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Reflection on the Masters Work Project
Business Plan of Juntta 2.0 - Crowdfunding Platform for Millennium BCP

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Abstract

This thesis is a Business Plan of a Peer-to-Peer lending platform, Junтта 2.0, designed for Millennium BCP, to understand the economic viability of entering in this market. The similarities between the type of business of Peer-to-Peer and BCP business activities, makes Peer-to-Peer lending platform the best type of crowdfunding platform for BCP. In Portugal, the crowdfunding market is under-exploit, without many players, yet, which creates comparative advantages, as the new product is more competitive, when comparing to traditional ones. At the same time, it allows Millennium to be prepared to face the new and stronger competition on the market. As a new and risky business, it might have some reluctance from the crowd. After all the considerations, the platform is a value added for the bank, due to its positive Net Present Value (NPV), considering a 5 years' horizon on estimations.

Keywords:

Millennium BCP, Alternative Financing, Crowdfunding, Peer-to-Peer Lending, Business Plan

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1. Executive Summary

Throughout the world, the financial crisis in 2008 and the subsequent reaction of the banks were responsible for a significant loss of trust in financial institutions. Crowdfunding became popular for small and medium enterprises, as banks were restricted to lending, according to *Attuel-Mendés (2017)*. Therefore, this new way of financing started to appear as an alternative for banks, which is more agile and present a sophisticated product, even though still limited.

With the fast growth of technology, banks became caught in the necessity of innovation but, at the same time, to comply with regulation. Notwithstanding, the environment for this sector has changed favourably and banks are now conquering again clients' confidence to the levels before crisis. Also, the improvement in the level of consumer confidence in Portugal has resulted in a decrease of the risk aversion of population in terms of investing their savings and therefore has led to a wider amount of money to invest. As a consequence, banks need to start offering its clients more attractive products, as their competition becomes more aggressive. They have to be competitive with new unexpected players entering the field and offering potentially better alternatives.

Millennium BCP is one of the market leader's banks in Portugal. Consequently, BCP needs to address this issue in the fastest way possible, in order not to stay behind their competitors that have already entered in the segment.

Junтта 2.0 is a crowdfunding platform, which would empower Millennium to enter in this new market business, offering solutions for small and medium enterprises in terms of financing. The platform allows BCP to offer to their pre-existing clients more attracting products in terms of return, however, riskier products.

The crowdfunding market in Portugal is not well explored so far, representing an opportunity to expand BCP businesses by taking advantages of being one of the first to explore it. Crowdfunding still faces restrictions in terms of legislation and even suffer from the reluctance of the crowd to invest their money in risky projects. Regardless that, with the improvement of Portuguese's life standards and the international rankings, population is gaining confidence in the economy and is starting to invest again. People are turning less risk averse and, consequently, putting themselves in riskier positions to get higher returns.

The project creates value with a positive NVP of **€223,129**. Even though, it is a lower value for the current values of bank's businesses, it is important to highlight that the assumptions considered are in a conservative scenario and it is expected that the sector grows more in the next years. This means that depending on the conditions of the market this value may be bigger.

2. Company Summary

Millennium BCP, S.A. (BCP) is the largest Portuguese privately-owned bank, with a mission based on four values, excellence, trust, ethics and responsibility. Millennium BCP is a distinguished leader in

diverse areas of financial business in Portugal and a reference at an international level. Furthermore, BCP has a vast number of financial services and products, such as current accounts, payment systems, savings, investments and banking and has €71.3B of total assets. Those services are integrated in the bank's networks, in order to benefit from economies of scale. In Portugal, the bank's activity is focused on the retail sector, and has 2.3 million customers.

Millennium BCP is a relevant player within the industry. With 5.5 million customers, it is spread over Portugal, Angola, Mozambique, Poland, Switzerland, Macau and China. This geographic location is referred to as the "*The Diamond Strategy*".¹ As a commercial promoter, Millennium is present in Canada, USA, France, Spain, Luxembourg and Australia.

In 2016, Millennium BCP changed its shareholders structure. Fosun Industrial Holdings Limited, through an increase in capital, became the major shareholder of the bank with a 23.92% participation, followed by Sonagol with 15.24% and Norges Bank with 2.53%.²

3. Introduction to Crowdfunding

According to *Beaulieu, Tanya (2016)*, crowdfunding financing is continuously growing. Crowdfunding appeared to fulfil a market gap resulted from the financial crisis, in which the traditional capital market power narrowed. In other words, the creation of crowdfunding appeared as a "magical cash machine", as mentioned by *Dushnitsky et al. (2016)*. Throughout the world, there are numerous of crowdfunding platform, from all the different types that have been growing on popularity. Zopa, Prosper, Kickstrater and Indiegogo are good examples of successful crowdfunding platforms that have been successfully operating as an alternative financing for companies, when they do not have access to traditional funds.

To understand the mechanism behind it, it is crucial to know who are the players involved: Entrepreneurs, Investors and the Crowdfunding Platform.

The Entrepreneurs, also designated as founders, are the principal clients of the platforms, and are the ones with projects to be posted online requesting capital. Secondly, there are the Investors. They are individuals or a small group of people who like the project, and thus want to finance it. Finally, the last player is the Crowdfunding Platform. As explained by *Valanciene et al. (2013)*, a crowdfunding platform is the interface between those who want to invest, and those who have the ideas.

Kirby and Worner (2014) consider that based on the presence of returns for the investor or not, there are two types of crowdfunding platform. The first category is called Financial Return Crowdfunding, with two subdivisions, Peer-to-Peer Lending and Equity Crowdfunding. According to *Borello et al. (2015)*, this first type has a financial return for investors, such as interest and principal payments or dividends. The second category is Community Crowdfunding, which englobes Social Lending/Donation Crowdfunding

¹ Appendix 1

² Source: *Bloomberg* (8th September 2017)

and Reward Crowdfunding, both not including rewards for the bakers. In this case, the investors do not act on behalf of getting a monetary return, but only for altruistic motives.

Normally, these crowdfunding platforms are from private entities or individuals that formed its own business, as it can be another one. Still, there are some banks that are addressing this issues by trying to create their own platforms, like BBVA, Novo Banco and Santander. This is happening and more financial institutions will eventually follow the same trend, because they understand that the banking sector is changing due to technology. As a consequence, it is a problem that needs to be solved as quickly as possible.

3.1 Mechanism of Work

The platform acts as a catalyst, since it helps the match between investigators and borrowers. This process can be leveraged by the quality of the bank's brand, using its pre-existing networks. The process to become a client and an investor in the *Junta 2.0* is minimally bureaucratic and can be done quickly on the Internet.

To begin, entrepreneur and investor must submit an application form on the website, which is subjected to a careful analysis before being accepted. Here, it is important to collect the main information about both of the parties, such as full name, age, fiscal number and background information. Upon approval, an account is created for each of them on the platform. This account is used for submission of the projects, in the case of the entrepreneur, and to allocate funds to projects, in the case of the investor.

