Merging Family-Owned Businesses
An Application of Internalization Theory

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Abstract

Family-owned businesses represent one of the pillars of modern economy. In Portugal, they represent more than 50% of all existing companies according to a study conducted by KPMG (2019). Governance of a number of family-owned businesses can be challenging. This project addresses the process of merging three enterprises owned by one family, presently with different managers at the head of each branch, focusing on value creation arising from the merger. In order to do so a financial assessment tool is employed to assess the tangible benefits of the merger. Internalization theory is used as a theoretical background for the merger of domestic businesses, which is a novel approach. A merger, although it may be demanding presents an opportunity to internalize competencies and capabilities otherwise dispersed across businesses and so provide the reshuffling of the internal organizational design, namely in what concern governance, as well as the interface with external economic agents. Our results suggest that the intended merger creates value paving the way for its completion. This project features a natural experiment and should interest the family owners, as it proves that the intended merger will deliver tangible benefits. It contributes to academic knowledge, as it is an opportunity to test in a practical setting Hennart's (2019) internalization theory intended to international business at its inception.

Key Words: Family-Businesses; Internalization Theory; Merger; Agency Costs;kb Governance.

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List of Abbreviations and Acronyms

CEO……………………………… Chief Executive Officer

EU………………………………. European Union

GDP……………………………… Gross Domestic Product

IAPMEI…………………………..Agency for Competitiveness and Innovation (Agência para a Competitividade e Inovação)

NPV……………………………... Net Present Value

PwC……………………………… PricewaterhouseCoopers

SME……………………………...Small and Medium Sized Enterprise

SWOT…………………………… Strengths, Weaknesses, Opportunities, and Threats

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1. Introduction

Family-owned Businesses (also denoted "family firms") "are one of the foundations of the world's business community. Their creation, growth and longevity are critical to the success of the global economy" (Cadbury, 2000: 1). According to La Porta, Lopez-De-Silanes and Shleifer (1999), the family firm is the most common type of firm governance. In Portugal, this statement is no exception, as the Portuguese business fabric is composed mostly of family businesses. Studies developed by the Association of Portuguese Family Businesses (https://empresasfamiliares.pt/) indicate that family businesses represent about 70% of Portuguese companies, contributing over 50% to GDP at national level, and employing approximately 60% of the work force (Pordata, 2019)

In their 2016 study "Consolidating the strategy of family firms: The creation of a bridge between short and long term" PwC identifies two major weaknesses within family businesses' structure that may affect namely their capability of enduring the passage of time across different generations, or their survival, in a succinct way. Although one of the said weaknesses is indifference to the challenges of technologic revolution, another identifiable weakness is the one that most closely resonates with the purpose of this study: the risk of collapse by not planning succession. Neither of the statements mentioned above are the focal theme of this applied project, but both are to play an instrumental part in the application of this project.

The actual purpose of this applied project delves around mergers, agency problems, and governance as thematic focal points. The ultimate objective is to test a plan for three family-owned companies with different names, brands, and clientele, but all working in the same economic field, to fuse into one larger, powerful group. We analyze whether from a financial point of view the intended merger creates value that

we can measure. It is worth mentioning that the present board members of the analyzed companies are all part of the same family, and that the managing partners for each enterprise are too part of the extended family. The present governance structure creates agency problems that will be tackled at later sections of the project.

Here is where the internalization theory as proposed by Hennart (2019) comes into play. In his paper "Digitalized service multinationals and international business theory" Hennart (2019) analyzes the advantages of internalization in digitalized businesses. Along his investigation he describes several types of governance models and points out that "firms have to deal with many interdependencies, each with its particular characteristics. Some will be more profitably organized within a firm, and some on a market" (Hennart 2019: 1392) This will ultimately leave the firm with a choice of how to organize itself and the interdependencies within its own structure. For this particular case, we are faced with a natural experiment, which is the merger of existing family-owned business. This presents an opportunity to analyze the impact on the value that the merger will create for the firm. The analyzed companies intermediate their dependencies with the market in a segregated manner, and the merger might provide an integrated organization of such interdependencies, namely vis-à-vis suppliers. That is, the merged group will organize interdependencies internally as opposed to the present organizational mode of each firm dealing, for example, with suppliers, banks and other external entities in a separate mode.

To achieve a successful merger is no easy task. As Bower (2001) explains, no two mergers are alike, and on top of that it is worth mentioning that family firms are diverse in character (De Massis, Frattini, Majocchi, & Piscitello, 2018), and the analyzed businesses are no exception. Even if they are all owned by the same family and share a unified board of the directors, the fact that the managing partners are diverse

creates a disparity in the culture motivation, and the overall way of conducting business, potentiating divergences in objectives of the interested parties. This heterogeneity factor and how it influences the outcome of a merger has been proxied by the multidimensional construct of parties proposed by De Massis et al. (2018). This construct focuses on the sources of heterogeneity within family firms that should be taken into account, according to the author's experience, to understand the complexity of the determinants, processes and outcomes of family firms' behaviors.

To assert the financials of merging the companies we use a tool, provided by the Agency for Competitiveness and Innovation (IAPMEI). The contents and full extent of the tool will be explained in a later part of this study. To properly model the merger, some assumptions are considered, specifically in tangible cost reductions of some of the activities, benefiting from economies of scale and scope. These cost reduction projections are a succinct way of analyzing tangible results of the proposed merger of the referred to family businesses. The merged concern, and its new governance model, will also serve the purpose of mitigating agency problems.

The overall results presented in section 5 suggest that the structure created by the merger will create value by increasing the NPV of the combined companies and reducing costs across the board for the operations presently incurred by each subsidiary. Each of the enterprises will benefit from the merger because they will be more profitable and will have additional bargaining power and the opportunity to reduce their employed staff namely in support and intermediate functions, thus increasing efficiency by reducing cost-to-income. The new business structure and governance model will provide a more efficient, seamless control of operations, creating a more relevant company, which in the future will provide additional cost reductions. In fact the group

will effectively by managed as a single family venture, in a manner more proximate to a "family business".

The next chapter illustrates the motivations of the present project. Chapter 3 revises the theorical background and chapter 4 lays down the methodology. Results are presented in chapter 5, and their discussion is presented in chapter 6. Finally, the conclusions are summarized in chapter 7.

2. Motivations

2.1 Motivation for the project

First, the project at hand is a way to contribute to academic knowledge by applying financial management tenets and empirical analysis to a specific situation resembling a natural experiment (or random assignment). Second there is motivation from the personal point of view to design and implement this project as the companies referred to are my own family's. And the company I am currently working in is one of the referred to businesses. Apart from the specific knowledge of the companies, a number of informal contacts were conducted among board members and managers to strengthen the analysis and the scenarios described in detail in chapter 4[1].

Even though this project will serve as the final stroke to convince the board of directors that a merger is definitely beneficial for the shareholders, the merger might probably happen anyway as this is the direction the strategy of the family businesses is pointing to at the moment. Therefore, in the future this process can be studied further to evaluate the results herewith estimated, a sort of back testing that I can use to contribute to academic literature in a near future.

In sum, this project contributes to the academic community, namely as it is a natural experiment in which we encapsulate internalization theory. As suggested by Hennart (2015), in a family firm setting we use assumptions of internalization theory to frame the merger, and use the IAPMEI tool for modeling the merged venture and thus computing the net present value (NPV) of the merger and compare it to the present situation. This should interest consultants and academics, and mostly the owners of the family firms.

[1] Not all information is made available in the present document, for confidentiality reasons.

There is also the possibility to study the merger from a marketing and a people management point of view in future research, to gain hands-on information on how a merger affects family-owned businesses from these specific perspectives. However, we choose to keep our analysis simple and succinct entering assumptions that are easy to interpret and emphasizing value creation that stakeholders of firms can appropriate. In fact, economies of scale and scope surface to justify our assumptions of mainly staff costs reductions after the merger, building on recent research on family businesses (London Economics, 2011). As this project refers to a merger it relates more closely to economies of scope. The merged company can combine multiple product lines in one firm rather than produce them in separate firms. In our case the referred to product lines might as well be represented by as the different stores' offer[2].

