODOLOGY

The DeFi Market was used as a proxy for the firm cluster 3 market. It was determined that, in Iberia, it represents about 15% of the total Fintech market.



Notes: *Model where the selection process takes place.

SOURCING

The majority of the Portuguese companies found come from the Portugal Fintech Report, and the Spanish ones were retrieved from the databases belonging to the Asociación Española and to the El Referente Magazine.

The process of selection of the relevant Fintech firms was done through the combination of four different sources. By having access to so much data, it was possible to have a better understanding of the Iberian Fintech market landscape.

ElReferente

CONECTANDO EL ECOSISTEMA DE LAS STARTUPS

El Referente is the leading information magazine about startups and innovation in Spain. This source provide us with more than 200 fintech companies operating in Iberia.



Being a hub where fintech can have contact with banks, regulators, and investors. Portugal FH has access to the most relevant firms in Portugal. We used their 2020 annual report to gather information about the most relevant Fintech in the Portugal ecosystem.

Iberian Fintech Report 2019

The Iberian Report 2019 done by our colleagues was very insightful since it already had a selection of at least 5 Fintech based on Iberia per vertical.



This organization represents Fintech companies based in Spain. We were able to find more than 110 companies through this source.

FIRM CLUSTERS MATRIX

Each firm collected from the different sources was attributed to a specific vertical and firm cluster, based on the activity they conduct. The firm clusters matrix displays that division into firm cluster and vertical.

	Payments & Money Transactions	KYC, Onboarding, AML, Regtech	Insurtech	Blockchain & Crypto	Lending & Credit	Capital Markets & Wealth Management
1 st Firm Cluster	  	  				  
2 nd Firm Cluster	  		 		  	  
3 rd Firm Cluster				  		

FINAL ADJUSTMENTS

Revenues were the main criteria for selecting interview candidates, after ensuring all firm cluster/ verticals were included. Relevance and Accessibility were only used after the sample of firms was already filtered by size.

Size

Size stands for the criteria used to filter companies in terms of revenues. The group decided that it was more value-adding to interview firms with a considerable size and market share, to find insightful and relevant information.

Relevance

Relevance stands for the criteria used to filter firms in accordance with our client's interests and output quality for the report. The criteria was only used for firm cluster 1 and 2 companies.

Accessibility

Accessibility is the realist connection of the team to the Fintech companies sourced. Through a combination of criteria, the companies were filtered in accordance to the realistic possibility of actually getting access to an interview.

The last step of the firm's choice methodology was to select the appropriate interview candidates, making sure that every firm cluster/ vertical combination is represented. This selection was done by applying the filter's Size, Relevance and Accessibility to the firms inside each firm cluster/ vertical combination.

Criteria used

Revenues

The team ordered the Fintech companies sourced in terms of revenue, selecting the three biggest companies of Portugal and Spain of each Firm cluster / Vertical combination. The goal was exclude the firms that create less value. This way, all interview hypothesis are well established in the market and require the consideration of Banks.

Criteria used

Client's suitability

The analyzis was done taking into account the relevance that each company could have for the client. All the players selected could be used either as a benchmark or as possible future partner.

Criteria used

Professor Afonso's Eça network

Co-founder of Raise (Lending & Credit Fintech), and teacher at Nova SBE, has a considerable large list of contacts.


Team's network

Portfolios of the Venture capital firms where the team members worked (Big Start Ventures; Semapa Next); LinkedIn connections (Former colleagues, Family, Friends)

It was **only possible to select 12 candidates out of the 18 possible Vertical/Firm cluster combinations (6x3). This happens since there are no companies from firm clusters 2&3 in the vertical KYC, Onboarding. There aren't also companies from the firm clusters 1&2 in the vertical Crypto and finally, there are no companies of firm cluster 3 from the verticals Insurtech and Capital Markets & Wealth Management.

INTERVIEW CANDIDATES

The interview methodology allowed us to reach ten companies out of the 210* initially sourced. Additionally, it was found relevant to interview two industry experts, three commercial banks and two regulators.

	Payments & Money Transactions	KYC, Onboarding, AML, Regtech	Insurtech	Blockchain & Crypto	Lending & Credit	Capital Markets & Wealth Management
1 st Firm Cluster			 			
2 nd Firm Cluster	 					
3 rd Firm Cluster						

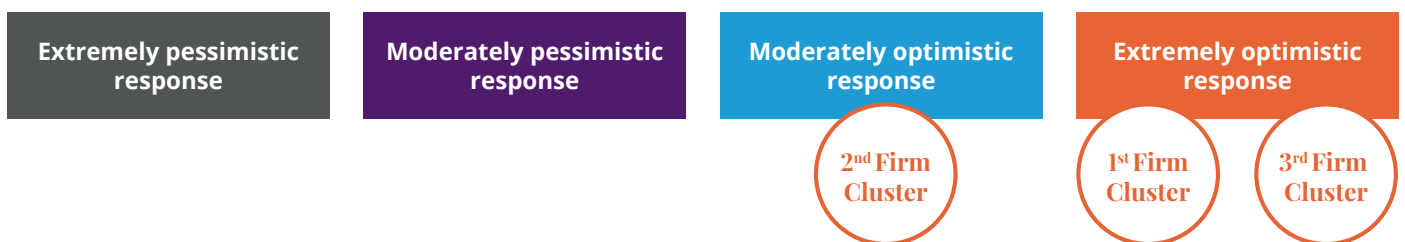
Note: *The fintech excel list was updated throughout the work. In the beginning of October 2021, when the interview methodology took place, the group only had sourced 210 companies.

SUMMARY

Three main questions were asked in interviews with players of all firm clusters. On average, firm cluster 1 and 3 firms were the most optimistic regarding the future. Firm cluster 3 sees regulation as necessary to legitimize the activity.

How do you see the company's future?

[Average Response]



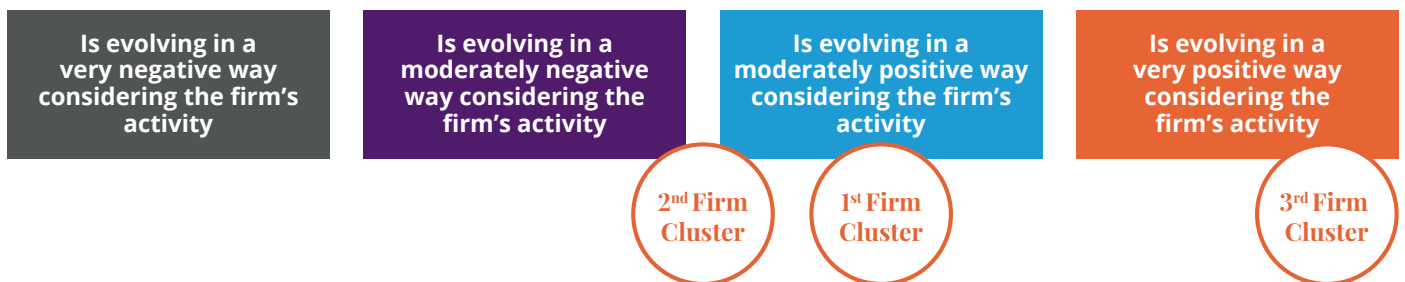
How do you see the relationship with Banks evolving?