The process begins with the borrower who requests for a loan on the platform.³ In this request, the entrepreneur needs to attach the business plan, to guarantee that all investors have the same relevant information, including estimated revenues, costs, the project's evolution and the duration of the loan. In addition, the platform indicates to the entrepreneur its opinion, based on seeing the viability of the project, regarding the conditions of the loan, such as duration and maximum interest rate to be paid to investors, to ensure they have the capacity to comply with their obligations. This is an essential phase to ensure that there is no fraud from the entrepreneur, and to decrease the level of asymmetry of information between entrepreneur and investor.

After that, the project is posted online to attract investors. To match the interested parties, the most suitable approach is making an auction process. This consist on borrowers indicating the maximum interest rate they would be willing to pay and the lenders indicating a minimum return to make them invest their money.

When deciding in which project to invest, the investor indicates the amount he is willing to invest and subsequently bids his proposals of rate of return. Afterwards, the entrepreneur is able to choose which investors offer him the most attractive conditions, and subsequently decide who is going to invest in their business. Based on all the investors' bidding, the entrepreneur can decide to engage with various

³ Appendix 2 – Mechanism of work of the process

investors before the deadline for the fundraising ends, to get the most advantageous rates for him. When the entrepreneur decides which investors offer he wants, he cannot turn back on his decision and thus will have to proceed with the signing of the contract. Following this, there is the contract signing in which the rate of return for the loan is established as well as time of reimbursement and repayment schedules.

During the entirety of the process, the entrepreneur and the investor should be in contact with the platform, which acts as a third party to help the deal to be signed. During the period of the loan, the entrepreneur must send regular updates of the project to the investor, in which the gap of time is decided by both parties and should be part of the contract terms.

3.2 Crowdfunding Platforms Types of Revenues

The crowdfunding platform revenues are based on fees charged to the entrepreneur, that can be from different origins.

Normally, platforms have funding fees that are small percentages that the platforms charges to the entrepreneur when the funding amount requested in the campaign is fulfilled. If the amount needed is not reached, most of the platforms analysed do not charge any fee. However, for example, Indiegogo platform splits the crowdfunding financing into two types. The first only charge funding fee as previously explain. The second type, if the total money need is not raised, the entrepreneur has the option to keep it, by paying a small a fee for that, as a result of platforms work to promote that specific project.

In addition, platforms can charge fees from different origins, like for example processing fees or credit fees. This is a fixed percentage of the asked value and can have a fixed amount charged and have a fixed cost for each investor that participates on the campaign.

Finally, some platforms have some registration fee for the entrepreneur when he decides to register on the platform for the first time. This helps the platform to have a more stable revenue as it does not depend entirely of the number of projects and how success their campaigns are.

3.3 Comparison Between Crowdfunding Product and its Alternatives

Crowdfunding is more and more considered as an alternative to banks, as mentioned by *Dushnitsky et al. (2016)*. This happens not only because of the easiness of getting the funding, for entrepreneurs, but also because of the attractiveness of their returns, in the investors perspective.

Firstly, for a small and medium enterprise getting funds from traditional sources can be hard mainly because they are too risky ventures, as concluded by *Stinchcombe (1965)*, and do not fulfil all the requisites that banks demand for concede a loan. For SMEs, crowdfunding appears as the only solution for getting the money needed to continuing operating and growing.

Secondly, the entrepreneur can have funds without losing too much control on the business. This helps the entrepreneur to get the money needed and, at the same time, keeping running the business as before without feeling they are losing control on its own business.

Thirdly, when getting a financing in a platform, the charges are smaller when comparing to the ones when getting a loan from a bank. This means, entrepreneur can offer more attractive returns for the investors, without being too much penalized on its financial stability. These facts allow crowdfunding products to be known for having higher returns when comparing to traditional banks products. However, crowdfunding products are riskier products, because the ventures that are behind the projects are new and still very dependent on how the economy is. This reason makes the investor demands a higher return to put their money on it, as there is a higher probability of for some reasoning he does not get his refund back.

In the Portuguese case, the bank's deposits, certificate of treasure and savings certificates are offering only, on average, 0.51%, 2.1% and 0.67%, respectively. These values are relatively low for an investor who want to make money from its investments. Therefore, crowdfunding provides a better alternative in terms of return when comparing to the traditional products as well as higher returns, even though it means invest in riskier products.

4. Product Presentation

Millennium BCP is considering entering into the crowdfunding market as an intermediate player by creating its own platform, entitled *Junтта 2.0*. Based on its operational characteristics, the best model of crowdfunding platform for Millennium BCP would be a Financial Return Crowdfunding, through a *Peer-to-Peer Lending (P2P)*.

Crowdfunding through Peer-to-Peer lending has been growing in popularity, essentially because it offers lower costs for entrepreneurs, simplified application processes and faster lending decisions. Over the last few years, it has become a stronger player in the banking sector, causing a paradigm shift in the lending industry from the traditional financial institutions to those platforms, which could increase even more in the near future. In other words, Peer-to-Peer Lending is reinventing banks activity, because it does the same thing, but in a faster and easy way of doing it. As a consequence of that, it has increased expected growth for the peer-to-peer lending over the next years.⁴

The platform is going to be a complementary product to the bank's activity, based on similar characteristics of the bank's principal activities. Furthermore, the platform creates a new and competitive product since it allows Millennium to help Small and Medium Enterprises (SMEs) to raise capital. This can have a positive impact on bank's visibility in the market, since it might help raise additional clients and reinforce its existing relationship with its current ones. All of this is a result of entering in a new market segment and it can, in fact, potentially contribute to a higher overall market share.

⁴ "The Business Model and Economics of Peer-to-Peer Lending"- Alister Milne and Paul Parboteeah (2016)

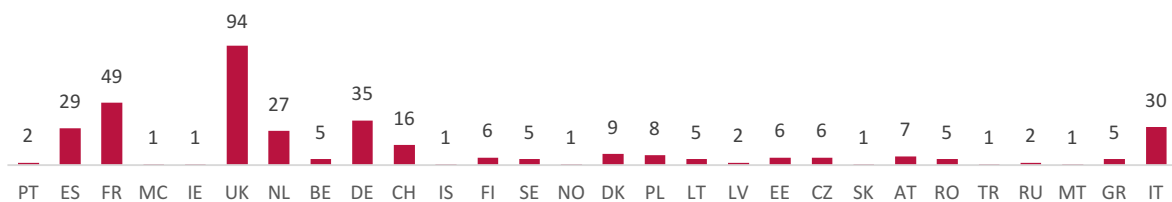
5. Market Analysis

Crowdfunding is an emerging alternative of financing worldwide. This fact has been previously demonstrated in the literature, with several market signals showing this phenomenon currently taking place.

In spite of the fact that this alternative financing industry is not totally known and is still a very young industry, it has already a worldwide presence.

United States of America, China and Europe are the three markets in which this alternative financing market is more developed. When compared directly the three markets, the dimension of the crowdfunding market is smaller in Europe than in the Asian and American, mainly due to the dimension of China and the United States crowdfunding markets, respectively.

In Europe, the total market in volume is worth €5,431m in 2015, with an annual growth from 2014 of 92%.⁵ Even though, the growth rate has decelerated 10%, the prospects of the market indicate that there is still space for potential growth in the next years. Almost all European Countries have at least one active platform in the country, as it can be seen in the following graph (Graph 1).