2.2 Motivation for the merger

Merging, when correctly managed, creates a number of advantages for the merged companies. As Weston, Siu, and Johnson (2001:256) propose, in order to determine the potential benefits and synergies from the merger "the underlying economics of the industry must be understood." As we have access to the real numbers of the companies at hand as they are now, this necessity proposed by Weston et al. (2001) is fulfilled, giving us the opportunity to highlight the potential benefits of the merger with more accuracy.

In this particular case study, besides the natural consequences of the merger, such as growth in the scale of operations and the overall diversification of products and services across the merging enterprises, the vision of the board of directors is to unify and gain more control over several businesses that have been managed separately for

[2] See for example the literature review by London Economics (2011) reporting namely the effects of the characteristics of family businesses on firm performance, spanning agency cost mitigation, leadership efficiencies by improved leadership, increased trust and motivation by managers, employees and customers alike, to longer-term time-horizons of investment and growth.

many years. Stronger control might mitigate agency issues, the difference in motivation among owners and managers, as the principal-agent issue is mitigated by family management. As Burkart, Gromb, and Panunzi (1997) suggest, concentrated ownership can closely monitor the behaviors of the managers and can control their activities to improve the value of the firm.

Another issue that serves as motivation to carry out the merger, is the drive to eliminate or, at the least, reduce agency problems among the managing partners of the firms. A study by Kesner and Sebora (1994) revealed that when referring to mergers the CEOs will often align to the goals of their representatives, but when referring to the merging company, their study suggests misalignment and conflicts of interest. For this particular case, as all the companies are owned by the same family, and the managing partners of all the branches are part of it, this issue should not be as significant as it was in the study of Kesner and Sebora (1994). But several attitudes and observations provided by the managing partners at the informal interviews conducted for this study, suggest that it is present. The intention to retain power seems to be the main concern of managing partners. This situation can be corrected if the board takes a more hands on approach and monitors more closely the behavior managers, as suggested by Tan (2014). We posit that the merged venture will be less complex fostering cooperation and thus mitigating agency issues.

The objective is to eliminate competition among branches, by changing the governance model, reducing the costs of operations, increasing the market share, expanding business into new geographical areas, and preventing closure of business units. In a nutshell, this boils down to manage the businesses as a unified family firm, reaping the benefits. In order to further evaluate this notion, we present a SWOT analysis in a later section.

3. Theoretical Background

3.1 Family firms

To fully understand this project and the underlying construct it is important to characterize the type of companies involved. As stated above, all of them are family companies, but to serve to the purpose of greater specificity it is worth to recall what a family business is. According to *https://empresasfamiliares.pt/* family businesses are those "in which a family has control, can nominate the management and some of its members participate and work in the company". According to the data, family businesses contribute to nearly 50% of employment in Portugal. They also represent around 65% of the country's GDP[3].

Although much has been discussed about this overall theme, after reviewing existing studies it comes out that family firms differ from non-family firms in a number of aspects, but mainly on goals (e.g. Westhead & Cowling, 1998), ethics (Adams, King & King, 1996) and corporate governance (Randøy & Goel, 2003). Moreover, the main differentiation aspect is always ownership, a key proposition that has led scholars to define family businesses as "firms in which the majority of the shares is owned by family members, the threshold usually set at 50 % of ownership." (Henssen Voordeckers, Lambrechts, & Koiranen., 2011) Even though this definition only focuses on the ownership of the firm, it serves the overall purpose of characterizing family firms in a succinct and tangible way.

When referring to family businesses, to comprehend this topic we must look at the multidimensional construct proposed by De Massis et al. (2018). This construct relies in four intertwined dimensions: family structures, functions, interactions, and events, that characterize the overall heterogeneity of family firms.

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[3] A number of definitions of family businesses are presented in the report by London Economics (2011). This study presents facts and figures for family businesses in multiple geographies, although not including Portugal. The cited site https://empresasfamiliares.pt/ addresses the Portuguese reality.

The family structures dimension refers to the ties that link the people in the firm, these ties may vary from traditional to extended families. This concept becomes important because the family structure affects the managerial discretion of individuals, their motivations and their capabilities through resource mobilizations (Meglio & King, 2019), meaning that individuals might attain different advantages or disadvantages due to their overall affinities within the family. In this case the people in the different firms are mostly cousins. Brothers, sisters and spouses don´t work together. This responds to a policy imposed by the board of directors to avoid conflicts of interest between close family members. All the family members interested in working in the company, disregarding their affiliation, end up at some point as partners.

The second dimension, family functions refers to the functions assigned to family members, or in some cases, the overall behavior expected from their family member status when working within the company. This is especially important because as explained by Jaskiewicz and Dyer (2017) family functions may constrain access to the family resource pool or stimulate the intentions of the family for maintaining full control of the firm. In the context of this project, this argument may be key when trying to pursue a full-fledged merger among the companies, because even though the position of all managing partners is the same from a legal point of view, there are some who have more perks or rights than others. The latter derives from the fact that these partners are the descendants from board members. This status gives them specifically, more freedom to make decisions, and more power when imposing their views among partners. Some members of the family might resist the idea of a merger due to this situation, as they would lose even more decision-making power towards these "especial" partners.

The third dimension, family interactions, refers to the type of relationships among family members. This dimension is generally overlooked by literature as it is difficult to measure. A few studies signal that spirited interactions between family members may have positive effects in the firm's strategic behavior. In our case, relationships between family members remain very cordial, with few misunderstandings not related to work. It is important to stress out the point that among the family involved in the company there is a strict culture of separating business from personal issues, meaning that, although there may be differences among some of the family members regarding personal situations, the business front will not be affected.

The fourth and final dimension is family events, and it relates to stages or events that every family goes through, that change the overall dynamic and functionality of the family, such as marriages, births, divorces. These events may affect the family business, and typically determine a shift from a cycle to another, thus impacting the core of the firm. The analyzed family firms are not strange to this issue, in fact it is tradition to include the husbands of the daughters of partners as new additions to the company. Often this new family members end up being partners in a new store themselves, thus continuing the cycle. It is interesting to mention, that regarding divorce, when a divorcee is in position as managing partner his or her position is secure, meaning there is no punishment for it.

These dimensions impact the general aspects of the firm, regarding specifically, size, resources, capabilities, and governance. According to the EU SME standard the companies in prospect for this project can all be considered small enterprises, as each has less than 50 employees and a turnover not exceeding 20 million Euros. Size is a relevant dimension, also related to resources and capabilities' endowment needed to gain and sustain competitive advantage, from a resource-based view (Barney, 1991).

The most important factor to consider for this project is corporate governance. When studying this aspect in family firms, scholars have focused mainly on the dichotomy of companies having a CEO internal or external to the family (De Massis et al., 2018). This point has a significant influence in the general strategy followed by the enterprise. Some scholars point to the fact that having an internal CEO may suggest a deeper intention for maintaining control over the company, while appointing an external CEO may suggest that the firm lacks an in-family leadership figure, or that there is disagreement between the family members as to who should be CEO (Yopie & Itan, 2016). In all the analyzed companies there is a CEO who is a member of the family. It is imperative to point out that although there is a unified board of owners there is no one leader that guides the strategy of all the firms at the present moment. We consider that the merger will fill in this governance gap.

3.2 Governance within family firms and the Internalization Theory

The governance structure is key for the progress of any company, and more so when referring to family firms, as more than in other settings owners depend on the motivation, power, and good willingness of their employees to unlock the full potential of their companies. But there is no universal solution to solve this predicament (Bammen, Voordeckers & Gils., 2008). Keeping this in mind, the relationship between the owning family and the business managers should also be considered when deciding, modifying, or studying a governance structure within a family business. As Henssen et al. (2011) explain, a dynamic view is necessary to grasp the essence of modern owner–manager relationships and there are several implications on how to soundly structure family firms. This is an element that owners must address beforehand.

