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# CHALLENGES AND OPPORTUNITIES OF IMPLEMENTING A MOBILE BANK IN PORTUGAL BY ALTICE GROUP

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## Abstract

**Keywords:** Mobile Banking, Banking Industry, Altice Group, Portugal

This research intends to provide a deeper overview of the market challenges and opportunities of establishing a mobile bank in Portugal by Altice Group, through the investigation of the main forces that are disrupting the industry, combining with a market research through an online questionnaire that adds evidence in those findings and provides deeper view of the Portuguese market. With this research the company is able to understand how it can add value to the industry and which future business model is proposed.

## Industry and Market Analysis

### Introduction to Mobile Banking

In 1983 with Bank of Scotland's "Homelink" service the concept of internet banking or online banking was born, where customers connected via a television set and a telephone to transfer money from their accounts without going to a bank (Feder 1984). In the mid-1990's the conception evolved with the implementation of the first interactive banking website from the Stanford Credit Union combined with the appearance of automated teller machines – ATM – which transformed radically the bank's distribution channels and altered the way transactions were made. (Qureshi, Zafar and Khan 2008). In 1999, with the appearance of the first smartphones using Wireless Application Protocol – WAP – Merita Nordbanken together with Nokia launched the first mobile bank using this technology combined with SMS to offer a service that give the ability to users to manage their account, pay bills and transfer money using only their mobile phones (Merita Nordbanken Group 1999).

As smartphones started to emerge and more people had access to this device, possibilities increased. With its technological development especially with the launch of the iPhone by Apple, new services and products were born through mobile applications, adding on its capability to interconnect people and other devices. This revolution gave industries a new channel to reach their customers. Mobile wallets are an effect of this phenomenon, following the demonetization trend that was started with payments through debit/credit cards. The main difference is that smartphones concentrate today everybody's attention as it is able to provide a wide range of services in a fast and convenient way to their users, all combined in one device (Knowledge@Wharton 2013).

According to the study of Visa Europe (2016), more than half of Europeans use mobile banking in all group ages, and especially mobile payments tripled since 2015 from 18% to 54%. Nevertheless,

the adoption of mobile banking has been slower than expected, with many studies being conducted to address this issue, using the technology acceptance model (TAM) to better understand these barriers. Koenig-Lewis, Palmer and Moll (2010), found that perceived risk in transactions security and privacy is one of the most important variables that influence the behavioural intention to use the service. Oliveira *et al.* (2014) find that as mobile banking enters the market, some consumers are not fully aware of the service's potential and fit with their current needs. Therefore, a successful penetration in this market is more related to a historical recognition of trust by the consumer, than the number of characteristics provided. Knipp (2009) reports that when it comes to risk perception and trust in the financial industry, one of the most important assets is brand and its reputation. To target one of the main reasons for slow adoption by users of this new service, banks must build a brand equity that differentiates from competitors. Loureiro (2013) states that for internet banking there is a positive correlation between brand equity and brand loyalty. Trust in the service by users will widely vary according to these variables. Banks must have a clear and transparent communication about their policies to increase perceived security of mobile banking (Cheng, Lee and Lee 2013).

## Mobile Banking Scope

Mobile banking is defined as a banking and financial service that is delivered through mobile devices (George 2016). However, it is fundamentally important to understand what services are more interesting to incorporate in those devices, from a commercial point of view. According to Tiwari and Buse (2007) the scope of activities of mobile banking can be constrained to: Mobile Accounting, Mobile Brokerage and Mobile Financial Information. The first one is referred to money management and transfer between accounts or sub-accounts, including contracting loans, subscribing financial products or insurance policies. Mobile Brokerage covers the purchase and

sale of financial instruments like securities, directly with the market. Mobile Financial Information is a transversal activity that enables customers to see all the information of their accounts and have access to market information, where we can also integrate the general management of the account.

## Mobile Banking Players

Mobile Banking market has a huge penetration in developing countries because the lack of financial institutions in these zones is complemented with a sufficient internet penetration. This enables telecom companies that own the connectivity infrastructures to offer competitive solutions to their customers (Arthur D. Little 2015). In developed countries, where banking penetration is bigger, mobile banking services have been implemented by players from different backgrounds and industries (Knowledge@Wharton 2013).

With a long record of an established market in financial services, new entrants in countries like Portugal created a segmentation on provided solutions through the online world. Today fintechs and other players are challenging banking business models, taking advantage of new technologies and the changing regulatory environment, to provide more accessible ways to transact and contract financial services (Robinson 2016).