Graph 1: Number of Crowdfunding Platform in Europe

United Kingdom (UK) is the European country in which this sector is more developed, with 94 active platforms, representing 81% of the European market and thus becoming the market leader, with platforms like Crowdcube, Seedrs and Zopa. After the UK, France comes with 49 platforms, followed by Germany with 35, Italy with 30 and Spain with 29 platforms. These are the countries with a relative high presence of crowdfunding platforms in Europe. Despite this, in terms of volume created, there is a small change in the ranking paradigm. United Kingdom stays in the first place with more than €3,125m trading volume, followed by France with €319m, Germany with €249m, Netherlands with €111m, Finland with €64m and finally Spain with €50m.⁶

Another possible metric to understand the market behaviour, markets unexplored and how it is being developed, is by comparing GDP *per capita* to Alternative Financing Volume *per capita*. Based on the graph presented below (Graph 2) and the arguments presented above, it is possible to extract important results from the position of the countries in terms of these variables.

⁵ Percentage provided by “Sustaining Momentum – September 2017” by KPMG International

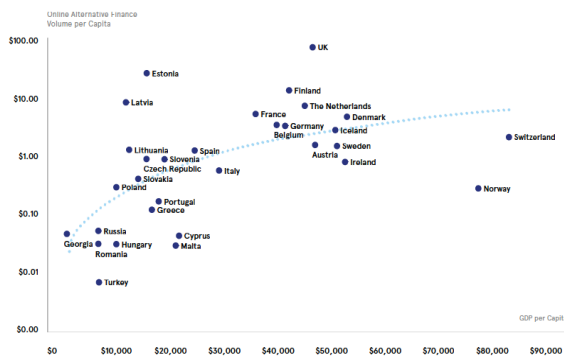
To begin, countries with more active platforms, such as the UK, Finland, and Netherlands tend to outperform the market, and therefore have a higher trading volume *per capita*, in accordance to their GDP *per capita*. This means that the Financing Alternative has a considerable weight in the economy.

Secondly, there are countries such as Estonia and Latvia which do not have many active platforms, but the weight of their volume in terms of GDP *per capita* is high. With this, the main conclusion is that the development of this market reveals to be an important factor in terms of GDP *per capita* and it can be seen as a form of expand the economy.

In third place, it is possible to understand when tracking the activity and type of crowdfunding platform, the countries that have higher GDP *per capita* and volume *per capita*. From this, it is studied that countries with strong peer-to-peer lending activities tend to outperform in this sector.⁶ This is the case of the United Kingdom, in which 57%⁷ of their market is Peer-to-Peer Lending. On the other hand, countries with more restrict regulation, with prohibitions that hinder this activity, tend to underperformed this market.

Finally, countries that lie below the line, which is the case of Portugal, are representative of under-exploited market. This is curious, because below the line are countries that have the same or lower GDP *per capita*, such as Estonia or Latvia. However, the alternative financing does not follow the same trend.

Overall, the alternative financing models in Europe have been continuously expanding over the last few year, and it is forecasted that it will continue with this positive growth path during the next years.



Graph 2: Relationship between GDP *per capita* and Volume *per capita*⁷

5.1 Portuguese Market

In Portugal, crowdfunding appeared in 2011, with two platforms in which only one is still working, PPL, a donation-based platform.⁸ Until 2017, this platform has raised €1.5m in successful projects, and there is still room for growing, as previous showed.

⁶ "Sustaining Momentum – September 2017" by KPMG International

⁷ Graph provided by "Sustaining Momentum – September 2017" by KPMG International, as well as possible analysis

The Portuguese Crowdfunding market has only three types: donation-based, reward-based and peer-to-peer business lending.⁸ So far, the reward based represents 57% of the market, peer-to-peer lending with 37% and the remaining corresponded to donation-based.

During the last eight years, the number of small and medium enterprises has increased, on average, 0.58%⁹ per year. At almost in a simultaneous way, the investment required by these companies has followed the same trend. Another plus factor for their success in innovative projects is related to the positive signal of economic growth, as concluded by *Kitchens & Torrence (2012)*, and that point is reflected on the improvement of life standards. This is, in fact, important for the growth of the alternative funding market, since population become less risk averse towards the investment in these projects.

The number of existing crowdfunding platforms is still very small. Nowadays, one of the existing platforms is a direct competitor to the BCP's platform, since it is a Peer-to-Peer Lending platform, called Raize, which appeared in 2014. The P2P lending is a useful tool for small and medium enterprises to raise money. Most of the times, these companies do not fulfil all the traditional bank requirements to get a loan, mostly because they are too risky or have not been able to generate enough cash flow, so far, to justify their capability to repay their loan in the future. Therefore, its development and growth might become compromised due to this lack of financing resources available to them.

Recently, the banking sector has been trying to increase its presence in the crowdfunding market. In fact, one of BCP's direct competitors, Novo Banco, have created their own platforms. Novo Banco's platform is a donation platform that does not have any type of returns, as previous explained. So far, it does not have a strong impact on the bank's financial statements; however, it has been experiencing a positive growth trend. This is a relevant fact, because it reinforces the idea that banks are trying to face this new segment by not beating him, but try to enter on it or collaborate with it.

Besides national platforms, there are some international platforms like Seedrs, that are already operating in the Portuguese market. In the case of Kickstarter and Indiegogo, they are not already operating in Portugal, but they are advertising and helping Portuguese companies to get funds internationally. This means that there is market that is not being fully explored by Portuguese entities and that foreign companies are seeing these opportunities before.

Moreover, it is important to highlight the emergence of some independent crowdfunding platforms in Portugal, which should also be taken into consideration when evaluating the attractiveness of this market. Even with conservative assumptions, Peer-to-Peer lending platforms would be able to capture in Portugal 10% of the consumer debt and 5% of the non-revolving consumer debt that financial institutions are owners.¹⁰ Considering that in 2016, the total credit granted was, approximately, €255m¹¹, this means that crowdfunding could have captured €38m of funds to lend.

⁸ "Crowdfunding in Europe: Determinants of Platform Creation Across Countries" by *Dushnitsky et al. 2016*

⁹ Source: Portada seen on 20th November

¹⁰ Based on "Peer pressure -How peer-to-peer lending platforms are transforming the consumer lending industry" from *PwC, February 2015*

This needs to be seen as an incentive for Millennium to reflect upon this opportunity, since it represents a segment for expansion with positive future prospects from which BCP is currently not taking advantage of. It has been proved that 50% of the lending platforms are owned by financial organizations, since it assures them access to target market, in which they have not been operating. This new segment can contribute to increasing the bank's presence, and in the future, there is potential for expanding the platform to other European geographies where BCP is present, such as Poland and Switzerland, which could further improve BCP's standing within the industry. Thus, there is an opportunity for Millennium to expand itself into the small and medium enterprises financing market, without substantially affecting its current position in the market.

Summing up, alternative financing has raised a high amount €1.79m¹² in Portugal and studies believe that there is still space for further growth. Nevertheless, it depends on how the population starts to become more familiar with the subject and its mechanism, as well as with online payments.