A conventional firm possesses a number of governing bodies, such as the board of directors, the management board and the advisory board, to help resolve its decision-

making processes more efficiently. The overall intention of these governing bodies is to guarantee the survival of the firm (Steier, Chrisman, & Chua, 2004).

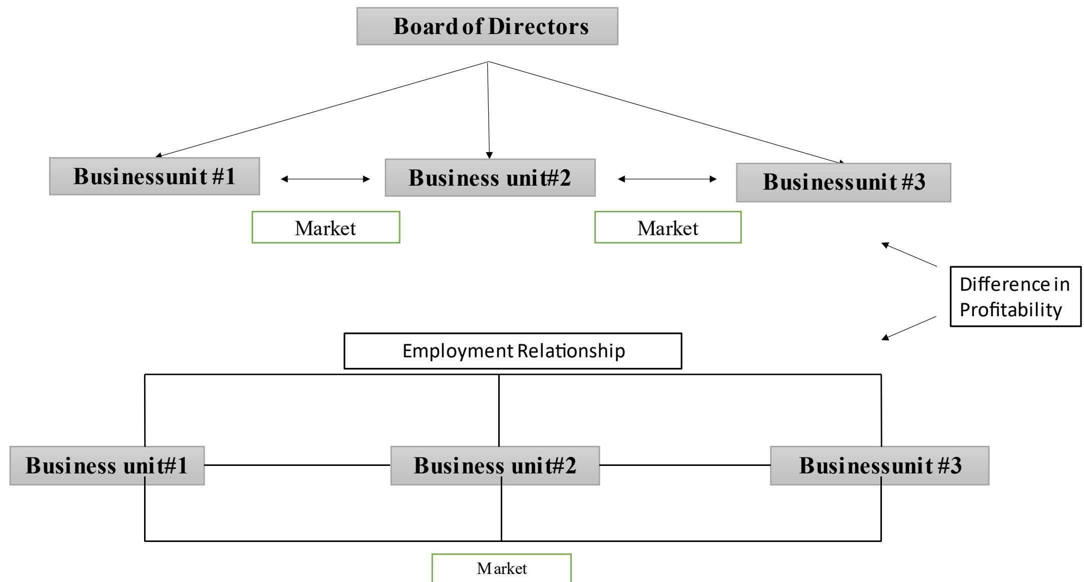
Family firm governance has been widely studied, and many specific topics have been looked at, e.g. board of directors and how their composition can predict (or not) the survival of a family owned business (Bammens et al., 2008); Shareholders interest protection and managerial entrenchment within family firms (Sener, 2014); and also just generally how governance structures vary across different family businesses (Arregle and Nordqvst, 2012). Even though all these studies have contributed to widen the academic field of family business governance, it can be argued that they offer a rather static point of view.

When considering the internalization theory in juxtaposition to governance of a family-owned business a broad aspect to be considered is the choice of the owning family to open the firm's governance to non-family members. As Pukall and Calabrò (2014: 2), point out "the openness of family firms' governance structures denotes the degree to which the boards embrace non-family members in addition to family ones." This point is of interest to this study, as a possible rearrangement of the governance structure of the firm should probably consider the possibility of adding non-family members to the board as a way to further advance and better control each business unit after the merger. It should be noted that to address adding non-family members to a managerial board, the ownership structure is usually not altered as family firms are extremely reluctant to share equity with non-family members (Chua, Chrisman & Sharma, 1999), we believe this applies to the case at hand.

The following figure can further illustrate Hennart's (2019) internalization theory. It fits to this project as it shows how companies can replace the market relationships by internalizing them as depicted below.

Figure 1

Hennart's (2019) internalization theory



As this figure shows the two different structures differ in several aspects, but the main point is the fact that by internalizing processes the businesses rule out the influence of the market on each of them, thus creating a difference in profitability and therefore being more efficient by applying Hennart's (2019) theory. When businesses internalize processes, they leave the market exchange outside of their internal structure, giving them room to better strategize, study and be more efficient when carrying out certain activities. This is the intention of the board of directors of the companies in question in this project.

We must also consider that firms must deal with many interdependencies, each with its particular characteristics. Some of them will be more profitably organized within a firm, and some on a market (Hennart, 2019), as the graphic above shows, therefore even though the idea of this project is to build on Hennart's theory and

calculate the tangible results of the modeled merger in terms of value creation and thus increase of the family's wealth.

In its paper, Hennart (2019) proposes that internalization theory is sufficient to address the reality and complexity of MNEs from emerging economies, including both their successes and, in some cases, their lackluster economic performance. Moreover, he suggests that applying internalization theory to MNEs highlights important ways in which they can enhance their business turning them more profitable for stakeholders. We adopt this view and present the results of value creation in later sections[4].

A number of authors advocating internalization theory, as for example, Narula, Asmussen, Chi and Kund (2019) posit that this theory not only explains what will happen, it also explains what will not happen. Internalization assumes that firms maximize profit. Managers do not make irrational decisions that damage the interests of the shareholders. We assume that managers maximize shareholder value rather than profit, that value depends upon size, and that size affects salaries. This will work perfectly to minimize possible agency issues within our firm.

Internalization theory also refers to the concept of firm specific advantages (FSAs). Regarding our case, there are several complimentary FSAs that can be recombined to gain efficiency within the companies. First, the combination of several departments, from accounting to administrative and marketing should be easily achieved as they all work similarly.

[4] The concept of firm specific advantages (FSAs). proposed by Rugman (1981) is based on the notion that every firm has advantages inherent to them and in many cases these advantages can be translated into knowledge. As assets cannot be recombined as efficient through the market (Hennart, 2009; Buckley & Casson, 1976). is, due to different reasons, processes must be internalized in order to recombine assets, share FSAs and internal knowledge in order to be more efficient by leaving the market outside the equation. A thing to note is that the recombination of complementary FSAs from two different parties can be achieved through, a transfer of one party's knowledge to the other or a joint provision of their respective knowledge to the recombination process as explained by Narula, Asmussen, Chi and Kundu (2019).

The most interesting application of this theory can be in the reconfiguration of business and clientele. Given that all the businesses work in the same field, but specialize in different areas, the existing knowledge attained from experience of each of them catering to their specific area is a valuable resource that can be shared within business units when the merger happens.

By applying internalization theory, agency issues might be mitigated by making information available across business units, to eliminate secrecy and possible misconduct.

3.3 Risk taking among family firms

Another aspect that we consider is risk taking, as merging four companies into one would involve risk. For decision making, risk is defined as the uncertainty associated with the return that a choice provides (March & Shapira, 1987). Risk-taking represents all risk decisions that managers make, not focusing on a specific type of risk (John, Litov &Yeung 2008).

The reviewed literature points out how the personal profile of each decision-maker affects behavior (John et al., 2008). In deciding between various alternatives, it acts according to his motivations, expectations, and incentives. These may be motivated by benefits, aligning equity with the firm's results, and taking riskier positions, as well as by the stability of their situation, in this case, presenting more conservative behavior.

There is a lack of studies addressing the circumstance in which risk-taking is influenced by the presence of a business family (Memili, Eddleston, Kellermanns, Zellweger & Barnett 2010). It can be argued that given the concentration of the business family's equity invested, the firm would choose to prioritize the firm's long-term survival over potential entrepreneurial opportunities that include risk (Voelcker, Macagnan & Vancin 2020).