Based on Tiwari and Buse (2007) and Arthur D. Little (2015) segmentation of mobile banking scope and the current and new offerings in the market by digital players, the following table gives a map preview of the different positions of each player:

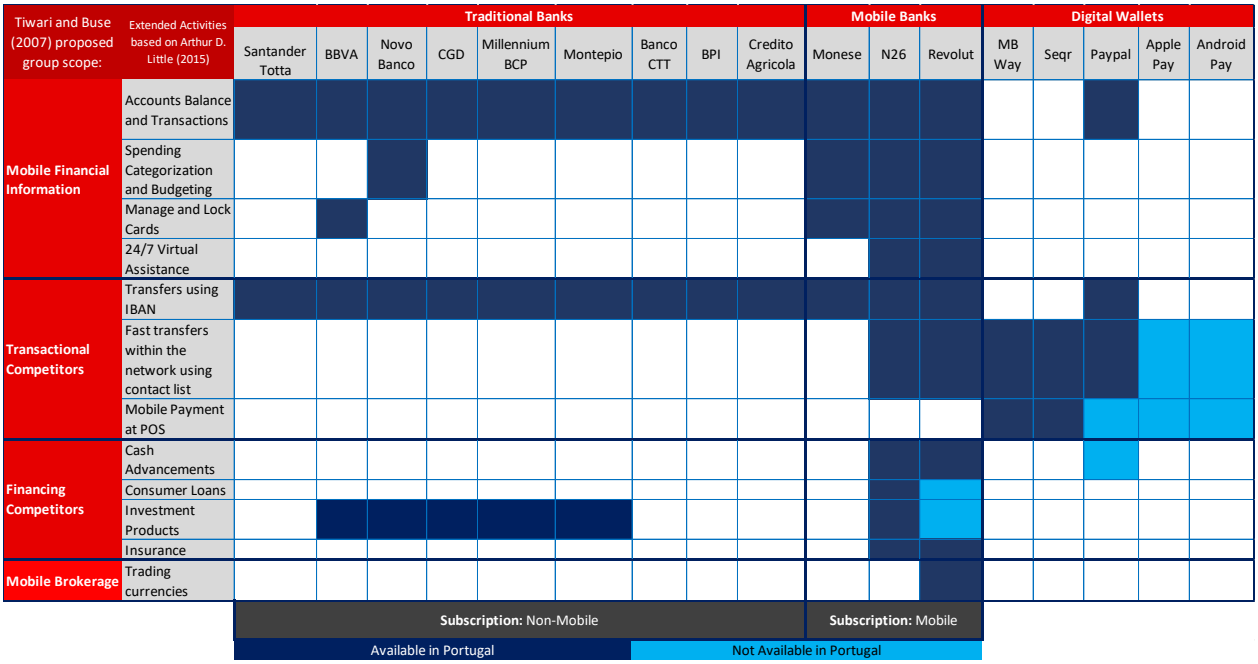


**Table 1 – Map of the offerings/services of the different players in Mobile Banking in Portugal**

## Traditional Banks

Traditional banks using the established branch business model, see the mobile channel as another way to communicate to consumers. Applications currently developed by this segment, only enable consumers to access and transfer money between their own account's, conduct bill payments and transfers without going to a bank branch or an ATM. Opening an account and the subscription of services are still held in a physical infrastructure, where the contact with client happens. But as more and more individuals start to replace their interactions with banking services through mobile devices, branches become heavier burdens for banks, not being able to maintain customer relationships. As the interactions shift towards a more digital connection, digital entrants became a major threat to those relations because this is their only point of contact with the clients. As such, they focus on designing better interfaces winning customer's loyalty and ultimately increase their revenue (Capgemini 2017). Since the appearance of new channels and ways to connect with customers – ATM, telephone banking or online banking – customers have widely adopted this new ways of accessing banking without having to go directly to a branch, and according to the study of

Lang and Colgate (2003) banks that weren't able to offer this new platforms to their clients, have higher levels of dissatisfaction. Moreover, in the Portuguese context, Proença and Rodrigues (2011) proven that the users of self-service technologies are able to drive more sales and be more loyal to their banks.

The future of banking branches is still unknown, but the consulting firm "A.T. Kearney" found that the reductions of fixed costs by traditional banks, mainly in human resources and branches do not bring higher cost efficiency, especially in a country like Portugal where even with the rationalization of these assets, traditional banks increased significantly the cost-to-income by 32% during 2009 and 2014. This clearly highlights a problem in the business and operating model itself and requires a deeper restructure in order to compete with these new challengers (Pratz et al. 2015). An analysis by "McKinsey & Company" on the potentials and threats for traditional banks shows that the impact of embracing new digital business models on net profit surpasses the current situation, where the reduction of operational costs is not enough but also collecting revenue from new products that use digital capabilities and the power of data to cross-sell (Broeders and Khanna 2015).