6. Strategic Rationale for the Platform

In Portugal, a growing number of new companies appear every year. After new companies' initial growth often financed by its own and family savings, the next stage usually involves obtaining external funds.

SMEs are often seen as riskier ventures. By being faced with the liability of newness, their probability of success is traditionally lower when compared to larger and more stable enterprises, as study by *Stinchcombe (1965)*. For this specific reason, most of them do not have easy access to capital via regular channels, such as traditional banks, and consequently need to find another way. Therefore, crowdfunding appears as a solution for younger, recently-established companies to finance themselves and proceed successfully to the next phase of the business. Nevertheless, SMEs and their projects are riskier than the regular criteria of the bank, so by using the platform it does not represent any risk for the bank, because it does not assume any risk exposures, as study by *Milne and Parboteeah (2016)*.

Even though this seems to be a disintermediation of the banks activity, the crowdfunding platform needs to be seen as a complementary product, as already mentioned. With the platform, smaller companies can become a new segment of clients, due to their small dimension that until today they do not obey the pre-requisites for obtaining a loan on banks. *Milne and Parboteeah (2016)* also concluded that, some of financial institutions are considering to create their own platforms, in order to benefit from the growth in crowdfunding industry.

The crowdfunding is considered to be a risky project; however, the fact that Millennium is considering to enter in this market, reduces the uncertainty of it, as it is a recognised company on the

¹¹ Pordata

¹² "Crowdfunding in Europe: Determinants of Platform Creation Across Countries" by *Dushnitsky et al. (2016)*

banking sector, as concluded by *Dushnitsky et al (2016)*. This fact can be seen as another strategic reasoning for this initiative.

Summing up, the creation of the platform should be seen as a way of creating comparative advantages for the bank, leveraging the bank's current good condition to improve and innovate its products.

6.1 Platform SWOT analysis

Crowdfunding is a recent phenomenon, so performing a SWOT analysis helps highlighting the strengths, weaknesses, opportunities and threats, and is a powerful tool to understand the viability of the project. It is used to figure out its position compared to other projects and helps avoiding mistakes, as explained by *Valenciene et al. (2013)*.

The strength of a SWOT analysis refers to the advantages that platform crowdfunding creates to Millennium in comparison to other competitors. Crowdfunding platforms appear to fulfil a market gap in financing, due to a lack of financing by banks, specially SMEs that have no access to financing and need it, as mentioned by *Sigar (2012)*. To begin, this project will give Millennium the capacities to be prepared for the growing of the crowdfunding market. As faster as, BCP address this issue, it will not stay behind when there is full legislation of the alternative financing and new players start to appear in the market. At that point, Millennium can have a more aggressive position, considering that has already one strong position in the market. Moreover, due to its geographic expansion, this project may be also presented in all BCP locations, helping entrepreneurs to overcome some geographic barriers, as *Agrawal (2014)* concluded. This aspect is, in fact, a good advantage when comparing to other players in the Portuguese markets, that only operate in Portugal. It also confers to Millennium the possibility of offering to its clients more attractive products, with higher returns, when comparing to traditional products. To end, as a bank that wants to promote the Portuguese economy, the most important advantage for crowdfunding platform is its contribution for economic growth, based on its innovation character. In other words, these platforms are the ending product of experimentation and, to experiment new investments and ideas, crowdfunding is a good way of achieving it, as argued by *Kitchens & Torrence (2012)*.

Following the SWOT analysis, crowdfunding platforms also have weaknesses. Creating a crowdfunding platform is a riskier project, that can damage banks image. In other words, by promoting its new product, the bank is making publicity to a risky project. Therefore, if something goes wrong in one of the projects that get funds through the platform like, for example, if the company that contract a loan goes bankrupt for some reason, investors may want to blame BCP for that. As BCP cannot reimburse the money, because it is not his fault, this fact can be not well received by the investors. Furthermore, this events may as well discredit Millennium BCP business. Finally, entrepreneurs may not want to promote their projects into BCP crowdfunding platform, because they may be afraid of having more costs on getting it, because it is a bank.

In third place, there are several opportunities related to this platform. Crowdfunding is a fast growing phenomenon, reinforcing its status as an alternative way of financing. Considering that in Portugal the number of these small firms is continuously increasing, the number of potential clients, that may grow and fulfil the criteria for request a loan on BCP is in expansion. Furthermore, by entering in this new market, BCP become one of the first banks in Portugal to address this issues. In other words, this means that besides conferring stability to the market, as it is a recognised brand entering the market. This new player can make people less hesitant on investing on crowdfunding products, and consequently it may attract more investors as well as entrepreneurs due to its good market position. In addition, as faster as BCP manage to get a strong position on the alternative financing market, more easily the bank can have a good market share. Enter now on the market, will allow BCP to embrace a new and unexplored market, that it is not well known by every player in the market. In other words, this is a clear opportunity to create a clear comparative advantage when comparing to other competitors that are not thinking about it, yet.

Finally, the main threats for this way of financing is legislation and the reluctance of the crowd to new this new idea. Firstly, this subject has no specific regulation, yet, but European Commission and some of European countries, including Portugal, have been working in this sense. The banking sector, itself, has been making some pressure for crowdfunding to become more regulated, due to their high level of regulation. Therefore, this means that, in the future, if it becomes highly regulated that stops being able to offer good financial products. Secondly, this platform depends entirely on how the crowd reacts and believes of it. In other words, this means that if there are no investors to finance the projects, because they are too risk averse, all bank's investments made to become more active in this sector will have no value.

All the SWOT analysis is summarized in the following table 1, in the appendix.

7. Revenue Share Agreement

The contract established between both parties would be realized with the help of the platform, called Revenue Share Agreement. This contract allows the entrepreneur to pay in coherence to the project's revenues, taken into consideration when defining the instalments of reimbursement. This might turn the investor position into a slightly riskier position. In addition, it forces the investor to be more conscious on which investment to choose, enhancing its commitment to it. This platform might originate problems with asymmetric information and moral hazard; however, this agreement tries to minimize them.

Asymmetric information exists when the involved parties are not in the possession of the same information. The Revenue Share Contract is itself a natural mechanism to prevent this problem, or at least, to decrease the possibility of its occurrence.

First of all, the presentation of the business plan of the project helps to guarantee that investors knows as much as the entrepreneur about the project. Furthermore, it makes the entrepreneur completely sure about what he is presenting to investors, and about the success of his venture.

The relation between the success of the project and the repayment to investors, creates a tied connection between both parties, giving an incentive to the investor to only finance the projects that he believes will end with a successful outcome.

The moral hazard problem can be originated from two sources, one from equity financing contracts and the other one from quasi-equity contracts. Both are solved by the Revenue Share Contracts.

The first one is related to Equity Financing contracts. Most of the times, the entrepreneur works on behalf of its own interests and based on the cost of financing. Thus, it is only considered a problem when the entrepreneur uses the funds in a nepotistic way or manages his project in a seemingly careless way.

The model presented helps to anticipate these problems, since it promotes a closer relationship between investor and entrepreneur, and provides a platform for frequent dialog about the state of the project. This closer relationship reduces the likelihood of outright fraud, since it allows investors to perceive what the entrepreneur is doing and act immediately if there is some evidence of anomaly.