[Average Response]



How do you think regulation will impact your company in the future?

[Average Response]



LOVYS B2C INSURTECH

Lovys aims for an European brand, not focusing in one country only. It expects continued collaboration with Banks. The B2C Insurance market is considered very regulated and technically demanding.



1st & 2nd
Bucket

Company Overview:

Lovys offers an Insurance subscription application which allows users to register and insure individual items. Customers can know exactly what they are paying for, manage policies, and seamlessly claim processes.

Relevant Ideas

Similarly to the generation of neobanks which became unicorns and currently dominate the Banking sector (such as Revolut, N26 and Monzo), there will be an Insurtech generation within the next five years.

The avant-garde Singapore's Fintech market is almost only focused on B2B Fintechs. Once there is no space within Singapore's B2C market, Lovys is only thinking of expanding its business to the rest of Europe and, later on, to the US.

Understanding the business

Lovys works with ten traditional Insurance firms and with banks (which amount to 15% of their relationships), in order to better distribute its products.

Funding is a crucial growth factor. The B2C Insurance market is very regulated and technically demanding, as customers are demanding more digitized solutions. Thus, raising money through bootstrapping processes is not an hypothesis: it is "mandatory" to spend a big amount of money, in order to offer an innovative and competitive service.



João Cardoso

CEO, lovys

HOW DO YOU SEE THE RELATIONSHIP WITH BANKS EVOLVING?

Insurance companies and banks have always worked together, and that will not change with the digital transformation of the financial sector. For Insurers, banks are only distribution channels of insurance products just as other entities are. Hence, it is expected that collaborations between Insurers and banks will continue to exist. Banks will always be relevant target channels, since there are many trigger points of insurance products offerings, such as Car Loans and Home Loans.

HOW DO YOU THINK REGULATION WILL IMPACT YOUR COMPANY IN THE FUTURE?

The European Regulatory Authorities are making an effort to create an unique market in terms of insurance and banking products, so that companies do not face difficulties to scale due to specific regulatory requirements among different countries. For instance, Lovys only started its activity in France due to its bigger insurance market, and not to run away from any extra Portuguese regulatory complexities. The US is behind Europe in this topic, because regulation works state by state.

RAIZE LENDING MARKETPLACE

Raize is a public firm in the lending space. It intends to grow through consolidation and is contemplating expanding lines of business. It considers that B2C Fintechs must either partner with banks or become one.

RAIZE



Company Overview:

RAIZE is the leading Portuguese online lender for SMEs and one of the largest investment communities: as a lending marketplace, it matches investors with SMEs looking for capital. The firm launched its IPO in July 2018, with a subscription of 369%.

Relevant Ideas

The key advantages of B2C Fintechs are their technological nature and their vanguardist and agile culture. Indeed, banks' systems are built on top of old technologies.

It is not the case that banks do not invest in technology: while Fintechs invest money in new technologies, banks invest similar or higher amounts of money trying to adapt their old systems into ones that can face the new necessities of the market, as well as the regulation's requirements.

Furthermore, Fintechs tend to operate as a community: these players do not try to internalize activities whose scope is out of their core business, instead they integrate other Fintechs' solutions. Parallely, most banks do not have the same culture: most of them try to develop in-house solutions, which often results in unnecessary costs and in non-competitive solutions.



Afonso Eça

Co-Founder, RAIZE

HOW DO YOU SEE RAIZE'S FUTURE?

Since Raize already reached the maturity stage in its market, consolidation is the key to keep growing. While its core business is credit origination through entities matching, the firm intends to broaden its activity to other areas, such as conceding credit itself, from its own balance sheet. For that, the company must acquire a Credit Institution license. Furthermore, Raize sees the offer of Buy Now Pay Later services, which lay within the Payments vertical, as a possible add-on to its activities.

These projects are envisioned either through the closing of M&A deals or Joint-Venture contracts.

HOW DO YOU SEE THE RELATIONSHIP WITH BANKS EVOLVING?

To survive, B2C Fintechs must either partner with banks or become one. Since it is easier for banks to partner with already well-known institutions, such as specific credit operators, it must be B2C Fintechs to approach banks in the first place.

As service providers, B2B Fintechs grow organically, side by side with Banks.

HOW DO YOU THINK REGULATION WILL IMPACT YOUR COMPANY IN THE FUTURE?

While regulation practices have the disadvantage of not allowing companies to grow as fast as they would like, the Regulatory Authorities require a well thought structure from start-ups, which increases the quality of both their business model and operations. The main problem of regulation is its instability. For instance, in order to operate, Raize had to become a Payment Institution in 2015. In 2018, due to the release of PSD2, it had, again, to be approved as a Payment Institution, incurring in an extra time and money demanding process.

UTRUST PAYMENTS LEVERAGING BLOCKCHAIN

Raize is a public firm in the lending space. It intends to grow through consolidation and is contemplating expanding lines of business. It considers that B2C Fintechs must either partner with banks or become one.



Company Overview:

Utrust is a payment platform that allows online merchants to accept all major cryptocurrencies as a payment method. It is based in Portugal, having offices in Braga and Lisbon. Its payment processing fee is very low due to the use of blockchain (which prevents fraud and mistakes).

Relevant Ideas

The main challenges of the company regard the current lack of trust in the crypto-world from most customers, the high competition for talent in technical areas, and the current compliance requirements (which don't perfectly fit Utrust's business model). Utrust is currently regulated as a "Virtual Assets Exchange Provider", thus it has the same regulatory requirements as other Fintechs payments services' providers. While the latter can easily fulfill the compliance requirements of the 5th AML Directive, DeFi agents, such as Utrust, find it hard: the level playing field is not currently well assured.

Understanding the business

On its B2B model, Utrust acts as a cryptocurrency payment gateway and offers online merchants and businesses invoicing services. On its B2C model, Utrust offers a crypto & cash personal wallet that comes with an exchange, banking services, reverse staking, and a VISA debit card. In order to keep the merchants' money safe, the compound yield per merchant can be transferred to merchants through centralized protocols.



Rodrigo Russell

COO, Utrust

HOW DO YOU SEE UTRUST'S FUTURE?

Believing in the increase of their network, Utrust expects more merchants and users to use their native stable coin, UTK, or others from their network (such as Bitcoin and Ethereum). Leveraging on the network increase, Utrust plans to exchange part of its margin for growth in the short-term future.

Their growth strategy is based on the offer of two new revenue streams to tier-1 merchants.

On the one hand, the company will offer a compound yield per merchant, in UTK currency, of 20% of the fee charged for the payment processing (which is 1%). For that, merchants must keep the UTKs locked in their wallets for one year. On the other hand, being the supply of the stable coin constant, the valuation of the coin will also be higher, in case the demand increases. Indeed, this means the merchant gets a second revenue stream out of its payments.