Given that the preservation of control is one of the primordial concerns of family firms, Gómez-Mejia, Haynes, Núñez-Nickel, Jacobson and Moyano-Fuentes (2007) assert that family firms are prone to accept below target performance in order to maintain the control of the business. Despite this risk increasing the probability of running into bankruptcy, and the definitive loss of socioemotional wealth and power, family firms will most likely take risks that involve maintaining control over the company even if it prejudices the overall operation. In the same way, Family-owned businesses will also take more risks, and more specifically, debt risk, when trying to maintain some sort of Socioeconomical wealth status (Gottardo & Moisselo, 2017).

On the contrary, family-owned businesses are averse to entrepreneurial risk, and "avoid high outcome variance investments in order to protect the financial and affective stocks, which are concentrated in the firm" (Gottardo & Moisselo, 2017).

It should be noted that researchers such as Lee et al. (2017) have found that family organizations take more risks into maximizing the value of the company when the owning family owns more than 50% of the shares of the company. This metric, even though it is not measured in this project, proves to be important for the case of the firms referred to as in all of them the family owns 100% of the shares, divided between managing partners and board of directors.

All the elements mentioned can be applied to this study as careful considerations considering the notion that mergers can be risky, when taking into account the possible consequences to the business. In this case the loss of control from managing partners, the appearance of possible agency issues within the firm, and the restructure of the company to fit one unified mold can destabilize the current situation of each or all of the branches that is, as of now, considered positive.

3.4 Shareholder’s Value

The 1976 winner of the Nobel Prize in Economics, Milton Friedman (1970: 2), proclaimed that “a company’s primary responsibility was to maximize profits for shareholders”. This doctrine empowers the idea that the strategy behind every company should pursue the intention of maximizing shareholders’ value without taking much else into consideration.

Shareholder value is the value delivered to the equity owners of a corporation due to management's ability to increase sales, earnings, and free cash flow, which leads to an increase in dividends and capital gains for the shareholders.

A company’s shareholder value depends on strategic decisions made by its board of directors and senior management, including the ability to make adding-value investments and generate return on invested capital. If this value is created, particularly over the long term, the share price increases, and the company can pay larger cash dividends to shareholders, or use the free cash flow to invest in value-adding projects contributing also to the increase of the owners’ wealth. Mergers tend to cause a heavy increase in shareholder value, as proven by studies from Rani, Yadav & Jain (2015) who found that, among other things, the announcement of a merger or an acquisition provides significantly high returns. Yeh and Hoshino (2002) confirmed in their study that the shareholders of the merging firms gain modestly positive returns around the announcements and early days of the mergers. These gains tend to increase steadily with the passage of time.

Managers serve as agents of the shareholders, therefore their general objective must be to increase their revenue, but sometimes this is not the case, as there may be cases where managers’ interests may differ from those of the stockholders. This is called the agency problem.

Even though this is not the case for any of the companies in view of this project, as all the managers also hold shares of the company they are managing we can consider that there are already alignment structures in place, thus mitigating agency problems. We look into this issue further on.

3.5 The Agency Problem

Agency theory has to do with the conflicts of interest between an agent acting as a representative of a principal (Ross, 1973; Eisenhardt, 1989). If the interests of both parties are aligned, then a problem will not exist. Although, in many instances, this will not occur, as more often than not, the two parties involved will have different interests.

Then because of their functions, agents will typically possess more and better information than the party they represent, creating what is called in theory, asymmetrical information. By being more or better informed, agents will decide what actions to take based on their knowledge, leading to decisions that may benefit themselves rather than the principal they represent.

Regarding family companies, a number of researchers (Parsons, 1986; Eisenhardt, 1989; Daily & Dollinger, 1992) suggest that family firms, by nature, should not have problems of agency, considering that top management is part of the same family. But given the heterogeneity of family firms, family-owned businesses are bound to have agency problems. As Bergstrom, Stoll & Randall (1989) theorizes, family firms will have agency problems, when information asymmetry exists, disregarding infra-family altruism.

The literature recognizes several types of agency problems, but regarding family-owned businesses one is more likely to occur, being that families tend to possess a big chunk of shares that constitutes them as a large shareholder. As theorized by La Porta et al. (1999, p. 510) "the autonomy of the controlling shareholders in decision-

making keeps the potential whistle-blowers out of major corporate decisions, and thus reduces the risk of getting caught." Therefore, as large shareholders they have the power to impose their own objectives on the firm's management and the related decisions might not always be in the best interest of other shareholders.

The presence of a family as a large shareholder can also generate conflicts of interest between minority and majority shareholders (Lopez de-Silanes & Shleifer 1999), this being the case of this project. The board of directors could use its power to push the merger agenda even though the minority stakeholders may have their reservations. However, since, in this case the board of directors is part of the same family as the managers, and they also have a close link to the firm, these problems are not likely to materialize as it would damage the overall stability of the family and more likely their income and wealth as a group.

Another issue that may cause problems of agency within the organization is family feuds, as theorized by Schulze, Lubatkin, Dino & Buchholtz. (2001). When family members are not all involved or interested in the management of the firm, or if they have diverging views, this might lead to disagreements and fights that will have a detrimental impact on firm value. Therefore, family structure and organization are important to family firms and necessary to fully comprehend the extent of this project.

Finally, agency can arise from the pursue of non-economic goals, or preferences, by the board of directors. The presence of noneconomic preferences creates two problems, as explained by Schulze et al. (2001, p. 102): "First, while owners may be expected to share common economic interests, there is little reason to presume that they have common non-economically motivated preferences. Second, conflicts of interests may arise because some non-economically motivated preferences can cause owners to take actions that threaten their own welfare as well as those around them."

Overall, it is evident that family firms are not at all exempt from having problems of agency, but, on the contrary, are a fertile ecosystem for agency to appear. In our financial analysis we do not enter the effect of agency mitigation by analyzing each family business. We point that this is an additional source of cost reduction, by avoiding additional expenses on bonuses, namely. Our view is that the avoided costs can be redirected to a global incentive program to further the increase in market scale by increasing sales, mainly.

3.6 Differences between mergers in family and non-family firms

As this project regards family firms, it is worth pointing out how different a merger within a family firm can be when compared to one of a non-family firm.

According to Gallo, Tápies, Josep & Kristin. (2004) when referring to fusions, the case of this project, there are no significant differences between family and non-family firms, the only aspect of interest is the fact that family firms are able to find more synergies between the merging companies. Gallo et al. (2004) also point out that restructuring processes are less painful when referring to family firms, and also refer that family firms tend to carry out the merging process with a lot of secrecy, giving them a strategical advantage towards competitors.

Gallo, Arino, Manez & Cappuyns (2005) point out in their study “Internalization via Strategic Alliances in Family Business” that to achieve a successful merger within a family firm, there exist several factors that must be considered:

- The idea of maintaining control of 100% of the ownership should be disregarded. The most profitable companies of any type are those in which the family only has 30% (although this is no longer genuinely considered a family company by academic doctrine) (Gallo, 2005).
- Enhance the managerial capacities of the board of the organization.

- Put aside personal objectives, towards more global and beneficial goals that will help evolve the merged company.

For our case the first point goes accordingly to the intentions of the board of directors, of not only retaining 100% of the control of the firm, but also to gain more control over everyday operations and decisions. This is a point that should be considered for the merger to work.

4. Methodology

We use a financial analysis approach to determine the impact of the upcoming merger of the three firms as compared with the existing situation in which the firms are managed as separate businesses. We use Net Present Value (NPV) to measure value creation in both situations:

i) Scenario A: three separate businesses. We add the various accounts of the businesses arriving to a composite NPV resulting from the sum of NPVs of the individual businesses.

ii) Scenario B: the merged concern. We enter the assumptions listed in the following sub-sections and obtain the NPV after the merger of the three said businesses.

In both cases we use the "Business Plan Financial Model" from the "Agência para a Competitividade e Inovação (IAPMEI)", available in https://www.iapmei.pt/ and taking into consideration the method diploid by Duarte and Esperança (2014).