The second one is related to Quasi-Equity Financing. This arises from the possibility of dishonesty from the entrepreneur, which is the case if he does not reveal the actual value of the revenues. Consequently, there is a mismatch of information between parties, and the investor has no way to endorse this information. Despite this, the Revenue Share Contract prevents the moral hazard problem, since it imposes a closer relationship between parties.

In an effort to prevent all these issues, the platform creates a mechanism of punishment to ensure its image is not damaged, nor the projects and the clients are fraudulent, such as extra fees. In addition, the platform increases its credit risk rate and considers more restricted rules for future possible financings.

7.1 Credit Rate and Loan Interest Rate

In order to evaluate the risk of the project, that platform has to create its own credit risk rate. This rate helps the investor understand what are the level of risk of the project, when considering investing on it or not. This credit rate has to consider many factors to attribute a credit rate, such as duration, expected revenues during the investment period, total amount requested to be borrowed and the capacity of reimburse the loan.

To begin, when a new project appears requesting for funding, the platform makes an analysis on the project and attributes them a classification based on a scale from “A+”, which are the ones that have the lowest risk, to “E” that is attributed to projects with significantly higher risk. The risk inherent to the project can achieve a better classification, if the entrepreneur can guarantee payment in the case

something goes wrong. This collateral can be a personal guarantee that entrepreneur can give up if there is a problem during the loan and they are not able to pay to investors.

After all considerations, the platform and the entrepreneur decide what is the best convenient rate for the project, to be posted online for investors to see.

This rate is an indicative return that the entrepreneur is willing to pay to the investors. As the process is an auction process, the investor can indicate its own rate, without considering the credit rate attributed by the platform, and the entrepreneur can accept it. When the entrepreneur decides to accept the investor's rate and signs the contract, this is the rate stated for the whole duration of the contract. It is possible that for each investor there are different returns to investors in accordance to the amount invested. After the entrepreneur decides to accept the investor's rate and signs the contract, this is the rate applicable to the revenues, in order to pay to investors during the loan period.

8. Instalment Payment Value

After the agreement on the Revenue Share Contract, the next step is to decide the amount of instalment that the entrepreneur needs to pay to their investors. Each investor is going to have a unique amount to receive because it depends on the value borrowed.

The formula to calculate this value is the same used by the bank, through an annuity. It takes into consideration the revenue share rate (r_e) decided, the duration of the loan (n) and the amount borrowed. The duration of the loan (n) has a minimum loan request of 6 months, and it goes until 36 months of financing. The formula states that the amount borrowed must be equal to the present value of all the instalments paid, as presented in the following formula:

$$Instalment = \frac{Amount\ Borrowed \times r_e}{1 - \frac{1}{(1 + r_e)^n}}$$

Every payment, the entrepreneur must see if there is a mismatch between what was forecasted when putted the projected online and what the project generate in fact. When the entrepreneur has to pay to the investor, he has to compare the value of the instalment decided upon the signing and the amount of revenues according to their Revenue Share Contract. Therefore, if the value of the payment is higher than this, the entrepreneur pays the second amount to the investors, which will deduct the value of future instalments to be paid. By the same logic, if the amount is lower, the entrepreneur pays less than stipulated, as it is agreed on the contract signed with the investor.

The payment schedule is defined within the contract signing. The payments might be done every month or with another time frequency. However, the frequency of payments must be the same for all the investors of the same project, even if with different amounts to receive.

9. Marketing

The success of the platform is almost directly connected to all the free publicity it can have. As a consequence of that, the crowdfunding campaigns success depends on that too. So, there must be an effort to advertise the platform through all social media channels, such as LinkedIn or Facebook.

As the platform is a product powered by Millennium, publicity can be made using Millennium channels, in order to increase its exposure. Advertising through its existing website and also making allusion to it in BCP's brand offices, are examples of ways that can be used to increase the probability of success of the platform and, at the same time, the success of the overall crowdfunding financing method. This method allows lower cost on publicity of the platform.

10. Demographic Target

The clients targeted for this type of platforms are expected to be more selective than the regular clients of loan requirement of the bank.

Since the projects presented in the platform are riskier than the traditional ones, it is expected that they are going to be financed by young people, between 30 and 55 years old, concluded by *Kirby and Worner (2014)*. In Portugal, there are 3.67m individuals between those ages. This happens because during those ages people are more risk lovers and, therefore, they are willing to take more risk when investing. Furthermore, the younger generation prefer to take control over their own money, deciding where to invest or not, instead of lending it to large financial institutions, as *Attuel-Mendés (2017)* concluded.

In terms of gender, women are more risk averse than men, therefore it is expected that men would be more active in investing in this type of business, as conclude by *Eckel & Grossman (2008)*. Considering the age gap and the gender, there are 1.75m individuals that are able to invest through a crowdfunding platform.

Lastly, it is expected that those who invest in these projects have higher levels of income available to invest.

11. Legislation

The alternative financing industry in Portugal is still a recent phenomenon and therefore, there are some risks and potential issues associated with that.

To start, the main risk that this model may face is regulation. Even though there has been an effort to legislate all points related to it, there is still lacking legislation regarding the protection of the entrepreneurs on business plans or to have their ideas stolen.

On the contrary, good improvements have been done in recent years in law, regarding debt and equity alternative financing. They have set a limit for the investment of non-accredited investors, who can only invest up to €3,000 per project, summing up to €10,000 annually. In the case of accredited investors, who have an annual income of €100,000, they have no limit to invest. This is important since it is a

safeguard for investors that do not have any type of formation about investments, in order to ensure that they are more careful when deciding to invest.

In the case of the entrepreneur, they and their projects can raise up to €1m. In the case of a segmented funding campaign to qualified investors, the cap is set to up to €5m.

This new decree law has limited the platform activities, since the core business must only be the raising capital functions. This fact implies that the platform cannot work as an advisor for investors in order to advise them in which project they should invest. Thus, its activity must be only as an intermediary.

12. Valuation Methodology

In order to understand the viability of the project, the valuation method used is a Discounted Cash Flows Model. For this, revenues, costs and initial investment are estimated based on market analysis and internal studies from Millennium.

The valuation considers an option, because Millennium has the option to close the platform at the end of each year. This allow BCP to close the platform if the return they are getting is below the expected or if it is not as rental as it was expected.

The payback period of the project is as well calculated, in order to help understand how long would take to pay the initial investment that the project requires.

The valuation is for the end of 2018.

13. Platform Financials

13.1 Revenues

The platform revenues can be from three different sources: Origination fees, Registration Fees, and Additional fees.

The Origination Fees (OF) are charged to entrepreneur. Those are a percentage charged in accordance to the amount requested. This rate should ensure that the platform has enough revenues and profits to be auto-sustainable and grow. This rate is a value between 5% and 10%, which is automatically deducted from the collected money.

Registration Fees (RF) are the amount requested to entrepreneur, but only when the client has success on getting the amount requested. This fee is a symbolic amount of 30€. The investor can register for free.