HOW DO YOU SEE THE RELATIONSHIP WITH BANKS EVOLVING?

Banks must innovate in order to work alongside firm cluster 3 agents, or they may become obsolete. Banks' role within the Defi system will be mainly to assure financial security: they shall be prepared to offer custody services, to launch, insure and provide liquidity for centralized protocols, and to be "financial security interfaces" (where customers can feel safe while interacting with the system).

HOW DO YOU THINK REGULATION OF THE DIGITAL SPACE WILL EVOLVE?

Currently, there isn't almost any specific regulation for DeFi activities. As long as regulation doesn't suffocate innovation, its release, at a European level, will be crucial to assure the level playing field, transparency, uniformization, and trustworthiness in the DeFi system.

NOVOBANCO COMMERCIAL BANK

Raize is a public firm in the lending space. It intends to grow through consolidation and is contemplating expanding lines of business. It considers that B2C Fintechs must either partner with banks or become one.



Company Overview:

Novobanco is a Portuguese Bank established in 2014, as a consequence of the Resolution applied to its predecessor (BES). It kept all workers, deposits, agencies and credit clients from BES, founded in 1869. One of the key goals of novobanco is to encourage value-adding partnerships.

Relevant Ideas

Apart from some regulatory imbalance, there is not much preventing banks from doing what Fintechs do. As times goes by, the best banks will become more technological and the surviving Fintechs will be more similar to traditional financial institutions in aspects such as customer service.

In Portugal, there is still some delay in digital transformation as there is still a big focus on personal relationships. The novobanco is focusing on accessing which clients require a physical presence. They consider their focus on the omnichannel to be an advantage. The number of branches tends to diminish but the ones remaining are important.

Fintech Interactions

There are a lot of Fintechs who work with banks and novobanco has a good relationship with them. In its most recent strategic update, the bank stated its intent to actively look for partnerships and combined solutions, as it considers them to be fundamental in the world of today.

There are also competitor Fintechs, which are fewer. Some try to get into the fundamental side of banking (neobanks) and others in less key aspects (BNPL and payments). Strategically, the main measure to fight these is to become more agile in adopting change and more technological, approximating the activity to that of Fintechs.

Regulation

Apart from some regulatory imbalance, there is not much preventing banks from doing what Fintechs do. As times goes by, the best banks will become more technological and the surviving Fintechs will be more similar to traditional financial institutions in aspects such as customer service.

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Challenges

There are a lot of Fintechs who work with banks and Novobanco has a good relationship with them. In its most recent strategic update, the bank stated its intent to actively look for partnerships and combined solutions, as it considers them to be fundamental in the world of today.

There are also competitor Fintechs, which are fewer. Some try to get in the fundamental side of banking (neobanks) and others in less key aspects (BNPL and payments). Strategically, the main measure to fight these is to become more agile in adopting change and more technological, approximating the activity to that of Fintechs.

BANCO DE PORTUGAL (BdP)

BdP is a fairly strict entity when it comes to the interpretation of the law. Nevertheless, it has implemented several initiatives to encourage innovation: language simplification, Finlab, Fintech meetings and Fintech +.



Company Overview:

Banco de Portugal is the Portuguese central bank. It belongs to the ESCB (European System of Central Banks) and is responsible for the supervision of financial institutions, regulating their conduct and promoting financial literacy. The main goal of the bank is to ensure efficiency and stability of the financial system.

Relevant Ideas

The Bank of Portugal has a great knowledge of the entities that it regulates and consequently a great understanding of what requires larger control.

The BdP sees greater risk in the banking activity than other regulators in the EU. Its goal is not to be a regulatory pioneer of Europe, However it strives to keep up to date with regulation in other countries, making sure Portugal does not lag behind.

Changes to the regulatory environment include the innovation hub, planning of a sandbox and a general simplification of the language used, to ensure it is understandable by all entities.

Fintech vs Banks

Banks have, by default, a more direct channel to regulators than Fintechs.

One initiative that helps improve Fintech connection to regulators is the Portugal Finlab, an innovation hub already in place. Even though this hub is not exclusive to Fintechs, it helps them greatly to create a relationship and get guidance from regulators. In the context of the Finlab, the BdP, CMVM and ANS provide regulatory support and clearly explain the rules firms must follow in Portugal.

Additionally, the BdP also has frequent Fintech meetings, in which specific topics of interest are discussed.

Lastly, Fintech + is a permanent contact channel for the institution.

Portuguese Financial Market Overview

The Bank of Portugal has issued a report in 2019 in which they identified most Fintech firms in Portugal as being B2B. For that reason, and also due to the size of Fintech firms in Portugal, their relationship with banks is seen by the BdP more as one of partnership rather than competition.

The Bank of Portugal has, in general, a big concern with financial stability and controlling the risk of the banking activity. For this reason, it sometimes maintains a more strict interpretation of the law when compared to other EU regulators.

The Bank of Portugal had initially believed that Portuguese Fintechs could benefit more from regulatory guidance than from a sandbox. However, after a decree was issued establishing its legal base, a regulatory sandbox for start-ups in the financial sector is being planned. The regulators, including the BdP, are working with the governmental agency in its establishment.

The biggest issue to banks and to the central bank was identified as being the threat of Big Techs entering the banking system. These firms have well-known brands, a large client base and access to a lot of data. They may use this information to create new financial services, exclusive to them.

LIGHTSHIFT CAPITAL

Lightshift Capital's Managing Partner sheds light on the high amount of DeFi activity and wide adoption of technology and digital assets in Portugal. He considers regulation instrumental to increase confidence.



Expert
Interview

Company Overview:

Lightshift Capital is a blockchain focused fund which invests in digital assets. It takes a hands-on approach to directly contribute to the success of its key investments. It prides itself on activating the ecosystems that will shape the future of financial services.

Relevant Ideas

DeFi activity seems more prominent in Portugal than Spain, as there are a lot more founders in the country. In general, there is a bigger adoption of the Fintech industry, as Portuguese consumers are more open to new technologies (e.g. Revolut has more success in Portugal).

Portugal is also one of the main crypto hubs in the world - which immensely helps DeFi activity. There is a lot of digital asset activity in Lisbon, a city which has hosted the biggest hackathon in the world and has recently had the "blockchain week".

Due to the fact that cryptocurrencies in Portugal are only taxable if one does it as a professional trading activity, a lot of investors come to the country to cash out their tokens and end up investing in the region, which makes for an increasing amount of founders.

If crypto and DeFi activity continue to grow as they have, banks may struggle to survive in their current molds.



Simão Cruz

Managing Partner, Lightshift Capital

HOW DO YOU SEE THE FUND'S FUTURE?

Lightshift Capital wants to create a community that is able to create value (especially technological value). Its goal is to have a network that knows which projects should go forward and what it takes to make them succeed. Fundraising for the fund has been going very well.

HOW DO YOU SEE THE RELATIONSHIP BETWEEN DEFI AGENTS AND BANKS EVOLVING?