This tool is used as an investment project evaluation tool that allows companies to evaluate and test the profitability of new investments, with two options: 5 years and 10 years projection. This tool allows the user to support the structuring of a business idea or investment project; facilitate the evaluation and analysis of the profitability of new investments; support dialogue and negotiation with stakeholders, in particular with funders. It can also be used in our two situations i) and ii) as described above.

After tabulating the results for each of the companies individually, a new experience is performed via the tool to see what the results will be if all these companies were managed as one big group, encompassing different units. To do so each enterprise will be considered as a separate business unit, the costs will be divided between companies and some statistical functions as average cost of capital will be utilized to

predict and simulate the overall performance of the would-be group. Some statistical assumption will be made in order to properly model the merger.

A crucial element in running the financial tool departing from the financials of the separate firms is to define the impacts of the merged venture. We base our estimated impacts on the figures deployed by London Economics (2011), which in its literature review report that family businesses are more profitable – Tobin’s q (a market measure of firm performance) is 11.6% larger. As in our case the separated units are already family businesses we use a 5%-10% interval for the impact of the merged venture. The values, between 5% and 10% are calibrated according to the knowledge of what as already been done and the leeway for further improvement, in terms of cost reduction and increase in sales. We were conservative in the estimation, thus considering e.g. a 6% in cost reduction and the same figure for the increase in sales.

We use the recent accounts of the companies as a proxy for the merged venture, which is a conservative approach as we are only considering future growth based on the expectations and projections given by the hard data attained to complete this project.

4.1 Assumptions for the baseline scenario

The merged company will benefit from reduced costs along with larger size and so higher bargaining power, on one hand, featuring eventually a less flexible handle of operations and higher complexity.

Having these factors in mind we conduct a financial analysis based on: (i) the actual financial data from the existing three firms (scenario a) ; and (ii) the provisional data of the merged companies (scenario b) as explained below.

4.1.1 Costs

We considered a 6% reduction in operating costs for the merged company corresponding to a 10 % increase in scale of operations. Merging into one concern, the

support staff can now work for the group as one avoiding duplicating functions as now occurs. Also, the growth in scale will directly impact in the cost of materials as the company will have more bargaining power toward suppliers. One more added perk resulting in cost reduction is the bargaining power toward banks, which will result in better deals when negotiating credit and overall transaction costs. Even though there is a lack of empirical studies concerning the effect of mergers on costs reduction (Le Pape, 2010), according to a few investigations costs reduction derived from mergers varies from 4 to 7% (Schmitt, 2016;). Considering this, the above figure results from a sensitive analysis and the expectations of the family after consulting the managing partners.

4.1.2 Sales

We considered a 6% increase in sales; this percentage responds namely to the expectations of the board members and managing partners interviewed for the project, contrasted with the research studies of Chen (2020) that suggests that sales growth can be a direct result of mergers, as they constitute a kind of inorganic growth. It also can be supported by the expected growth in scale of the merged companies, a situation that can assure a reduction in the cost of goods as bargaining power is attained towards suppliers, thus assuring competitive prices.

4.1.3 General & Administrative expenses

Regarding these expenses we consider an 8% reduction in general and administrative expenses, because all the material needed on the operational level for the business units to work can now be purchased in bulk, as a group rather than individually. Also, some administrative positions can now be unified and as was mentioned above, resulting in a reduction in personnel and therefore salary costs. These assumptions are based also on the studies of Dranove and Shanley (1995) that prove

that by merging not only redundancies can be eliminated but acquiring material for the merged company can reduce costs significantly.

4.1.4 Payroll costs

This item requires a deep dive, after which we consider a payroll cost reduction of 30%. The merger will make it possible to cut a number of job positions, mainly in the human resources, accounting, and administrative departments. The current headcount for these departments combined as of now stands at 18 employees. A 30% staff reduction would deliver a total of 13 employees. These departments can now serve the three business units as one meaning there is no need for each of them to continue to individually carry out the payroll process, training and career advancement of the employees individually. We base this assumption on the studies Dranove and Shanley (1995) who propose the eradication of redundancies within merging companies to reduce costs, and the investigation of Krishnam and Park (2002) who concluded that mergers are to be more successful when reducing the maximum possible of the workforce of the merging companies without damaging the overall structure of the newly formed company.

4.1.5 Other Costs

A 5% reduction of several other costs such as publicity, communications, insurance, security and material transportation were also considered as a direct result of the merger, taking into account all of the costs can now be diluted within the group and does not have to be suffered by the business units individually.

4.2 Sensitivity Analysis

We conduct a sensitivity analysis for an optimistic scenario and a pessimistic scenario. As NPVs can be added and weighed, as they measure value at the same point in time, we consider a 50% weight on the baseline scenario, a 20% weight for the

pessimistic scenario and a 30% weight for the optimistic scenario in which case we consider additional cost reductions. This calculation yields a NPV of 3.249.761€ which translates into value creation, supportive of the merger. We conducted calculations with alternative weights and the NPV remains positive.

5. Results

Keeping in mind that this is rather an applied project and not a thesis, the rigor the results should be contrasted to the practical implications that they serve. The following results obtained from the IAPMEI assessment tool were presented to the board of directors of the companies addressed in this project, and were received with positivity providing “tangible proof that this is the strategy to follow” as pointed out by one the board members.

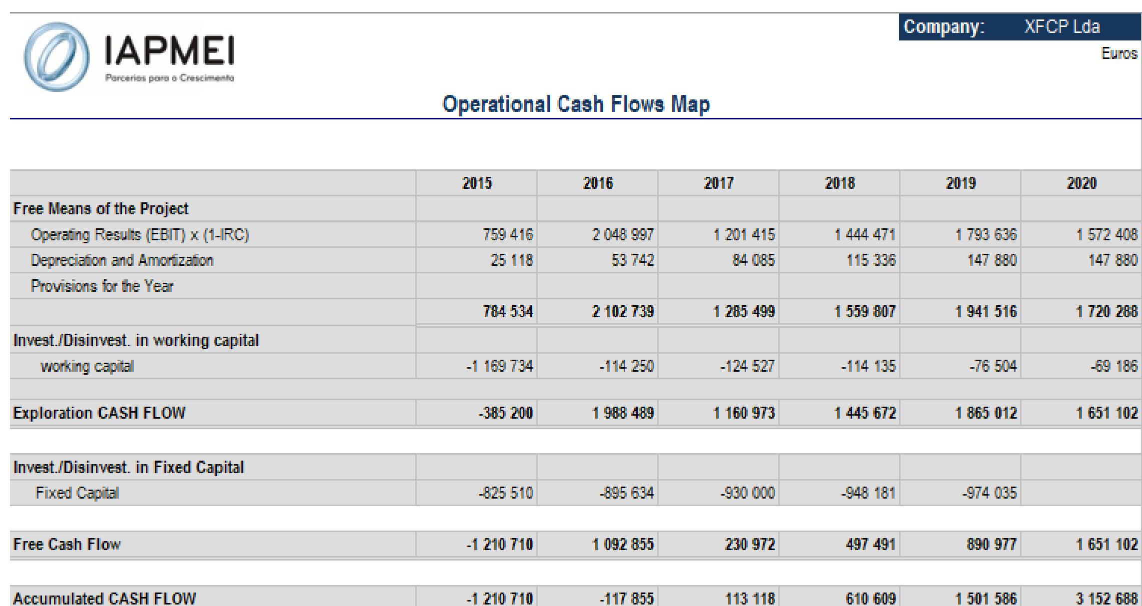
To be able to fill the blanks proposed by the used tool a separate excel sheet was created to add the financial results of the companies along the years to get a full perspective of what they would look like if managed as one enterprise with different units. The complete IAPMEI working sheet will be added to the annexes of this project. Also in order to properly model the merger, some assumptions will be added with consideration of economies of scale and scope, meaning that some of the numbers will be modified to accurately simulate the merger as if had already happened.