**Mobile-Only Banks**

These new digital entrants play a deeper role in mobile banking, as this is the main channel of acquisition and communication with customers. Having no branches, these services are all operated through online platforms, where you can immediately create an account and use it to manage and transfer money. This represents an advantage in terms of customer acquisition because users can become clients effortlessly (Dietz, Härle and Khanna 2016). They are able to penetrate in the market by entering in a specific segment of the banking value chain – normally payments – and then widen their scope, offering better customer experiences as a competitive advantage to

traditional banks (BBVA 2016). This agility allows them to rapidly expand throughout the different geographies, and increase their customer base.

According to Williams-Grut (2017) most of these fintechs possess disruptive business models that are not yet profitable. Even though these startups reduce heavily their costs burden to offer their services with lower prices, variable costs like ATM withdraws, card top-ups and the usage of payment cards are challenging their revenue streams. In 2016, Number 26 had to close a part of its customers' accounts that withdraw cash in average more than 15 times per month. Many of these fintech startups have a small percentage of loans and investment products in their balance sheets, either because they are recent players in the market or it is not their strategy at all. The new digital companies focus entirely their strategies on growth before adjusting their profit margins, mainly because nowadays the cost of capital is low and the future return-on-equity exceeds this value (Mankins 2017).

According to Telstra Corporation Ltd. (2016) and BBVA (2016) we can distinguish two different models that mobile-only banks use two operate. On one hand, we have "neo banks" that do not hold a banking license and rely on a traditional bank to process their transactions. They develop exclusive partnerships to widen their scope of activities and added value, focusing on building a mobile-first banking experience that aggregates this services. On the other hand, we have digital challenger banks that possess a banking license and look in the future to produce financial products and do more processing in-house, but with lower costs and fully mobile-centric.

The current mobile-only banks that operate in Portugal are:

***Monese***

Monese is a neo bank based in the United Kingdom that operates also in all Eurozone countries having the ability to provide accounts in these two currencies – pounds and euros. Like any other

mobile-only bank, it does not possess a physical branch, but instead partners with local post offices or pay points - UK only - for deposits, charging a fee for the service. In Portugal to add money to the account, users must possess another bank account to transfer funds. Monese's concept came from the difficulty of immigrants and expats to open a bank account in the UK, because of their lack of credit history or utility bills, being this the company's market target. Therefore, nowadays 85% of their clients are immigrants and 15% don't have any bank account (Harris 2017).

***Number26 (N26)***

Number26 is based in Germany and it is a licensed bank that provides small credit options and insurance, plus investment financial products and savings accounts and currently operates in all Eurozone countries. To open and manage their account, N26 extends its service to online banking enabling users to open an account also using their computers. The company is growing 124% year on year across Europe, reaching now more than 500.000 customers.

***Revolut***

Revolut is a neo bank based in the United Kingdom that operates in all European Union countries plus Switzerland. It is the fastest service to open an account - without an IBAN - because you don't need to verify your identity until you reach €250 in a year. The company's key differentiator is the ability to have a multicurrency account - available in 120 currencies - at the real interbank rate and no fees. The company reached already more than 900.000 customers and 16.000 business customers after 4 months of launching the new B2B product (Williams-Grut 2017). According to Kharpal (2017) the CEO intends to build a platform that allows brands to directly advertise and offer special promotions to Revolut's clients, besides the interest on offering credit and further insurance.

**Digital Wallets**

According to Gulatii, Nadeau and Rajgopal (2015) a digital wallet is a software that enables the storage of money, payment credentials or other cards that can be normally found in a physical wallet such as loyalty cards, coupons or even tickets, providing this way the digitalization of transactions. The McKinsey's Annual Mobile Consumer Panel finds that the major added value for customers of these services is convenience but in developed countries where the presence of debit and credit cards is high, the payment service provided by these wallets only adds a marginal difference to frictionless transactions, and therefore they must widen the scope of capabilities. Denecker, Gulati and Niederkorn (2014) show on average users interact with their banks for payment purposes at least two times per day, which represents more than 80 percent of the overall interactions. As such digital wallets see this segment as a great way to win customer's loyalty, taking advantage of implemented infrastructures and later upgrade their offers.