There can be some difficulty in understanding the use-cases and how to take advantage of this new technology. In reality, there are increasingly more assets moving to the digital space and banks should find a way to enter this world. Currently, banks are still a big entryway into crypto assets, as people still rely on bank accounts to store the money exchanged for cryptocurrencies.

HOW DO YOU THINK REGULATION OF THE DIGITAL SPACE WILL EVOLVE?

To be able to regulate a business, it is important to understand what its purpose will be. If the financial firms in DeFi will perform the same functions but simply be built on different technology (blockchain), the criteria applied should be similar to that of traditional institutions.

Regulation is key to increase the confidence in the digital space, of both big financial players and the general public. For the largest banks, it may be very rewarding to grow in this area, as the usage of blockchain and tokens allows them to provide better rates to their users.

BiG START VENTURES

BiG Start Ventures sees the global Fintech ecosystem growing quickly and Portugal doesn't lag behind, emerging as an innovation hub for the financial sector.

Expert Interview



Company Overview:

BiG Start Ventures is a Lisbon-based Venture Capital firm investing across all geographies. The fund is mainly focused on B2B Fintechs, Insurtechs, Regtechs and Cybersecurity companies raising rounds between pre-seed and series A stages.

Relevant Ideas

As many VC started investing in early-stage Fintechs from 5 to 8 years ago, a shift of their focus to larger Fintechs has been observed. Consequently, pre-seed B2B companies are currently having a harder time to capture investors' attention.

Firm cluster 1 companies have a high potential to adapt to a DeFi world, since it is easier to work with typical DeFi's technology, than it is to work with legacy technologies.

Furthermore, firm cluster 3 companies are acquiring regulators' and investors' attention, showing them innovation cannot be ignored. In fact, DeFi agents are an important "R&D Box" of the financial sector, which is a strength of the market.



João Freire de Andrade

Executive Director, BiG Start Ventures

HOW DO YOU SEE THE FUND'S FUTURE?

The global Fintech ecosystem is growing, not only in size and number of players, but also in the variety of technology's use-cases in the financial sector. More specifically, innovation is one of the characteristics of Portugal's Fintech industry. In fact, as the global and Portuguese ecosystems are developing, so is Big Start Ventures, as its portfolio is growing at a fast pace.

HOW DO YOU SEE THE RELATIONSHIP BETWEEN DEFI AGENTS AND BANKS EVOLVING?

Portuguese B2C Fintechs generally have a high customer acquisition cost, and will often face a large competition from banks, who have a stable and large customer-base. In line with this, BiG Start Ventures focuses only on B2B Fintechs, players which can better serve banks and other incumbent financial institutions, and leverage on their large customer-base to easily scale and grow.

HOW DO YOU THINK REGULATION OF THE DIGITAL SPACE WILL EVOLVE?

Initiatives, such as Portugal Finlab, show that regulators are more eager to listen to Fintechs and to let them grow and innovate within the financial sector. However, they still lack resources, which often delays processes – since time is a determinant factor of Fintechs success, this obstacle still has to be overcome, so that it doesn't impact negatively the ecosystem's growth.

Real Use-Cases

—

DRIVERS AND OUTCOMES OF INTERACTION

The interviews offered different perspectives and were followed by a study of past interactions between players. Partnerships are growing, mainly due to digitization, regulatory requirements and larger tech adoption.

Recent changes in the European regulatory requirements have shifted the way players in the banking industry operate and broadened the scope of products and services offered. Additionally, Covid-19 has accelerated digitization of operations and further increased adoption of Fintech offerings, which provided a great environment for partnerships to flourish.

Nevertheless, it is important to notice that players in the industry are very different in nature. Banks, for example, deal with strict regulation and some resistance to innovation. B2C Fintechs (often firm cluster 2) still have high client acquiring costs and have a harder time establishing themselves and assuring a consistent client base. On the other hand, firms operating in B2B (typically firm cluster 1) are considered extremely agile players with strong technological skills and not operating directly in regulated space. (Kroft 2021)

Partnership Drivers

FINTECHS

- Access to banks' established client base
- Ability to leverage the partnership to convey trust in the Fintech
- Access to large investment budgets
- Access to bank's know-how and industry experience

BANKS

- Ability to create a more seamless digital customer experience
- Ability to leverage the Fintechs' technological advancements into the product offering

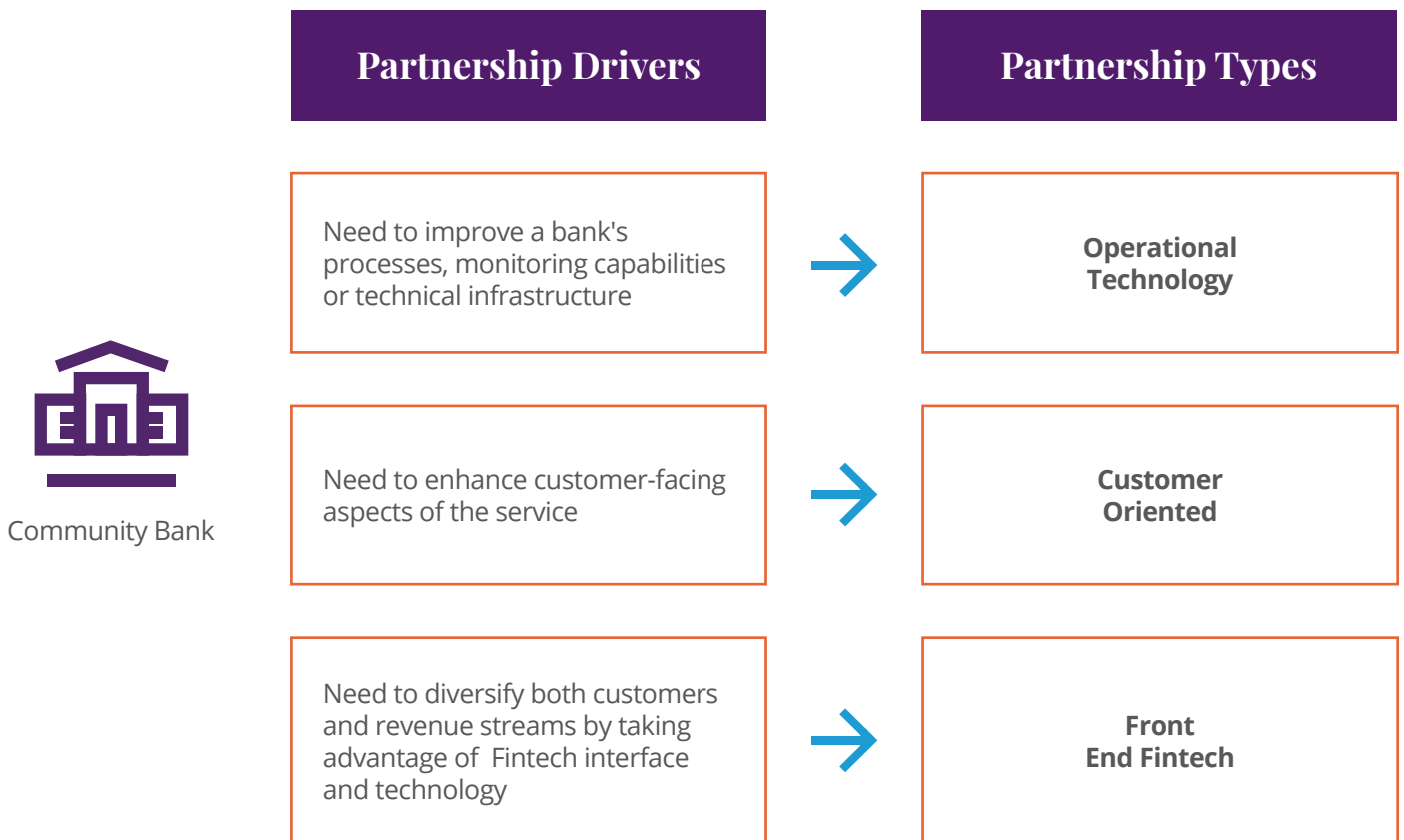
Partnerships adopt multiple formats and involve different levels of financial commitment. They often give origin to platform-based solutions, as banks are increasingly investing in innovative "ready-to-use" products in collaborations. These models have the benefit of allowing for a seamless experience for the customer, without the need for massive financial inputs.