To contrast the values of the hard data obtained for the past years used to model the merger, a projection based on the values and assumptions was carried out to model the venture into the future. This projection took the year 2022 as baseline and continued for five years. The data used corresponds to the one attained before, unified and based on the assumptions mentioned above. These tables will be presented alongside the ones corresponding to past years in order to properly see the contrast between them.

In exhibits A. and B., the operational cash flow map. From these values the ones that present more interesting characteristics are the ones for the working capital. These values are all negative and decreasing on a yearly basis. As they are negative, the data suggests that the company is reducing its working capital. It can be assumed that these parameters would be corrected on the presumption of the merger as the holding

company will by default reduce costs from overlapping activities, such as marketing, human resources, accounting, and several other procedures. This means that the operational result should be higher than the ones presented here below.

Exhibit A. Operational Cash Flow



IAPMEI Parcerias para o Crescimento

Company: XFCP Lda

Euros

Operational Cash Flows Map

	2015	2016	2017	2018	2019	2020
Free Means of the Project						
Operating Results (EBIT) x (1-IRC)	759 416	2 048 997	1 201 415	1 444 471	1 793 636	1 572 408
Depreciation and Amortization	25 118	53 742	84 085	115 336	147 880	147 880
Provisions for the Year						
	784 534	2 102 739	1 285 499	1 559 807	1 941 516	1 720 288
Invest./Disinvest. in working capital						
working capital	-1 169 734	-114 250	-124 527	-114 135	-76 504	-69 186
Exploration CASH FLOW	-385 200	1 988 489	1 160 973	1 445 672	1 865 012	1 651 102
Invest./Disinvest. in Fixed Capital						
Fixed Capital	-825 510	-895 634	-930 000	-948 181	-974 035	
Free Cash Flow	-1 210 710	1 092 855	230 972	497 491	890 977	1 651 102
Accumulated CASH FLOW	-1 210 710	-117 855	113 118	610 609	1 501 586	3 152 688

Exhibit B. Operational Cash Flow of the Future

Operational Cash Flows Map

	2022	2023	2024	2025	2026	2027
Free Means of the Project						
Operating Results (EBIT) x (1-IRC)	1 367 966	2 425 732	3 454 990	4 512 085	5 656 825	7 001 216
Depreciation and Amortization	25 118	53 742	84 085	115 336	147 880	147 880
Provisions for the Year						
	1 393 084	2 479 474	3 539 074	4 627 422	5 804 705	7 149 096
Invest./Disinvest. in working capital						
working capital	-2 193 361	-71 046	-70 757	-76 190	-87 818	-98 960
Exploration CASH FLOW	-800 277	2 408 428	3 468 317	4 551 231	5 716 887	7 050 136
Invest./Disinvest. in Fixed Capital						
Fixed Capital	-825 510	-895 634	-930 000	-948 181	-974 035	
Free Cash Flow	-1 625 786	1 512 794	2 538 317	3 603 050	4 742 852	7 050 136
Accumulated CASH FLOW	-1 625 786	-112 993	2 425 324	6 028 375	10 771 227	17 821 363

Now in the exhibits C, D, E and F. I present the provisional balance for the assets of the company as whole, showing that not only does it represent an important value, but it also shows a yearly increment of the company assets based on estimated growth.

Exhibit C. Provisional Balance

ACTIVE	2015	2016	2017	2018	2019
Non-Current Asset	**800 392**	**1 642 283**	**2 488 199**	**3 321 044**	**4 147 198**
Tangible Fixed Assets	638 817	1 319 133	2 003 474	2 674 744	3 339 323
Investment properties	161 575	323 150	484 725	646 300	807 875
Intangible Assets					
Financial investments					
Current Asset	**2 655 573**	**4 214 642**	**4 528 275**	**5 274 822**	**6 334 227**
inventories	303 333	279 167	490 572	576 464	613 425
Customers	634 903	778 770	936 244	1 093 132	1 186 000
State and other public entities					
Shareholders/Partners					
Other Accounts Receivable					
Deferrals					
Cash and Bank Deposits	1 717 336	3 156 705	3 101 459	3 605 225	4 534 802
TOTAL ASSETS	**3 455 965**	**5 856 926**	**7 016 474**	**8 595 865**	**10 481 425**

Exhibit D. Provisional Balance of the Future

ACTIVE	2022	2023	2024	2025	2026	2027
Non-Current Asset	**800 392**	**1 642 283**	**2 488 199**	**3 321 044**	**4 147 198**	**3 999 318**
Tangible Fixed Assets	638 817	1 319 133	2 003 474	2 674 744	3 339 323	3 191 443
Investment properties	161 575	323 150	484 725	646 300	807 875	807 875
Intangible Assets						
Financial investments						
Current Asset	**4 971 378**	**6 560 129**	**9 145 539**	**12 832 935**	**17 709 590**	**24 986 814**
inventories	715 293	672 375	632 033	594 111	558 464	524 956
Customers	1 214 695	1 304 070	1 397 618	1 503 158	1 612 367	1 728 722
State and other public entities						
Shareholders/Partners						
Other Accounts Receivable						
Deferrals						
Cash and Bank Deposits	3 041 390	4 583 684	7 115 888	10 735 666	15 538 759	22 733 136
TOTAL ASSETS	**5 771 769**	**8 202 412**	**11 633 738**	**16 153 979**	**21 856 788**	**28 986 132**

Exhibit E. Equity and Liabilities

EQUITY						
Capital realized	1.350.000	1.350.000	1.350.000	1.350.000	1.350.000	1.350.000
Shares (Own Shares)						
Other Equity Instruments		0	0	0	0	0
Reserve		763.332	2.821.930	4.032.728	5.488.572	7.297.252
Revaluation Surplus						
Other Variations in Equity	0	0	0	0	0	0
Net Income for the Period	763.332	2.058.599	1.210.798	1.455.844	1.808.681	1.593.555
TOTAL EQUITY	2.113.332	4.171.930	5.382.728	6.838.572	8.647.252	10.240.807
PASSIVE						
Non-Current Liabilities	645.243	637.844	567.607	497.370	427.133	356.897
Provisions						
Financing obtained	645.243	637.844	567.607	497.370	427.133	356.897
Other bills to pay						
current liabilities	697.390	1.047.152	1.066.139	1.259.923	1.407.040	1.462.270
Suppliers	423.978	397.750	661.902	782.409	826.775	952.073
State and other public entities	273.412	649.402	404.237	477.514	580.264	510.196
Shareholders/Partners	0	0	0	0	0	0
Financing obtained	0	0	0	0	0	0
Other bills to pay						
TOTAL LIABILITIES	1.342.633	1.684.996	1.633.746	1.757.294	1.834.173	1.819.166
TOTAL LIABILITIES + EQUITY	3.455.965	5.856.926	7.016.474	8.595.865	10.481.425	12.059.973

Exhibit F. Equity and Liabilities of the Future

EQUITY						
Capital realized	1350 000	1350 000	1350 000	1350 000	1350 000	1350 000
Shares (Own Shares)						
Other Equity Instruments						
Reservations		1374 940	3 814 274	7 293 406	11 844 472	17 559 792
Revaluation Surplus						
Other Variations in Equity						
Net Income for the Period	1374 940	2 439 334	3 479 132	4 551 066	5 715 320	7 088 673
TOTAL EQUITY	**2 724 940**	**5 164 274**	**8 643 406**	**13 194 472**	**18 909 792**	**25 998 465**
PASSIVE						
Non-Current Liabilities	**1 668 870**	**1 537 506**	**1 367 067**	**1 196 628**	**1 026 188**	**855 749**
Provisions						
Financing obtained	1668 870	1537 506	1367 067	1196 628	1026 188	855 749
Other bills to pay						
current liabilities	**1 377 960**	**1 636 311**	**1 895 161**	**2 171 533**	**2 466 762**	**2 815 718**
Suppliers	929 395	878 597	835 290	799 225	756 528	715 313
State and other public entities	448 565	757 714	1059 871	1372 308	1710 234	2 100 404
Shareholders/Partners						
Financing obtained						
Other bills to pay						
TOTAL LIABILITIES	**3 046 830**	**3 173 817**	**3 262 228**	**3 368 160**	**3 492 950**	**3 671 467**
TOTAL LIABILITIES + EQUITY	**5 771 769**	**8 338 091**	**11 905 633**	**16 562 632**	**22 402 742**	**29 669 931**

Exhibits G. and H show the financing plan. Once again bear in mind that this tool is to assess possible investments in production companies, and only serves the purpose of this project as a tool to show result for a soon to be merged company.