PayPal is a great example of this market movement, as it started as an online payment system that enables transfers between account holders of the service. It is mainly directed to online money transfers but it also offers solutions for offline points of sale, working as a payment processor for merchants and also as peer-to-peer money allocations for individuals. Later on, in some countries PayPal already offers consumer credit for personal accounts, widening their scope of banking activities (Ley and Doyle 2017). In Europe, the company holds a banking license since 2007 and has the legal capacity to compete further in the banking industry (Holahan 2007).

A major player in Portugal that recently implemented a digital wallet is SIBS with its mobile application MB Way. It partners with all banks operating in Portugal as they were able to increase their scope by partnering with the service that offers a mobile payment solution. Customers can use their bank accounts to sign up for the service and use their smartphones as a substitution for

their debit/credit cards. They can pay in associated retails using only their mobile phone, with Near-Field Communication technology or a generated barcode and make instantaneous peer-to-peer transfers to individuals that also use MB Way – regardless of their bank. The service is connected to SIBS' network of ATMs permitting users to withdraw cash using only the mobile app. Another mobile wallet service present in Portugal is the Swedish company Seqr which works with the same technologies as MB Way in mobile payments and bets in a cash-back model to differentiate from the market.

Not yet present in Portugal are Apple and Google that together own 99.8% of the "global mobile operating system share in sales to end users" (Statistica 2017). Both of them are entering the payment services market with very similar services by launching in some European countries their digital wallets.

**Understanding the new business models**

With the exponential growth of accessibility in services across industries provided by the new digital era, customers are looking for traditional banks to improve the user experience while exploring the mobile channel, being easily accessible and meeting the client's needs (Burke 2017). But as we have seen before, banks are struggling to reduce their cost burdens and invest in innovation for their business models. Meanwhile, the new digital entrants do not hold any legacy in the cost structure and IT systems, and so they allocate all of their attention into providing the best user experience while penetrating in the market through low pricing strategies that enable any customer to open in a frictionless manner an account for free. Nevertheless, they are still trying to figure their business model while investing their capital in growing their customer base.

### *Open Banking*


**Figure 1 - Banking Value Chain (Kobler, Bucherer and Schlotmann 2016)**

The World Retail Banking Report of 2017 shows that with the introduction of the Payment Services Directive 2 (PSD 2), new business models arise with open banking that enables the separation of the different parts of the banking value chain, breaking the ownership of customers through various players depending on their position on the chain. This separation will create issues in the future for players that do not place themselves in the frontline of the customer relationship, which is still currently one of the best assets of traditional banks (Capgemini 2017). According to Kobler, Bucherer and Schlotmann (2016) the value chain can be divided into 5 segments [Figure 1]. As previously analyzed, neo banks penetrate the market through client accessing and financial advisory trying to gain the clients relationships and provided better experiences while leveraged in third-parties products. Digital challenger banks hold a banking license to further look towards producing some of the distributed products.

As Robinson and Galbraith (2016) state in their analysis to the digital era of business models, the emergence of asset-light players in different industries disrupted the markets, but the main reason behind this success was a new way of contacting with the customer and offer a differentiated experience. Amazon, Twitter, Facebook, Uber or Airbnb became major companies without owning what they were selling, but rather being efficient and customer-centric distributors. In the same perspective, fintechs are appearing today in the banking industry taking advantage of the new regulatory environment to establish themselves as distributors of financial services - without owning them for now - but in its essence using digital channels to provide better experiences that are centralized with current needs of time and convenience. Mobile-only banks are positioning themselves into the highest ROE segments of the value chain, where according to Dietz, Härle and

Khanna (2016) average a 22% compared to 6% of pure balance-sheet provisioning. Like shown in the Temenos' report, companies like Amazon, Facebook or Netflix after disrupting their industries and facing competition to catch their high initial margins, they tend to grow in deeper in the chain investing on assets to catch more value, thus no longer being in an asset-light model (Robinson and Galbraith 2016). Lichtfous et al. (2017) see large traditional banks in this model as "balance-sheet providers" that have the capacity to lend huge amounts of capital but do not have the capacity to invest in the front-end of services and thus partnering with new fintechs that can more easily add-value on this segment.

***Data Monetization***

Mobile-only banks act as advisers for customers, being able to be accessible at any time through a digital channel. Every time its service leads to the subscription of a financial product, the company takes a small fee. As Robinson (2016) states "the challenge to operating in such a model was not technology" as the mobile channel already existed for banks. The main difference in today's macro environment is the change in regulation and more specifically the PSD 2. With the capability of accessing the transactional data of third-party banks, mobile-only banks can not only help customers find the best products but also understand their transaction profile and provide high-value insights. The power of data generated by users on their day-to-day transactions holds on the ability of front-end users to develop truly personalized services and cross-sell products while taking commissions and increasing revenue to third-parties (Garg et al. 2017).