- Integration of work cultures of Fintechs and banks, so that they can work towards the same goals and deploying the same mindset.
- Fintech's ability to deliver products that meet the compliance requirements demanded of banks.
- Fintech's ability to adapt to different launch timelines when it comes to new offerings.
- Bank's ability to conjugate the expense of maintaining their legacy systems with the expense of integrating new technologies quickly to the entire system to please customers. (Kroft 2021)



TYPES OF INTERACTION AS DEFINED BY THE FEDERAL RESERVE

Partnerships between banks and Fintechs differ in type according to the strategic need they are fulfilling. They can be focused on improving operational processes, customer experience or diversity of clients.



Community Banks are here defined as American Banks with less than \$10B in assets.



EACH PARTNERSHIP TYPE BETWEEN A COMMUNITY BANK AND A FINTECH TARGETS SPECIFIC NEEDS AND OBJECTIVES AND CONSIDERS THE RISK PROFILE OF THE BANK.

There are three general categories of partnerships (Board of Governors of The Federal Reserve System 2021):

- **Operational technology partnerships**, when a community Bank utilizes technology from a third-party to its own processes or infrastructure in order to enhance efficiency and effectiveness;
- **Customer-oriented partnerships**, when a Bank requests a third-party to enhance various customer-facing aspects of its business. It is important to note that the Bank continues to interact directly with its customers;
- **Front-end Fintech partnerships**, when a Bank's infrastructure is combined with technology developed by a Fintech, with both the Fintech and the Bank interacting directly with the end-customer in the delivery of products and services.

OPERATIONAL TECHNOLOGY

The operational partnerships identified in credit and digital onboarding helped banks improve their concretization rates, accelerate internal processes and ultimately improve customer experience.

Hapi and Credibom



Context

Digital transformation is a growing concern and in fact should be the topmost strategic priority for every organization nowadays. At the same time customers are more demanding than ever, also super informed, and thus more powerful than they used to.

Partnership Description

Embed the hAPI module in the conversion path to collect data and make data and documents available to credit analysts to accelerate credit decision and increase the online concretization rate.

Some Key Performance Indicators of this partnership are:

- Processes with hAPI submitted increased by 5.5x more than expected;
- The company exceeds expected number of processes by 27% on average every month;
- In the processes made through hAPI the concretization rate is 2 points higher than the rest of online requests. (Portugal Fintech 2021).

LAUNCH DATE: MARCH 2021

OPERATIONAL TECHNOLOGY

The operational partnerships identified in credit and digital onboarding helped banks improve their concretization rates, accelerate internal processes and ultimately improve customer experience.

Novobanco and Loqr

novobanco



loqr

Context

Novobanco's priority is creating a customer-centric banking culture. The bank's strategy is to reinvent and personalize the key customer journeys for customer excellence, transition to digital channels and automate processes for efficiency, and start exploring new business model opportunities with open banking and ecosystem players.

Partnership Description

Digital onboarding - LOQR and Novobanco have been working in a close partnership since 2020 to provide clients with a digital onboarding resorting to video call, OCR reading of documents and KYC validations. (Portugal Fintech 2021).

LAUNCH DATE: FEBRUARY 2021

OPERATIONAL TECHNOLOGY

Both ABN-AMRO and BBVA resorted to cloud-base solutions provided by Fintechs, in order to improve their internal processes, achieving significant results in the areas of internal developments and internal processes.

Abn Amro and Temenos Marketplace



ABN-AMRO



TEMENOS

Context

Temenos' MarketPlace sources business applications from partners, Fintechs and traditional financial services firms and provides aggregated self-service solutions over a platform, acting as integration facilitators between Banks and Fintechs. ABN AMRO International leverages Temenos' MarketPlace platform through APIs, interfaces and data services, thereby allowing it to quickly onboard FinTech partners.

Partnership Description

Temenos cloud-based platform enables ABN-AMRO to test and develop software in a secure environment, complete coding and bring new releases to market within 24 hours. The bank estimates the Temenos tools will help it to increase the efficiency of its early-stage testing by 30%, the number of daily test pipelines by 150% and test cycles by a factor of 100 - leading to more frequent and effective innovation. (Temenos AG 2019).

LAUNCH DATE: JUNE 2019

OPERATIONAL TECHNOLOGY

Both ABN-AMRO and BBVA resorted to cloud-base solutions provided by Fintechs, in order to improve their internal processes, achieving significant results in the areas of internal developments and internal processes.

BBVA and das-NANO



Context

Veridas, a leading international company in the field of digital identity verification, was created as a joint-venture between BBVA and the Navarran technology firm das-Nano with the goal of developing new, more secure and user-friendly customer identification and authentication systems.

Partnership Description

Veridas currently performs millions of cloud-based identity validation operations and has an internationally recognized technology. Leveraging on artificial intelligence, Veridas operates in three main areas: document verification, face biometrics and voice biometrics.

In 2020, the two founding partners, BBVA and das-Nano, injected four million euros into the company. This decision reinforced the support of both companies in Veridas as a business partner and confirms the confidence in the project as a result of its successful track record. (BBVA 2020).

LAUNCH DATE: JUNE 2017

CUSTOMER-ORIENTED PARTNERSHIP

The customer-oriented partnerships identified in the corporate area proved very successful. In both cases, banks provided services to their corporate clients targeting increased efficiency of their internal processes.

Millenium BCP and Cloudware



Context

The creation of a new company requires that entrepreneurs, in addition to connecting with customers, supplies and tax authorities, implies heavy reliance on accounting services as well as a bank account.