Exhibit G. Financing Plan

Financing Plan

	2015	2016	2017	2018	2019	2020
SOURCES OF FUNDS						
Capital Funds Surplus	986.404	2.647.410	1.604.863	1.943.780	2.418.306	2.138.270
Realized (paid up) capital	1.350.000					
Other Capital Instruments	0	0	0	0	0	0
Loans obtained	645.243	57.125	0	0	0	
Disinvestment in Fixed Capital						
Disinvestment in RWC	0	0	0	0	0	0
Financial Income	4.957	12.154	11.877	14.396	19.044	26.768
Total Origins	2.986.603	2.716.688	1.616.740	1.958.176	2.437.350	2.165.039
FUNDS APPLICATIONS						
Fixed Capital Inv.	825.510	895.634	930.000	948.181	974.035	0
Inv. Working Capital	1.169.734	114.250	124.527	114.135	76.504	69.186
Income tax		202.911	547.222	321.858	386.996	480.789
Dividend Payment						
Loan Repayment	0	64.524	70.237	70.237	70.237	70.237
Financial Charges	0	0	0	0	0	0
Total Applications	1.995.243	1.277.320	1.671.986	1.454.410	1.507.773	620.212
Annual Treasury Balance	991.360	1.439.369	-55.246	503.766	929.577	1.544.827
Accumulated Treasury Balance	991.360	2.430.729	2.375.483	2.879.249	3.808.826	5.353.653
Applications/Short Term Loan	991.360	2.430.729	2.375.483	2.879.249	3.808.826	5.353.653

Exhibit H. Financing Plan of the Future

Financing Plan

SOURCES OF FUNDS	2022	2023	2024	2025	2026	2027
Capital Funds Surplus	1.756.720	3.124.289	4.457.489	5.826.837	7.308.418	9.010.179
Share Capital (Inflow of Funds)						
Other Capital Instruments	0	0	0	0	0	0
Loans obtained	3.018.870	35.523	0	0	0	
Disinvestment in Fixed Capital						
Disinvestment in FMN	0	0	0	0	0	0
Financial Income	8.828	16.539	29.200	47.299	71.315	107.286
Total Origins	4.784.418	3.176.352	4.486.689	5.874.136	7.379.733	9.117.465
FUNDS APPLICATIONS						
Fixed Capital Inv.	825.510	895.634	930.000	948.181	974.035	0
Inv. Working Capital	2.193.361	71.046	70.757	76.190	87.818	98.960
Income tax		365.490	648.288	924.547	1.209.348	1.518.689
Dividend Payment						
Loan Repayment	0	301.887	305.439	305.439	305.439	305.439
Financial Charges	0	0	0	0	0	0
Total Applications	3.018.870	1.634.058	1.954.485	2.254.358	2.576.641	1.923.088
Annual Treasury Balance	1.765.548	1.542.294	2.532.205	3.619.778	4.803.092	7.194.377
Accumulated Treasury Balance	1.765.548	3.307.842	5.840.046	9.459.824	14.262.917	21.457.294
Applications/Short Term Loan	1.765.548	3.307.842	5.840.046	9.459.824	14.262.917	21.457.294

The Exhibits I. and J. is the most interesting from a capital budgeting point of view, because in it one can see exactly the potential of the enterprise when considering each store as a business unit.

Exhibit I. Financial Indicators

Main indicators

ECONOMIC INDICATORS	2015	2016	2017	2018	2019	2020
Business Growth Rate		23%	20%	17%	8%	7%
Net Profitability on Sales	12%	27%	13%	14%	16%	13%
ECONOMIC AND FINANCIAL INDICATORS	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Return On Investment (ROI)	22%	35%	17%	17%	17%	13%
Return on Assets	28%	44%	22%	21%	22%	17%
Asset Rotation	179%	130%	130%	124%	110%	102%
Return on Equity (ROE)	36%	49%	22%	21%	21%	16%
FINANCIAL INDICATORS	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Financial autonomy	61%	71%	77%	80%	83%	85%
Total Solvency	257%	348%	429%	489%	571%	663%
Coverage of Financial Charges	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
LIQUIDITY INDICATORS	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Current liquidity	3,81	4,02	4,25	4,19	4,50	5,51
Reduced liquidity	3,37	3,76	3,79	3,73	4,07	5,02
BUSINESS RISK INDICATORS	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Gross Margin	2.006.189	3.667.195	2.624.648	2.963.565	3.438.091	2.993.563
Operating Leverage Degree	209%	141%	173%	162%	151%	150%
Financial Leverage Degree	99%	100%	99%	99%	99%	99%

Exhibit J. Financial Indicators of the Future

Main indicators

ECONOMIC INDICATORS	2022	2023	2024	2025	2026	2027
Business Growth Rate		7%	7%	8%	7%	7%
Net Profitability on Sales	12%	19%	25%	31%	36%	42%
ECONOMIC AND FINANCIAL INDICATORS	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Return On Investment (ROI)	24%	30%	30%	28%	26%	24%
Return on Assets	30%	37%	38%	35%	33%	31%
Asset Rotation	205%	155%	117%	91%	72%	58%
Return on Equity (ROE)	100%	64%	48%	38%	33%	29%
FINANCIAL INDICATORS	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Financial autonomy	24%	46%	63%	73%	80%	85%
Total Solvency	131%	187%	268%	375%	508%	667%
Coverage of Financial Charges	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
LIQUIDITY INDICATORS	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Current liquidity	3,61	4,01	4,83	5,91	7,18	8,88
Reduced liquidity	3,09	3,60	4,49	5,64	6,95	8,69
BUSINESS RISK INDICATORS	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Gross Margin	2.734.705	4.102.274	5.435.474	6.804.822	8.286.403	9.823.671
Operating Leverage Degree	158%	134%	124%	119%	116%	111%
Financial Leverage Degree	99%	99%	99%	99%	99%	99%

Exhibits K., L., M., N, O., and P. show values regarding the overall evaluation of the company considered from different points of view. A two-year return on investment rate is interesting for possible investors, and also the partners should considered the merger as a good strategy going forward.