## Mobile Banking and Telecom

As introduced before, telecom companies are already present in the banking industry especially in geographical areas of the world where a considerable amount of its customers is unbanked and the mobile and internet infrastructures are already present, giving an edge to invest in this business.

Using the technology already implemented to run the telecommunications' business, operators can play an important role in the mobile payments services, on any market. The Ernst and Young (2014) report on "The Next Wave of Growth in Telecoms" shows that technologies like SMS or USSD are used to enable users to deposit, transfer and withdraw their money in developing markets – one of the biggest successes is Vodafone's "M-PESA" in Kenya (Joseph 2017) – whereas more advanced innovations like near-field communication are being employed on markets where banking presence is much more competitive, and people have access to more developed technologies. In developed markets telecom companies are adding value to this industry by entering into the payments systems as well, creating mobile wallets and developing advanced solutions for banks, users and merchants. The "Mobile Payments in Portugal" by Statista (2016) shows that the volume of mobile payment transactions in the country is growing and will continue at an estimate of 53,2% per year. The penetration rate is also increasing, showing the potentialities to further explore this market.

Giving this presence by adding value through technology, telecom companies can widen their propositions and propose financing and savings solutions, taking part of the banking disruption that is being created by mobile services. Using a large customer base that is usually bigger and more concentrated than retail banks, plus a stronger client management and marketing force, telecom companies can take advantage of the core-business to penetrate in the market (Arthur D. Little 2015). Through the partnerships with retail banks, merchants and other players, they can increase the revenues streams from subscription and transaction fees, build better loyalty agreements and enhance the amount of customer data that is collected, looking to further monetize it through B2B advertisement solutions and data analytics (Ernst and Young 2014).

Nevertheless getting into the banking business in developed markets represents a regulatory challenge as to get a banking license. New players need to provide guarantees and possess the capital requirements to engage in this activity, which leads to partnerships as we saw with mobile-only banks, or acquisitions (Ernst and Young 2016). Poland is one of the first stages of telecoms moving to mobile banking in developed countries, with Orange, T-Mobile and Plus. The first two partner with traditional banks – mBank and Alior Bank – in a joint venture that enables these telecoms to possess a banking license and act in the front-end of banking value chain with direct contact with clients, backed by the balance-sheet of the allied bank (Meder and Zajac 2014). Orange has also launched a mobile bank in France, but this time through the acquisition of 65 percent of the traditional bank Groupama. In a special report written to NFC World, Marc Rennard – the "Deputy CEO of Customer Experience and Mobile Financial Services" – writes about the importance of telecom being flexible in the current competitive market, as customers will have more options and power of choosing the most convenient services. As such, telecom companies must be able to provide their non-core business services to all clients (Rennard 2017).

## Regulation's Scenario

Regulation plays an important role in the future of banking. For new entrants in the banking business, the Basel III makes licensed banking activities more expensive as it requires more capital to bear risk-weighted assets (Sinclair and Global 2016). "Neo banks" can be seen as a consequence of this regulation, as new online players engage in banking activities, partnering with already licensed institutions. Nevertheless, we've been seeing a lot of these new digital startups coming from the UK, and that is because the government and financial authorities like the Financial Conduct Authority and the Prudential Regulation Authority implemented new legislations to support competition in the banking industry. Start-ups can now obtain a banking license more

easily, having a pre-established period afterwards to comply with the capital requirements of the Basel III (Financial Conduct Authority 2014). As for Portugal the process of getting a banking license involves first the authorization Portuguese Central Bank during an undefined period, where the company requiring the license must meet all legal requirements, and if the request is approved it is forward for the authorization of European Central Bank, which will answer the request in a maximum period of 12 months ("Autorização De Constituição | Banco De Portugal" 2017).

Another European directive that will enhance competition, as seen before, is the Payment Services Directive 2 which will, with the client's consent, open bank data to 3rd party institutions. Companies that settle their core business model in partnerships will be able to input data of the user's payment behaviour from a broader number of sources (Light et al. 2016). The exchange of this data must be aligned with the General Data Protection Regulation that will be in force in May 2018, meaning that any institution that collects and processes personal data either from internal sources or third parties, must have a clear consent from the user. This extends the concept of data that can be transferred between institutions, beyond the PSD2 for bank data (Mikkelsen, Soller and Strandell-Jansson 2017).