Partnership Description

The M Contabilidade surges as a partnership that connects directly the website of Millenium Empresas to the platform of accounting TOOnline. The company is now able to monitor the evolution of its income and expenses on the bank's website, to make the automatic payment of salaries, taxes and suppliers prepared by its accountant, besides ensuring timely access of its bank information to its accountant. (ECO 2021).

LAUNCH DATE: MARCH 2018

CUSTOMER-ORIENTED PARTNERSHIP

The customer-oriented partnerships identified in the corporate area proved very successful. In both cases, banks provided services to their corporate clients targeting increased efficiency of their internal processes.

CGD and Tink



Context

Caixa Geral de Depósitos (CGD) and Tink developed the first open banking solution in Portugal. With this partnership, Caixa joined Tink's wide range of partners such as PayPal, NatWest and ABN AMRO, among others, some of which are its direct investors.

Partnership Description

CGD launched DABOX, a personal finance management (PFM) app that gives millions of Portuguese consumers insights and tools to improve their finances. DABOX allows its users to categorize spendings, set saving objectives, manage budgets and receive insights and tips. It's the first solution in the market to allow money transfers from any bank. The key performance Indicators of this partnership regarding the first year of operation are the following (Portugal Fintech 2021):

- + 96,000 downloads;
- 32.5% of the clients were not from CGD;
- 4.4 score on Google Play Store;
- 60% of the open banking share.

LAUNCH DATE: SEPTEMBER 2019

CUSTOMER-ORIENTED PARTNERSHIP

Santander and J.P.Morgan have partnered with Fintechs to increase their offer to SB companies. These Banks were able to outsource services they were struggling with, achieving high benefits for their customers.

J.P.Morgan Chase and Ondeck Capital

J.P.Morgan



ondeck

Context

JPMorgan had traditionally struggled to achieve profitability targets due to underwriting costs on smaller denomination loans. OnDeck Capital is a Fintech focused on small-business lending, with streamlined customer onboarding and loan underwriting capabilities. In 2016, JPMorgan's CEO stated the partnership with OnDeck Capital would allow them to do "what we don't want to do or cannot do".

Partnership Description

The partnership lasted three years until JPMorgan ended it, in order to start offering online loans to small businesses all on its own. In 2019, the bank stated: "It has been a great collaboration with OnDeck. They helped us create and launch an online loan application process that gave business owners faster decisions and easier access to credit, something we will continue to do on our own platform." (OnDeck 2015)

LAUNCH DATE: APRIL 2016

LAUNCH DATE: JULY 2019

CUSTOMER-ORIENTED PARTNERSHIP

Santander and J.P.Morgan have partnered with Fintechs to increase their offer to SB companies. These banks were able to outsource services they were struggling with, achieving high benefits for their customers.

Santander UK and Kabbage



Context

Banco Santander UK partnered with North-American Kabbage to offer working capital loans to UK small businesses through the online lender's platform.

Partnership Description

Sigga Sigurdardottir, Santander UK's Chief Customer & Innovation Officer, stated the partnership allowed them to "offer a powerful selling proposition to our customers networking capital needs, since the strengths of the Kabbage platform, in terms of real-time risk modeling and extensive capabilities to cross reference data against multiple sources, combine perfectly with our customer base, trusted reputation, UK payments infrastructure and understanding of the requirements of UK businesses". (Penn 2016)

LAUNCH DATE: APRIL 2016

FRONT-END FINTECH

Activo and Best Banks' front-end partnerships show how Banks and firm cluster 2 players (in this case B2C competitors) can cooperate and deliver innovative and interesting solutions to the final client.

Activo Bank and Transferwise



Context

ActivoBank represents the shift made by Millennium bcp to digital banking. Activo has been growing significantly in terms of customers, business and profitability. The partnership with Wise represents an effort from the bank to increase its foreign customer base by offering more competitive conditions than the other Portuguese banks.

Partnership Description

Possibility of sending money abroad with the real exchange rate directly from ActivoBank App through an API that enables users to enjoy from Wise service. Some Key Performance Indicators of this partnership are:

- Speed - international transfers with Wise are increasingly fast, some of them reaching their destinations within seconds;
- Level of transparency - consumers get the real exchange rate using Wise and fees are given upfront (excluding hidden costs);
- Process simplicity – to access the service, costumers just need to access the ActivoBank account. (ActivoBank 2021).

LAUNCH DATE: FEBRUARY 2020

FRONT-END FINTECH

Activo and Best Banks' front-end partnerships show how banks and firm cluster 2 players (in this case B2C competitors) can cooperate and deliver innovative and interesting solutions to the final client.

Best Bank and Raize

RAIZE



Best^{Bank}

Context

Alternative lending is becoming an increasingly attractive option to consider in any asset allocation strategy – competing head-on with low interest bonds and highly valued equity prices. This is true for retail and institutional investors.

By investing in SME loans, investors can create a steady stream of income for themselves, with low volatility and historical annual returns above 6%.

Partnership Description

Banco Best clients now can open a Raize account instantly via their Home Banking and with no additional bureaucratic or account opening steps. This means an integrated UX that ensures familiarity, agility and simplicity throughout the process. Investors can top-up their accounts, withdraw money and check their financial position at any given point in time. Investments are made through Raize's allocation algorithm ("Tracker"). Tracker allows investors to invest continuously and in a diversified way, leveraging the know-how and expertise of an experienced risk and origination team. (Portugal Fintech 2021).

LAUNCH DATE: JUNE 2021

FRONT-END FINTECH

Banks partnered with Fintechs by directly integrating their services into their own. ING improved their wealth management services through scalable solutions, and Rabobank their business services through Signicat.

Rabobank and Signicat

Rabobank



Signicat

Context

In 2017, Rabobank saw it was starting to lose significant market share to Fintechs, challenger banks and big tech, mainly due to increased demand of “commodification” and “disintermediation”. Effectively, in the age of password fatigue and hackers, clients needed a way to build mutual digital trust.

Partnership Description

Rabobank and Signicat entered the Dutch identity market together by providing digital and compliance services to businesses, helping them onboard customers more easily and digitize operations, invoicing and supply chains. This was done through online login, identity, signature and archiving solutions.

Some Key Performance Indicators of this partnership are:

- A declared better consumer experience (Rabobank 2017);
- 58% saving costs per transaction and €502,848 saved since launch;
- Several awards: Celent Model Bank 2019 Award For Identity Management; Bobsguide’s Best Retail Banking System Integration Award; Aite Impact 2018 Innovation Awards for Digital Channel Capabilities.

LAUNCH DATE: MAY 2017

FRONT-END FINTECH

Banks partnered with Fintechs by directly integrating their services into their own. ING improved their wealth management services through scalable solutions, and Rabobank their business services through Signicat.

ING and Scalable Capital



Context

The partnership between the online wealth manager Scalable Capital, a leading German robo-advisor Fintech, and ING Bank, began to offer the latter's retail customers in Germany a fully-digital investment solution. The FinTech solution is offered directly on the investment platform of the bank, and leverages data analytics and artificial intelligence to enable unprecedented levels of personalization for financial consumers.