Lastly, the platform may charge some Additional Fees (AF). These fees are only charged when there are late payments and correspond to transaction costs, but they are announced in the website previously.

Concluding, the total revenues¹³ are given by the following formula:

$$\text{Revenues} = OF \times \text{AmountBorrowed} + RF \times \# \text{contracts} + \text{Additional Fees}$$

The Amount Borrowed contemplates the number of entrepreneurs that demand capital and the amount they request. The number of contracts are all the contracts established between investors and entrepreneurs. Each investor has its individual contract, as the rates and the amount are different.

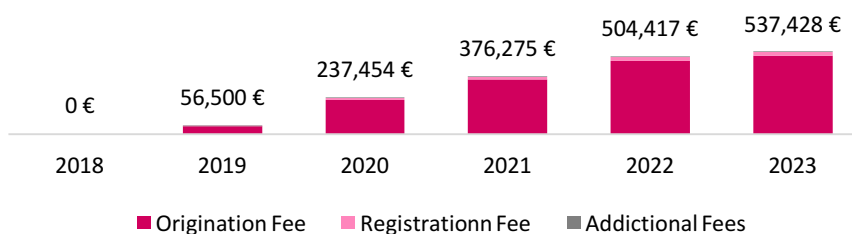
To start, the number of entrepreneurs based on the pre-existing platforms are expected to be 100¹⁵, during the first year of operations. On the following year, it is expected that the number of entrepreneurs requesting capital quadruple, reaching almost 400. After that, the growth rate is expected to be 59%¹⁵ on the next year, and after that stabilize at an annual growth of 26%¹⁵ for the next years. The amount requested by project is expected to be on average €7,000¹⁴ in the first year. During the next years, it is assumed to grow at a constant growth rate of 6.85%¹⁴. This growth is due to the platform increasing its exposure and to the small and medium companies that will continue to request for projects, either new ones or the pre-existing that can request for more funds. Based on this, the amount requested is the product between the number of entrepreneurs and the amount they are requesting. The Origination Fee is expected to be, on average, 7.5%¹⁶, that multiplied by the amount borrowed, gives the total Origination Fee Revenues.

The Registration Fee Revenues are the product between the number of projects at the end of the year that successfully concluded the amount requested and the Registration Fee of €30¹⁵.

The values of Additional Fee Revenues are forecasted to be €1000¹⁵ during the first year, and grow at the same rate as the amount requested per project grows, which is 6.85%¹⁵.

The Total Revenues are expected to be the sum of the Origination Fee Revenues, Registration Fee Revenues and the Additional Fee Revenues all summarized is table 3 in the Appendix.

The revenues are expected to follow an upward trend during these 5 forecasted years, due to market predictions, that this type of financing is going to increase its market share. The upward trend is visible in the following graph, that presents the revenues evolution over these 5 years. During the first three years, it is expected to have a higher growth accent, and after that it has a more stable growth, from year to year.



Graph 3: Total Revenues Forecast

¹³ Formula and values obtained through market analysis, based on pre-existing platforms

¹⁴ Based on what existing platforms in Europe have developing over years, summarized in Table 2 in the Appendix

¹⁵ Based on Market Analysis

13.2 Costs Structure ¹⁶

Cost can be from two different sources variable and fixed costs. The first one depends directly from the activity of the company. In this case, the platform does not have variable costs, since all the investment funds are only paid by investors.

The fixed costs are costs that the platform always has, regarding how the business is going. During the following years, the costs can be from different natures, such as internet web maintenance costs, salary and compensation of workers and some other expenses, like marketing and advertising.

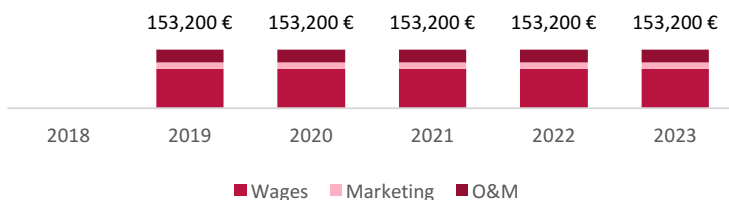
The maintenance costs are basically on the maintenance of the website summing up to an annual cost of €20,000. This costs are online related to website, and do not consider remuneration to employee or marketing expenses.

The salary and compensation of workers is the remuneration of those who work on a daily basis on the platform. This demands the existence of a manager and two analysts. This represents the minimum to start, and as the business grows, this number of employees is expected to increase. The compensation is a monthly cost of €2,000 for the manager and €1,200 for each analyst, summing up to a total of €4,400 monthly, and €52,800 annually.

In terms of office rental, this platform can be developed under the existing building of Millennium BCP, in order to benefit from synergies and costs savings.

Finally, the marketing expenses are summing up to €10,000 annually. These marketing expenses are relatively small, because the marketing campaigns should be focused on attracting in the first place, the already existing clients of the bank to invest. In a second phase, it should be focused on attracting new clients that want to invest their money and are more risk-loving, due to the higher associated risk. Therefore, it can be done by using the existence networks of the bank, in order to create synergies.

These costs are expected to be kept constant in the beginning years, since they represent fixed costs that do not depend on the activity of the platform, as can be seen in the following graph.

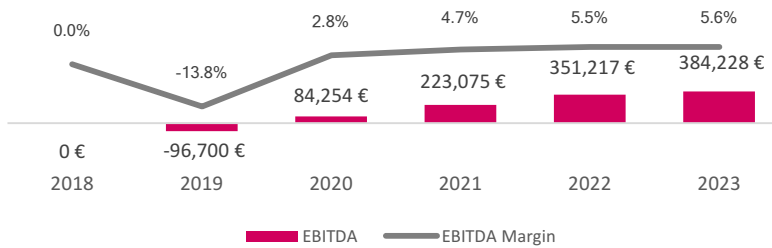


Graph 4: Total Costs Forecasted

¹⁶ All costs are provided by internal studies of Millennium BCP and Active Bank and summarized in table 4 in the Appendix

13.3 EBITDA & EBITDA Margin

The same positive trend of revenues is reflected in the EBITDA values, even though the project has a negative EBITDA during the first year, because it is a new project and in expansion. After the first year of full expansion, the platform expects to have a positive EBITDA, with an EBITDA Margin of 2.8%. During the following years the EBITDA margins increases, by increasing its weight in revenues to 5.6%. This positive evolution translates the expansive nature of the project, and the trend that is estimated. EBITDA's and EBITDA's margin evolution can be seen in graph 3, presented below.



Graph 5: EBITDA and EBITDA Margin

13.4 Initial Investment

The initial investment is higher, since the creation of this type of projects demands a high level of investment upfront. The first cost is the initial capital requirement demanded by CMVM. The initial capital should be of €50,000, as demanded by CMVM.

The next expense is related to the creation of software and mechanism of payment that the intervenient needs, which is a total amount of €35,000. For this particular cost, there are two alternatives. The first one is to contract a specialized company to do all the processes and the second alternative is to contract informatics engineer to design the technological part.