### Mobile Banking Customers

In 2016 according to Visa Europe (2016), individuals in the age group between 18 and 34 years old, were the main users of mobile banking. As Tardivo et al. (2014) and Laukkanen (2016) finds, younger generations are the predominant adopters of this service, where the indicator of satisfaction comes from the time-saving characteristics. This segment also shows more confidence in the safety of mobile banking. Furthermore, studies show that income is not an explanatory variable for this trend, but a higher resistance to technological change. In a survey made to banks who implemented Mobile Banking, Tiwari and Buse (2007) show that 75% of them targeted young working

professionals (on top management or self-employed) that are constantly on the move and "technology well-versed", who acknowledge more advantages in the service's accessibility.

## Internal Analysis

### Altice Portugal Business

Altice Group has operations in Portugal through the ownership of Portugal Telecom – also known as PT – and its subsidiaries since 2015. The company positions itself in three major pillars: Telecommunications, Media and Advertisement. According to Reuters, Altice Group intends to launch a mobile bank in the European countries where it operates including Portugal (Rosemain and Nikolaeva 2017).

Portugal Telecom has a huge history in developing innovative technologies and products regularly, where some of them became widely used in the world such as the pre-paid SIM Card. For this reason the centre of innovation of Altice Group is located in Portugal, called Altice Labs – former PT Inovação. It was here that the company began its presence in the financial industry in 2013, with the creation of the mobile wallet service called MEO Wallet, which offers clients the possibility to pay with their smartphone in affiliated merchants' stores, using all the technologies mentioned before associated to mobile payments. Depending on the supported technology of his device the user can pay by NFC technology – contactless payments – by a generated QR Code, or simply through SMS. The mobile application has an embedded account that must be charged through a bank transfer or it can have one or more payment cards linked, serving like other mobile wallets as a perfect substitute of credit/debit cards and cash. The service can be seen as payment service provider for merchants, as it extends its offerings to accept payments not only through MEO Wallet mobile application but also through payment cards, by a provided card reader. It is also directed to purchases through MEO's set-top boxes and support online stores, providing a payment

portal that accepts MEO Wallet. This service is linked to a parenting organization created for the purpose called PT Pay which holds the license of a payment institution in the Portuguese Central Bank ("PT PAY, SA | Banco De Portugal" 2013). According to the company's statements "R&C Anual Dezembro 2015 - MEO Wallet" (2015) and "R&C Anual Dezembro 2016 - MEO Wallet" (2016), in the last three years PT Pay presented negative net results forcing Portugal Telecom by 2015 to fund PT Pay in around 3,5 million euros to keep the required capital ratios by the Portuguese Central Bank.

## SWOT Analysis

### Strengths

- **Strong Brand Value:** The presence of Portugal Telecom in the telecommunications sector is done through its subsidiary MEO, which leads the industry in the country in terms of brand value growing from the 9$^{th}$ to the 6$^{th}$ overall position considering all Portuguese brands (Statista 2017). As previously mentioned, when considering the studies using the Technology Acceptance Model, the main reasons for the slow adoption are risk perception and trust that can be overcome by brand reputation (Knipp 2009).
- **Large Customer Base in B2C:** The telecommunications buddle offerings – where television, wireless internet, SIM cards, telephone and mobile broadband are included in the same bill – is subscribed in Portugal by 9 out of 10 households or 3,7 million customers. MEO is the market leader in the country with 39,9% of the total subscribers in the 3$^{rd}$ trimester of 2017 (ANACOM 2017). This customer base can be used to further increase the customer's share of wallet, rise their loyalty to the core business and build better services by holding a richer database. As mentioned before, data monetization is part of the future banking business models. By providing telecommunication and media services to individuals, Altice Portugal holds a huge

amount of valuable data about their customer's behaviour that can be further used for developing a better banking service based on advertising fees and better user experience.

- **Network of Stores:** Altice Portugal has more than 250 stores around the country ("MEO - | Lojas" 2017) that can be used as a channel when implementing a mobile bank for assistance or enhanced customer experience. This is an advantage compared with mobile-only banks because it gives flexibility on the market approach when considering the more resistant customers to adopt fully digital bank and trust issues. It also allows overcoming the difficulty of cash deposits faced by mobile-only banks. Comparing with traditional banks, this physical presence requires no investment besides operational, which can be flexibly managed according to the business needs. The cost structure of holding a physical presence by Altice Portugal would be mainly variable, as it already uses the stores for its core business.
- **MEO Wallet POS:** Established partnership with a network of third-party stores – points of sale – that accept payments from MEO Wallet and can be used to integrate into a new mobile banking service, if economically viable.
- **PT Pay License:** Altice Portugal currently holds with PT Pay a payments license in the Portuguese Central Bank that can be used in the same way as neo banks. This removes time-to-market to proceed with the creation of a mobile bank that positions itself in the distribution and client accessing part of the banking value chain.