Partnership Description

From September 2017 to December 2017, 7,000 ING-Direct customers invested over €150M in Scalable Capital. According to the bank, Scalable Capital's ready-to-use solution helped to reduce its go-to-market time within the digital wealth management sector. Based on the success in Germany, ING and Scalable Capital are now expanding their online portfolio-monitoring service to other geographies. (ING Group 2017).

LAUNCH DATE: SEPTEMBER 2017

Conclusions for the future

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CONCLUSIONS ON THE FUTURE OF THE FINANCIAL SECTOR

It was concluded that firm cluster 1 Fintechs benefit from the digital shift banks are undertaking. These Fintechs are extremely valuable as they can help banks innovate with their technological savviness and specialized offering.

1st Bucket

Opportunities for firm cluster 1 Fintechs



There is an increased trend for partnerships with Fintechs coming from banks' strategic plans. This represents an opportunity for these type of Fintechs to reach larger customer bases. (Interviews + Slide 46)



Firm cluster 1 Fintechs have the agility and adaptation skills required to deploy tailor-made solutions for its customers, which is an opportunity to partner with banks, or other agents working in fields such as DeFi, who often ask for specific solutions. (Interviews + Slide 46)



Firm cluster 1 solutions have the ability to specialize and focus all resources on specific nodes of the value chain. This represents an opportunity for them to present the most competitive solutions of the market. (Interviews)



Banks' technological blueprint is complex and maintains several challenging legacy systems. The incumbents are realizing it and are starting to look for outsourced solutions. B2B Fintechs have here an opportunity to offer them innovative and cutting-edge solutions. (Slide 46)

1st Bucket

Risks for firm cluster 1 Fintechs



Most of these Fintechs still have a small team and do not own many resources. There is the risk of facing difficulties to scale, as banks may require infrastructures these Fintechs cannot provide, due to the lack of facilities. (Caicedo 2019)



Many players within firm cluster 1 offer Software-as-a-Service, SaaS, solutions to their customers, which run on cloud infrastructures, such as Microsoft Azure and Amazon Web Services. There is the risk that these infrastructures fail (due to glitches or hacking attacks). If it happens, all the Fintechs solutions will also fail. (Milmo 2021)

Thesis

Firm cluster 1 firms represent most of the Fintech players in Iberia. In order to maintain this position, a proactive approach to establish partnerships with banks is crucial. Firm cluster 1 firms may also continue their fast rhythm in technological innovation and their specialized offerings, as those represent their main competitive advantage within the financial sector.

These firms must also be adaptable to the different technologies used by the different institutions they may serve, (for instance, firms which provide onboarding services for CeFi companies, may also be able to offer the same service, which implies a different technology, to DeFi agents).

CONCLUSIONS ON THE FUTURE OF THE FINANCIAL SECTOR

Firm cluster 2 has flexible, highly technological infrastructure and ability to adapt to client preferences. It also often faces less strict regulation. However, it struggles to monetize users and provide personal attention.

2nd Bucket

Opportunities for firm cluster 2 Fintechs

- Fintechs in this firm cluster make seamless user experience a pivotal part of its offering. This represents a strong opportunity to stand out in the current environment, where users' expectations have changed: convenient products and "easy-to-use" are a priority. (Slide 12 & 46)
- There is easiness in rapidly changing business models / products to better fit customers' needs due to the technological nature of these firms. This is important as preferences change rapidly. (Interviews)
- Users are starting to recognize Fintech brands and having greater trust in them. (Moden et al. 2021)
- European passport allows companies to be headquartered in E.U. members that are most lenient in regulatory terms. (Interviews)
- Covid brought increased demand for digital banking solutions, in which these firms excel. (Slide 12 & 46)

2nd Bucket

Risks for firm cluster 2 Fintechs



Customer service is generally weaker in Fintechs, when considering human contact. As they grow larger and strive to become the main medium for its users, they will be expected to provide more personal attention which they may struggle to deliver. (Interviews)



There may be some difficulty in adapting to regulation applied to banks, which is very strict and demanding in its requirements. (Interviews)



Firm cluster 2 Fintechs find it difficult to monetize young users, which generally expect zero-costs in having a banking account or investing. (Slide 46)



Technological solutions take time and have large development costs. The issue for Fintechs is that this is a fast-moving industry in which preferred products rapidly change and become obsolete. (Interviews)

Thesis

Firm cluster 2 firms have become increasingly important and represent one of the biggest threats to banks, as mentioned in the interviews. Most of them operate strictly digitally and are in the process of becoming fully-licensed banks. Some issues with these firms include difficulty to adapt to strict and

complicated banking regulation; the long road to achieve monetization of their users and the need to overcome the lack of personal contact. As such, these firms may either upgrade their offering to tackle the problems at hand or may struggle to compete with increasingly digital traditional banks.

CONCLUSIONS ON THE FUTURE OF THE FINANCIAL SECTOR

Firm cluster 3 Fintechs operate in an increasingly popular space which may bring many improvements to financial services provision. Nevertheless, there is still a lot of uncertainty and distrust surrounding DeFi.



Opportunities for firm cluster 3 Fintechs

- Increased growth in crypto utilization will most likely lead to the increase of worldwide DeFi activity. (Interviews + Slide 24 & 25 & 26)
- An increasing number of tokens and blockchain-based products are in circulation, which ultimately leads to improved features. (Gogel 2021)
- There is a large social movement that fosters the belief in a world where big financial institutions hold less power. (Smith 2021)
- The use of blockchain leads to better rates for customers, which helps generate interest in the digital space. (Interviews)
- Potential for reduced fraud may lead to increases revenues. (Interviews)
- Incoming regulation may favor and incorporate blockchain into public platforms, in order to foster transparency. This may mean a general increase in the use of technology. (Interviews)

3rd Bucket

Risks for firm cluster 3 Fintechs



Concrete case of Portugal: there is currently a great advantage in capital tax policy regarding crypto. Incoming regulation may make it mandatory to tax gains from trading crypto assets, which would mean the country lost its privileged position in the space. (Interviews)



Incoming regulation may restrict distributed ledger activity due to high energy usage and environmental concerns. (Bateman 2021)



There is still a big lack of trust and understanding of crypto assets by many customers, which difficults adoption of Decentralized Finance. (Interviews)



Cryptocurrencies make for a highly volatile market, which may not be advisable when applied to the entire financial industry.



Bitcoin network has gotten slower with utilization, which may be an issue if all activity is conducted in one network. (Prasad 2021)

Thesis

According to Chainalysis, global adoption of crypto currencies grew over 800% since 2020. The current distrust still affecting the area is a result of the lack of regulation and its volatile nature. Apart from these issues, the threat of Central Bank Digital Currencies is significant, as they may become reliable substitutes to existent cryptocurrencies.

However, as regulation emerges there is an opportunity for the space to be legitimized and become the main environment for financial transactions. This can only happen if regulation is not too restrictive of the activity.