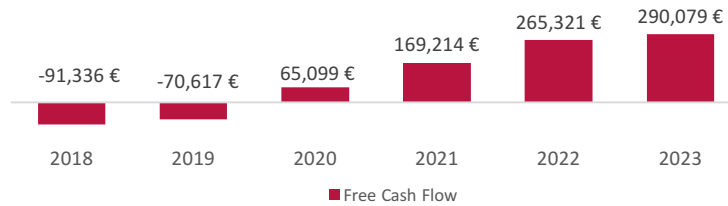
In addition to the previous costs, the company's registration cost is €360, while the new equipment needed has a cost of €5,976.

Having said that, the value of the initial costs is summed to €91,336.

In terms of working capital and further investments during the project, they are not expected to occur and therefore are assumed to be zero for valuation purposes.

13.5 Free Cash Flow, Net Present Value and Payback Period

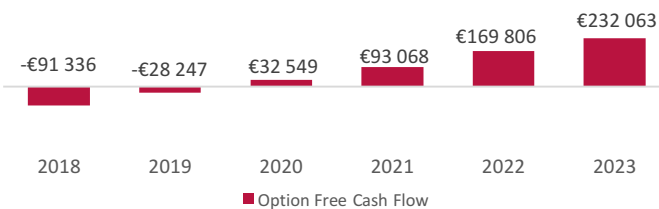
Based on the previous descriptions, it is possible to get the value of the free cash flows, that this project will generate, as presented in the following graph:



Graph 6: Free Cash Flow

Notwithstanding, the valuation of the project needs to consider a probability of success of the platform each year, because BCP has an option to close the platform. Therefore, in the first year the probability of success of the project is around 40%¹⁷, due to people reluctance in putting their money in something new and risky. In the following years, when investors are more informed about this new mechanism, project's probability of success increases to 55%. The same trend exists in the following years, being in the last year estimated to 80%.¹⁸

To calculate the value of the project, considering the value of the option it was used a backward induction. Each year, the option has two possible outcomes: the first one when the everything goes as estimated and the second one when the platform is closed, and consequently there are no cash flow associated with this. To calculate its net present value, the two possible outcome must be weight by the probability of each event to occur, in other words, it is the probability of having success times the correspondent cash flow plus the probability of failure times the cash flow of that. With this, we obtain the option cash flows.



Graph 7: Option Cash Flow, considering the probability of success every year

Next stage is discounting the previous calculations each year, using the discount rate and bring it to 2018, in order to put all of them at time zero in order to be summed to get the NPV value. In terms of discount rate, it was assumed as being, approximately, 11.3%. This was calculated using a risk-free of Portugal of 1.19%, a Millennium BCP beta of 1.176, and a market risk premium of 5.5%, give a Millennium return on equity of 7.66%.¹⁹ In addition, the discount rate needs to demonstrate the risk of the business

¹⁷ "The determinants of crowdfunding success: evidence from technology projects"- by Alessandro Cordovaa , Johanna Dolcib , Gianfranco Gianfratec, (2015)

¹⁸ Table 6 in the appendix

¹⁹ Source Bloomberg 4th December 2017 (summarized in table 8)

itself for the bank. Even though, the project is promoted by Millennium, it has more risk, when comparing to the traditional projects, that is why it is summed a business risk of default of 3.68%.²⁰

The free cash flows follow the same upward trend, as the one presented by the revenues. The increase in available cash flow to the firm is higher from year 1 to year 2, followed by the increase from year 2 to year 3 of 157%. For the remaining years, the growth of the cash flows is more stable, but continuous to increase. The Net Present Value of the project is the sum of all the discounted cash flows, which gives a total of **€223,129**.

The project has the capacity to fully repay the initial investment of the project during the first three years after the platform is fully operational. This means that the generated cash flows are above the investment that the platform requires in advance.

14. Sensitivity Analysis

The value of the Platform depends on how the market and the crowd reacts to it. Therefore, the project value change among others, with the discount rate and the growth of the money requested by project. As the base case, the discount rate was kept constant at 11.3%, and a growth of the averaged asked money of 6.85%.

The first sensitivity analysis changes only the growth rate, giving a range of values of €209,642, when growth is lower, and €236,903, if growth is better than estimated. In second, only the discount range change, as a result of the change in the business risk premium. This can make the value of the project to vary between €211,291, when crowdfunding is becoming riskier, and €235,547, as the crowd believes in this alternative financing and it becomes less risky.

Finally, if the two sensibilities are joined, there are two possible scenarios, the pessimist scenarios giving a value of €221,532 and the optimistic scenario that might value €224,551. In the first one, it assumes that the average money requested by project only increases 5.85%, and a discount rate of 12.3%. This might happen if the crowd is not very enthusiastic with the platform, and consequently do not invest on it. In the optimistic scenario, the average money requested in reality overestimates the projections, assuming a value of 7.85% and assuming a discount rate of 10.3%.

Based on the previous results, we can conclude that the project is more sensible to changes in the growth rate that affects revenues than to the changes in discount rate.

All of the results are summarized on table 9, in the appendix.

15. Possible Issues and Warranties

The project has a positive impact for the bank, however, there are some issues that should be considered before engaging in this project.

²⁰ Based on IOSCO data: see appendix table 7

Firstly, the initial investment requested up front is high for one isolated risky project, even though there is always the possibility of creating synergies for clients and for the banks.

Secondly, the platform needs to guarantee that investors have full knowledge about the risk of these investments, because it will be associated to the Millennium brand, but has different levels of risk. This is important as if something goes wrong with the project, as BCP will not compensate the investor for potential losses and will not be able to guarantee their money back. One of the main concerns is that most of existing platforms in the market have not reached maturity, which means that is still quite unknown how it will behave until there, however, the prospectus is positive.

Furthermore, Millennium has always the possibility to close the platform if it is not giving the returns they are expecting, revenues are not compensating the costs or damaging the bank's image. Therefore, Millennium should be confident enough to be able to exit this project, to prevent further impairment.

Finally, the value generated for the bank is positive, €223,129. Despite this, it is a relatively low value added when compared to other existing and prospective projects of the bank. Given the big scale of projects taken by Millennium, this negative point should be taken into consideration when deciding on whether or not to go ahead with this project.

16. Recommendation

After all considerations, the recommendation is to proceed with the creation of the platform. This represents a market segment with high growth potential, because population has becoming more technological dependent. As a consequence of that, people prefer to manage all their banking accounts through internet and mobile applications, thus the same thing applies for their investments.

In addition, people do not have as much money as they used to, due to the financial crisis, as so the available money to invest is lower. Therefore, they want to invest smaller amounts in products that give them money easily and with high returns, in other words, characteristics that banks are not offering right now.

Besides this, banks need to keep trying to follow the new tendencies, otherwise the banking sector will suffer some changes. As quickly as Millennium starts to invest in this new businesses, easily BCP will be able to adapt itself to new changes and challenges that may appear for the banking sector due to technological development.

Based on all the previous facts presented, the platform is a value creation project, as already been showed in the financials. The value is only the begging amount, that for a long run prospects will be certainly higher, because there is the positive growth trend in this sector.