**Weaknesses**

- **Failure in mobile payments:** Altice Portugal's first attempt to enter the mobile payments services have been so far unsuccessful, with high losses from PT Pay during the last 3 years, which demands a reconsideration of the business model and how the service can better add value to the market.

- **Limited geographical presence:** Implementing a mobile bank in Portugal or extending to the countries where Altice Group operates, gives the company a lower addressable market compared to agiler mobile-only banks that plan to operate across the European Union borders. This lower growth opportunity puts more pressure on the business model and short-term profitability, as potentially the future return-on-equity will be lower than other international competitors. Moreover in open banking business models when approaching partnerships with traditional banks for client assessment while they become "infrastructure providers" (Robinson 2016), there is less value added compared with agile fintechs that have the ability to expand globally.

**Opportunities**

- **Payment Services Directive 2:** The PSD 2 represents a general opportunity to all new entrants in the industry, but especially for companies that come from other industries that already have a strong customer database. This adds on value to customer experiences, as Altice Portugal is able to provide personalized financial advisory and product recommendation based not only in the client's transactional data from banks, but also telecommunications and media services consumption and advertising preferences.
- **Partnership with a Traditional Bank:** With Basel III entering in the regulated banking industry requires huge amounts of capital against risk-weighted assets. Partnering with a traditional bank can take away time-to-market in acquiring a banking license, and build a mobile bank that is able to penetrate the market with a wider proposal of financial services. For traditional banks, partnering with Altice Portugal would enable them to use the strengths of the company – meaning huge client database, brand notoriety and technology know-how – to build differentiated service and renew the business model.

**Threats**

- **Strong presence of SIBS:** Owning a large ATM and TPA network in the country combined with digital payment solutions like MB Net and MB Way, SIBS as a strong presence in Portugal, in terms of notoriety. According to the company's market report, MB Net is the leader in brand awareness and usage for digital payments after Paypal (SIBS 2016). With the integration of MB Net in the MB Way service, the digital wallet has shown an impressive growth with 155 thousand users in less than one year of creation (Almas 2016).
- **Entrance of Google and Apple:** With the launch of Android Pay and Apple Pay, the two tech giants are entering the digital wallets market. The tremendous amount of customer data collected by these companies through their different digital services and their constant presence in their client's daily activities, make this a high threat when considering the future of banking. According to Accenture (2016) 40% and 34% of people between 18 and 34 years old "are likely or very likely" to use respectively a Google or an Apple banking service.

## Market Research

### Methodology and Research Purpose

In order to add more evidence to the previous research, and further investigate the Portuguese market, this work project intends to collect data from an online questionnaire. According to Denscombe (2010) the information that can be collected by this research methodology is either facts or opinions regarding what is being studied. They allow straightforward information framed into the research purpose without any variation in the collected answers. With the usage of a closed question system, the collected data can be more easily compared and further computed to show the results of what is being studied. Nevertheless, the questions in the questionnaire must enable the reflection of the responder's point of view, giving him enough set of options that provide unbiased and honest answers.

The targeted population constrains the main characteristics mentioned before, that can differentiate the mobile bank customer – age group and type of employment. Using a sample of 132 people from the age group between 18 and 54 years old that live in Lisbon, that are either students, employed or self-employed, the main goal is to collect on one hand, factual information that can give a preview of customers' behaviour towards banking and the digital mobile channel. On the other hand, inquiring about the client's satisfaction with their most used bank using the Net Promoter Scale score, combined with the willingness to move towards a more digital branchless bank, permits a deeper understanding of how a new bank can successfully enter the market. Considering the findings previously mentioned with the Technology Acceptance Model, this market research aims to also comprehend the perception of Altice and MEO brands versus the current players and potential entrants from mobile payments/mobile wallets.

**The scales and options used in this closed question questionnaire**

- The age group considers the scale used in the Visa Europe (2016) questionnaire, for comparing purposes.
- The professional background considers the defined niche of users of mobile banking by Tiwari and Buse (2007)
- The questionnaire groups the institutions according to the analyzed mobile banking players – traditional banks, mobile-only banks and digital wallets.
- To evaluate the people's satisfaction with their most used bank, it is used the Net Promoter Score developed by Fred Reichheld in 2003. This metric provides valuable insights on the customer's loyalty and growth potential of a company, and it's computed by subtracting the detractors – scores between 0 and 6 – to the promotors – scores of 9 and 10. (Van Dessel 2011).