CONCLUSIONS ON THE FUTURE OF THE FINANCIAL SECTOR

Firm cluster 3 Fintechs operate in an increasingly popular space which may bring many improvements to financial services provision. Nevertheless, there is still a lot of uncertainty and distrust surrounding DeFi.

Commercial Banks

Opportunities for Commercial Banks



More structured regulation for Fintechs will benefit banks. These agents are more used to handling compliance/regulation requirements and have a long-standing relationship with regulators. (Interviews)



Consumers trust banks and have long standing relationships with them, which will benefit them facing the newcomers. (Moden et al. 2021)



Consumer shift to digital will require high amounts of money. Banks are expected to have more access to funds than newcomers, to invest in transformation. The newcomers will probably depend on raising rounds of private money. (Interviews)



Risks for Commercial Banks

- Complex technological blueprints and legacy systems will difficult the process of adaptation to the shift of consumer preferences. (Slide 46)
- Retailers and other non-financial institutions embedding finance in their activities (e.g., entering in the Buy Now Pay Later business). (Interviews)
- Competition coming from banks operating in Portugal under licences of less regulated countries. (Interviews)
- B2C Fintechs becoming fully licensed banks, protected by DGS. (Interviews)
- Potential release of regulation for crypto, which can make this agents more trustworthy since they will be under BdP (Banco de Portugal) supervision. (Interviews)
- Banks' may need to adapt their strategy for attracting and retaining talent, due to a decrease in the perceived upsides of a career in banking when compared with other industries. (Arellano et al. 2018)

Thesis

In order to maintain its position in the financial sector, it is crucial for banks to develop their digital presence - since customers' expectations demand so. Furthermore, banks may also find difficulties in talent acquisition, as Fintechs typically offer more competitive work environments.

Hence, banks may further digitize themselves through partnerships or in-house solutions, or they may struggle to attract the new generation of tech-savvy customers. Other issues that may require a change of approach include the threat of the Decentralized Finance movement and the embedded finance trend.

CONCLUSIONS ON THE FUTURE OF THE FINANCIAL SECTOR

Most Relevant Conclusions

The Fintech Market is planned to grow at a CAGR of 9.2% from 2019 to 2023 globally.

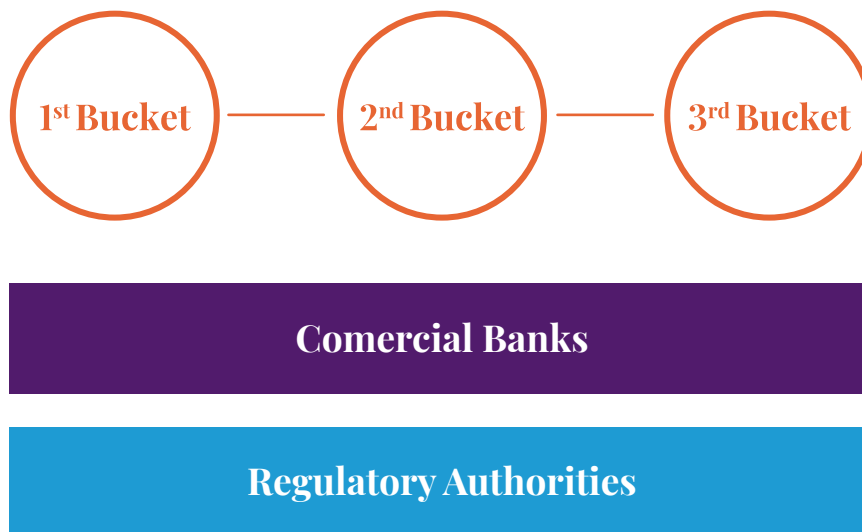
The biggest vertical in number of Fintechs (in Iberia) is Capital Markets & Wealth Management. After dividing Fintechs in accordance with the relationship kept with Banks, it was concluded that the most represented firm cluster in the region is 1, in terms of market sizing and revenue amount.

A very large growth can be observed in the DeFi space. Due to a tech-friendly environment and inviting tax laws, Portugal has become a crypto-hub.

The European central entities have developed regulations that ultimately favor the emergence and development of Fintechs. PSD2, the Payments Directive in effect, establishes Strong Customer Authentication and Open Banking. These features encourage the appearance of Fintechs who can help banks adapt and also of those who can make use of the shared client data.

Several European national governments have further fostered technology-driven change by allowing for less strict rules to be applied to innovative firms as they enter the market.





There are various types of partnerships between banks and Fintechs, depending on the Bank's strategic needs. These projects occur across the world.

Most relevant interview conclusions per player

FIRM CLUSTER 1

The firm cluster will highly benefit from initiatives like Open Banking and Open data. Most players seek to internationalize, adapting their offering as required to do so. They are specialists in the area in which they operate.

FIRM CLUSTER 2

These players are agile and work with new infrastructure. There is also a large collaborative culture amongst Fintechs. It is likely that firms with the better customer experience will do better.

FIRM CLUSTER 3

The main challenges are the compliance requirements, general crypto distrust and high competition for talent. Regulating the space can help give trust.

BANKS

Embedded Finance is considered a big threat. Digitalization either through in house developing or partnerships with B2C / B2B Fintechs is considered key for success. Some banks identified a regulatory disadvantage in being Portuguese.

REGULATORS

Changes have been implemented to make requirements easier to follow for Fintechs and to foster innovation. Historically, Portuguese regulators apply a strict interpretation of the law.

DIFFERENT PREDICTED SCENARIOS ON THE FUTURE OF THE FINANCIAL SECTOR

The future scenarios described were considered the most likely: 1) Banks become indistinguishable from firm cluster 2 Fintechs; 2) Banks continue on with some digital adaption or 3) They serve as part of the DeFi system.

Scenario 1

- Banks and firm cluster 2 Fintechs become indistinguishable, both adapting considerably to each other, creating a hybrid between the current models. Firm cluster 2 firms leverage facing less strict regulation in other E.U. states to improve their personal attention to clients. Banks leverage their reputation to bring customers along their digital transformation.
- Firm cluster 1 firms service both banks and firm cluster 2 Fintechs.
- Firm cluster 3 remains not as significant as CBs and regulators are able to import DeFi characteristics to CeFi (CBDC in payments, blockchain in financial markets).

Scenario 2

- Banks adapt to technology to a certain degree, in order to meet customers' expectations.
- Firm cluster 2 Fintechs are unable to adapt to the heavy banking regulation in Europe, to the increased digital competition from banks and to customers' expectations of zero costs.
- Firm cluster 1 continues to service banks.
- Firm cluster 3 Fintechs remain not as significant (for the same reasons stated in Scenario 1).

Scenario 3

- Firm cluster 3 takes off – DeFi becomes the reality of the financial sector.
- Regulation is favorable to DeFi activity and legitimizes the space.
- Firm cluster 1 adapts to service DeFi entities.
- Banks, due to the long-lasting relationship of trust they keep with customers, serve as infrastructure providers and gateways into the crypto world.
- Firm cluster 2 Fintechs become irrelevant, as they lack the strong trust component present in banks and thus have no purpose in this reality.

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