Even though, there are some risks that should be consider when presenting and reflecting about to proceed or not with the project, including legislation and the newness of the project, in addition to the risk of business itself. Another alternative for Millennium, if the creation of their own platform is too risky

and might damage the current image of the bank, is to try to make a partnership with an existing platform. However, this should be seen as the last alternative, if the idea of the platform is not very well accepted.

Summing up, Junтта 2.0 is the way to face the new challenges that technology has imposed on the banking sector, due to its easiness of how to use it. Therefore, any institution that does not start development their own way of keeping in the hedge of technology, in the future, might see they traditional activity threaten by new sector players.

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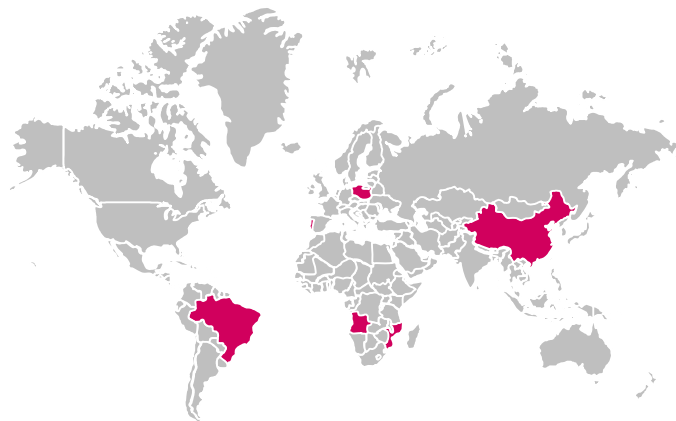
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18. Appendix



Appendix 1: Millennium BCP presence in the world



Appendix 2: Process of Crowdfunding

| Strenghts | Weaknesses |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Adopt a more aggressive behaviour in the market as players start to enter | Damage bank image |
| International Expansion through its international channels | Entrepreneurs avoiding BCP platforms with fear of high fees as are normally asked |
| Offer more attractive products to clients | |
| Contribute to economy growth | - |
| Opportunities | Threats |
| Increase the number of investors and entrepreneurs interested in the market | Regulation |
| Increase the number of clients of the bank | Reluctance from the crowd |
| Increase the market share | - |

Table 1: Summary of the SWOT Analysis

| Growth Rates | |
|----------------------|--------|
| Number of Supporters | 70,92% |
| Money Raised | 6,85% |
| Nº of Projects | 61,35% |

Table 2: Summary of all averages of Growth rate of the platforms

| Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------------|------|--------------|-------------|-------------|-------------|-------------|
| Amount Borrowed | | € 700 000 € | 2 963 800 € | 4 674 619 € | 6 230 816 € | 6 595 319 € |
| # Projects | | 100 | 400 | 596 | 751 | 751 |
| # amount requested (average) | | € 7 000,00 € | 7 409,50 € | 7 842,96 € | 8 301,77 € | 8 787,42 € |
| Origination Fee | € - | € 52 500 € | 222 285 € | 350 596 € | 467 311 € | 494 649 € |
| # Investors Per Project | | 90 | 95 | 101 | 107 | 113 |
| Registration Fee | € - | € 3 000 € | 12 000 € | 17 881 € | 22 516 € | 22 516 € |
| # Investors | | 9000 | 15383 | 26293 | 44940 | 76811 |
| Additional Fees | | € 1 000 € | 1 059 € | 1 120 € | 1 186 € | 1 255 € |
| Total Revenues | € - | € 56 500 € | 235 344 € | 369 598 € | 491 013 € | 518 420 € |

Table 3: Revenues Estimations

| Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------|-------------|-----------|-----------|-----------|-----------|-----------|
| O&M | € 20 000 € | 20 000 € | 20 000 € | 20 000 € | 20 000 € | 20 000 € |
| Wages | € 61 600 € | 61 600 € | 61 600 € | 61 600 € | 61 600 € | 61 600 € |
| Manager | € 28 000 € | 28 000 € | 28 000 € | 28 000 € | 28 000 € | 28 000 € |
| Two Analysts | € 33 600 € | 33 600 € | 33 600 € | 33 600 € | 33 600 € | 33 600 € |
| Marketing | € 10 000 € | 10 000 € | 10 000 € | 10 000 € | 10 000 € | 10 000 € |
| Total Costs | € 153 200 € | 153 200 € | 153 200 € | 153 200 € | 153 200 € | 153 200 € |

Table 4: Total Costs Estimations

| Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------|-------------|--------------|-------------|-------------|-------------|-------------|
| Total Revenues | € - | € 56 500 € | 237 454 € | 376 275 € | 504 417 € | 537 428 € |
| Total Costs | € 153 200 € | 153 200 € | 153 200 € | 153 200 € | 153 200 € | 153 200 € |
| EBITDA | € - | -€ 96 700 € | 84 254 € | 223 075 € | 351 217 € | 384 228 € |
| <i>EBITDA Margin</i> | 0,0% | -12,4% | 3,2% | 4,9% | 5,6% | 5,8% |
| Depreciations | -€ 7 634 € | -€ 7 634 € | -€ 7 634 € | -€ 7 634 € | -€ 7 634 € | -€ 7 634 € |
| EBIT | € - | -€ 104 334 € | 76 620 € | 215 441 € | 343 584 € | 376 594 € |
| Taxes | € 26 083 € | -€ 19 155 € | -€ 53 860 € | -€ 85 896 € | -€ 94 148 € | |
| NOPLAT | -€ 91 336 € | € 70 617 € | 65 099 € | 169 214 € | 265 321 € | 290 079 € |
| Capex | -€ 91 336 € | | | | | |
| Change in WC | € - | € - | € - | € - | € - | € - |
| Depreciations | € 7 634 € | € 7 634 € | € 7 634 € | € 7 634 € | € 7 634 € | € 7 634 € |
| Free Cash Flow | -€ 91 336 € | € 70 617 € | € 65 099 € | € 169 214 € | € 265 321 € | € 290 079 € |

Table 5: Free Cash Flow Map

| Year | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|------|------|------|------|------|
| Probability of Success | 40% | 50% | 55% | 64% | 80% |
| Probability of Failure | 60% | 50% | 45% | 36% | 20% |

Table 6: Option Probabilities of success and failure of the project

| Business Risk Premium | |
|------------------------------|--------------|
| Zopa | 2,2% |
| Funding Circle | 1,5% |
| Credit Ease | 2,5% |
| Prosper | 7,2% |
| Lending Club | 5,0% |
| Average | 3,68% |

Table 7: Business Risk Premium

| Discount Rate | Bloomberg 4 december |
|---------------------------|----------------------|
| rf | 1,19% |
| beta | 1,176 |
| MRP | 5,50% |
| Millennium Cost of Equity | 7,66% |
| Business Risk Premium | 3,68% |
| Project Discount Rate | 11,34% |

Table 8: Discount Rate Parameters for Project

| Discount Rate | Revenues Growth | | |
|---------------|-----------------|-----------|-----------|
| | 5,85% | 6,85% | 7,85% |
| 10% | € 221 532 | € 235 547 | € 249 861 |
| 11% | € 209 642 | € 223 129 | € 236 903 |
| 12% | € 198 307 | € 211 291 | € 224 551 |

Table 9: Sensitivity Analysis Summary