## Results and Main Findings

Looking to the factual data in the collected sample, students and people between 35 and 44 years old – especially self-employed – are the ones who use more digital wallets [Table 5], with a residual number using the mobile-only banks present in Portugal [Table 4]. Of those digital wallets, the MB Way and Paypal are the more used, a result that goes in accordance with SIBS (2016) market report. Of the surveyed people only 20,45% don't use banking apps, with the biggest percentage of usage being no more than 3 times per week [Table 10]. Results indicate that usage of banking apps can have an impact on dissatisfaction in accordance to Lang and Colgate (2003) study. People that never use the mobile channel to interact with their bank show more tendency to be detractors [Table 11]. When analyzing the Net Promotor Score, all the different segments support the potential disruption of the industry that was previously demonstrated, with clients from all ages, professional backgrounds and behaviours having a negative score. The group age between 18 and 34 years old are the ones who show less loyalty to their current banks with -13.83 score below the average, due to drops in promotors and neutral clients [Table 26]. This research also finds that this group age represents the segment that is more willing to be a client of a digital-only bank without branches [Table 19], as it is also the one who visits less this physical channel [Table 7] which goes in accordance to Tardivo et al. (2014) and Laukkanen (2016). The study also shows the importance of awareness on the potentialities of digital and mobile financial services mentioned by Oliveira *et al.* (2014), as users of digital wallets are more willing to be client of a digital-only bank [Table 21], and prefer to run most of the inquired banking operations, through a mobile app [Table 16].

As for measuring brand perception for the creation of a bank, the question "Which of these banks would you deposit your salary" was made to respondents. When comparing MEO and Altice brands, the results are not conclusive, with average preferences [Equation 1] being too close in

terms of position, with a low standard deviation – meaning a big spread in answers [Table 32]. When inserted in other potential entrants, MEO brand seems to highlight among traditional banks' only users [Table 33] and respondents that are not willing to be clients of a fully digital bank [Table 39]. This result can reflect the option of people that are not yet in contact with digital players, revealing the trust on the Portuguese brand. This research also shows the notoriety of SIBS brand in the industry, with a great part of respondents answering they would trust their salary to an "MB Bank". Following is Paypal, which has a lower standard deviation mainly because of a distrust from traditional banks' only users [Table 33], and group ages above 45 years old [Table 37].

## Conclusion

With the evolution of technology, banks modified and adapted their distribution models for online banking and automated teller machines. The technological disruption of smartphones enabled users to access and manage a wide spread of services at any time like never before. This introduced a new powerful channel to banks that are capable of giving customers the ability to manage and conduct all their banking activities in one device. Nevertheless traditional banks are failing to provide differentiated services through this mobile channel, and new digital entrants begin to penetrate in banking value chain. As client interactions shift more to the digital world, big networks of branches became a heavier burden for banks. Facing a clear challenge on the business model, the rationalization of resources by Portuguese banks does not show any signs of improvement. Meanwhile digital entrants are penetrating the market with mobile-only solutions that provide superior user experiences, combined with competitive pricing strategies. Regulation plays a huge role in this industry as in one hand, engaging in licensed banking activities requires setting aside huge amounts of capital with Basel III, and removes time-to-market. On the other hand, with the Payment Services Directive 2 a new business model emerge with open banking and data monetization. As such new players are entering this industry as distributors of financial services

backed by the balance-sheet of traditional banks. However, they are struggling to became a profitable business, currently focusing on growing their customer base and taking advantage of the low cost of capital. Indeed this research shows that there are clear signs of disruption in this industry, which Altice Group can take advantage. With a large customer base in Portugal, and a historically acknowledged technological expertise, the company can partner with a licensed bank and build a business model based in open banking and data monetization. To compete with other players it must be able to overcome its limited geographical presence and build a service that is flexible to reach all types of customers. Furthermore brand recognition and notoriety are very important factors for perceived risk in mobile banking. MEO brand is one of the top recognized brands in the country, but this research does not find any evidence on that being a competitive advantage compared to other players. In fact, the market research is able to demonstrate the strength and presence of companies like SIBS and Paypal in Portugal. When addressing the target customers, the study shows that younger generations are indeed more willing to be clients of a fully-digital bank but finds no evidence on self-employed people. The performed market research also demonstrates that lack of awareness on the potential of mobile banking is an important constraint for the willingness of being a client of a fully-digital bank.

This research is able to provide a deeper understanding of the current situation and the forces that are disrupting the banking industry and how is it shifting towards the mobile channel, which business model can take place in the future and how Altice Group can provide value to this industry. There are still some questions that need to be addressed in future researches like the sustainability of banking branches and who are the best partners for a company like Altice Group in Portugal.

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