Exhibit K. Project Evaluation

Project / Company Evaluation

From an Investment Perspective (pre-financing = 100% CP)	2015	2016	2017	2018	2019
Free Cash Flow to Firm	-1.210.710	1.092.855	230.972	497.491	890.977
Update Rate Rcp = Ru = RF+Bu*(Rm-Rf)	6,00%	6,00%	6,00%	6,00%	6,00%
Update Factor	1,00	1,060	1,124	1,191	1,262
Updated Flows	-1.210.710	1.030.995	205.565	417.703	705.737
Accumulated Updated Flows	-1.210.710	-179.715	25.850	443.553	1.149.290
Net Present Value (NPV)	6.618.291				

Exhibit L. Project Evaluation of the Future

Project / Company Evaluation

From an Investment Perspective (pre-financing = 100% CP)	2022	2023	2024	2025	2026	2027
Free Cash Flow to Firm	-1.625.786	1.512.794	2.538.317	3.603.050	4.742.852	7.050.136
Free Cash Flow to Firm + Residual Value	-1.625.786	1.512.794	2.538.317	3.603.050	4.742.852	13.647.587
Update Rate Rcp = Ru = RF+Bu*(Rm-Rf)	6,00%	6,00%	6,00%	6,00%	6,00%	6,00%
Update Factor	1,00	1,060	1,124	1,191	1,262	1,338
Updated Flows	-1.625.786	1.427.164	2.259.093	3.025.191	3.756.783	10.198.271
Accumulated Updated Flows	-1.625.786	-198.622	2.060.470	5.085.661	8.842.444	19.040.715
Net Present Value (NPV)	19.040.715					

Exhibit M. Project Evaluation (post-financing)

From the Investment Perspective (post-financing) Update Rate=Weighted Average Cost of Capital - wacc)	2015	2016	2017	2018	2019
Free Cash Flow to Firm	-1.210.710	1.092.855	230.972	497.491	890.977
Weighted average cost of capital = Rcp*CP%+Rca*(1-ti)*CA% (Rcp with BP 100%CP)	4,06%	5,20%	5,43%	5,59%	5,72%
Update Factor	1,000	1,052	1,109	1,171	1,238
Updated Flows	-1.210.710	1.038.793	208.244	424.777	719.607
Accumulated Updated Flows	-1.210.710	-171.917	36.327	461.104	1.180.711
Net Present Value (NPV)	6.767.841				

Exhibit N. Project Evaluation (post-financing) of the Future

From the Investment Perspective (post-financing) Update Rate=Weighted Average Cost of Capital - wacc)	2022	2023	2024	2025	2026	2027
Free Cash Flow to Firm	-1.625.786	1.512.794	2.538.317	3.603.050	4.742.852	7.050.136
Free Cash Flow to Firm + Residual Value	-1.625.786	1.512.794	2.538.317	3.603.050	4.742.852	13.647.587
Weighted average cost of capital = Rcp*CP%+Rca*(1-ti)*CA% (Rcp with BP 100%CP)	0,00%	3,48%	4,49%	5,08%	5,43%	5,65%
Update Factor	1,000	1,035	1,081	1,136	1,198	1,266
Updated Flows	-1.625.786	1.461.850	2.347.385	3.170.914	3.958.968	10.782.828
Accumulated Updated Flows	-1.625.786	-163.936	2.183.449	5.354.363	9.313.332	20.096.160
Net Present Value (NPV)	20.096.160					

Exhibit O. Project Evaluation (capital perspective)

From the Investor/Shareholder Perspective - Own Cap.	2015	2016	2017	2018	2019
Equity Free Cash Flow = CF operac + CF investment + CF financing	-565 467	1 085 456	160 736	427 254	820 740
Equity Free Cash Flow = Residual Value	-565 467	1 085 456	160 736	427 254	820 740
Update Rate = Rcp = Ru = RF+Bu*(Rm-Rf)	6,00%	6,00%	6,00%	6,00%	6,00%
Update Factor	1	1,060	1,124	1,191	1,262
Updated Flows	-565 467	1 024 015	143 054	358 731	650 103
Accumulated Updated Flows	-565 467	458 548	601 602	960 333	1 610 436
Net Present Value (VAL)	7 026 952		Residual Value = Own Cap. in the last year		

Exhibit P. Project Evaluation (capital perspective) of the future

From the Investor/Shareholder Perspective - Own Cap.	2022	2023	2024	2025	2026	2027
Equity Free Cash Flow = CF operac + CF investment + CF financing	1.393.084	1.246.430	2.232.877	3.297.611	4.437.413	6.744.697
Equity Free Cash Flow = Residual Value	1.393.084	1.246.430	2.232.877	3.297.611	4.437.413	13.342.148
Update Rate = Rcp = Ru = RF+Bu*(Rm-Rf)	6,00%	6,00%	6,00%	6,00%	6,00%	6,00%
Update Factor	1	1,060	1,124	1,191	1,262	1,338
Updated Flows	1.393.084	1.175.877	1.987.253	2.768.738	3.514.847	9.970.029
Accumulated Updated Flows	1.393.084	2.568.961	4.556.214	7.324.952	10.839.798	20.809.827
Net Present Value (NPV)	20.809.827		Residual Value = Own Cap. in the last year			

After presenting these results, it is important to address the fact that this experience is but a picture in time of what could have been the numbers for the company if managed as one big corporation in the years presented here. Also, the data used would not have been the same if the corporation was one with different business units as some costs would (and should) be diluted through the company this is a topic that would be addressed latter in the discussion of the project. Although we are concerned with the merged venture, that will have a future inception, we consider that the past performance is an adequate proxy to project the future. In other words, we consider that the family's perceptions on the performance of the firm will remain unaltered for the period under analysis and that the accounting data are adequate proxies for future predictions (see for example Gentry & Shen, 2010) for a similar approach.

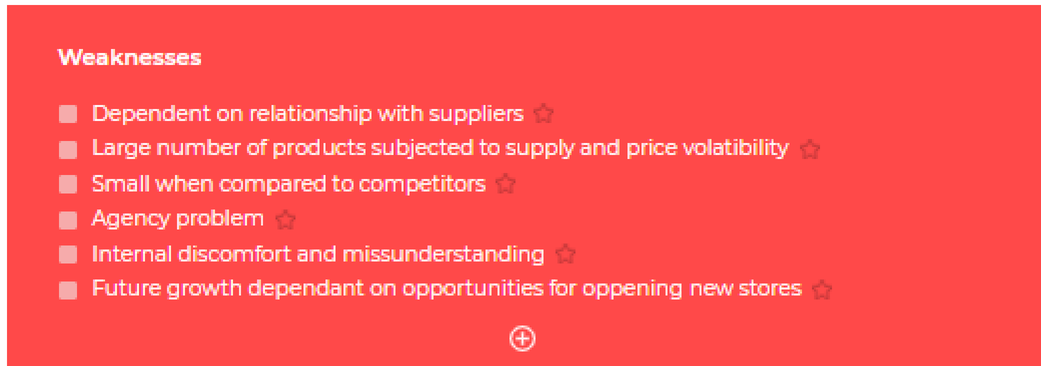
5.1 SWOT analysis

As a complement to the results shown above, a SWOT analysis was conducted to assess the viability of the merger, keeping into close consideration the current status of the companies now.

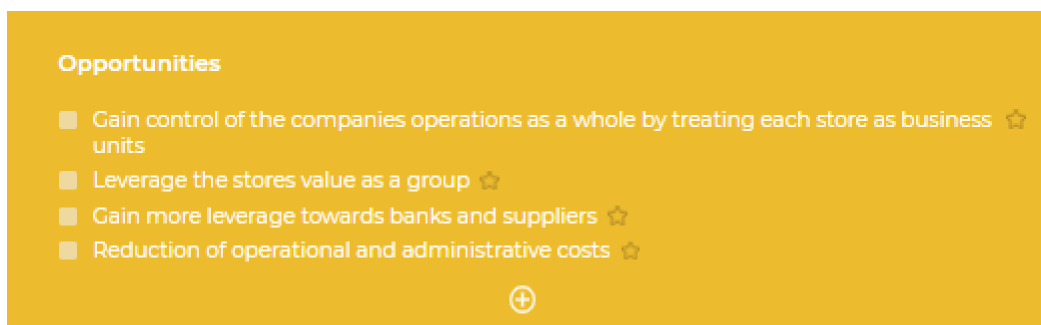
Strengths

- Good realtionship with suppliers
- Each store works and sustains itself independently
- High quality and wide variety of products
- Each store works and controls different local markets across the country
- Visibilty across the national market
- Possibility to Increase the efficiency of the supply chain between stores

The strengths the companies posses respond basically to the notion that as of today each of the stores is successful on its own market meaning that the merger will only push the companies further in their field evolving their current situation into one more beneficial.



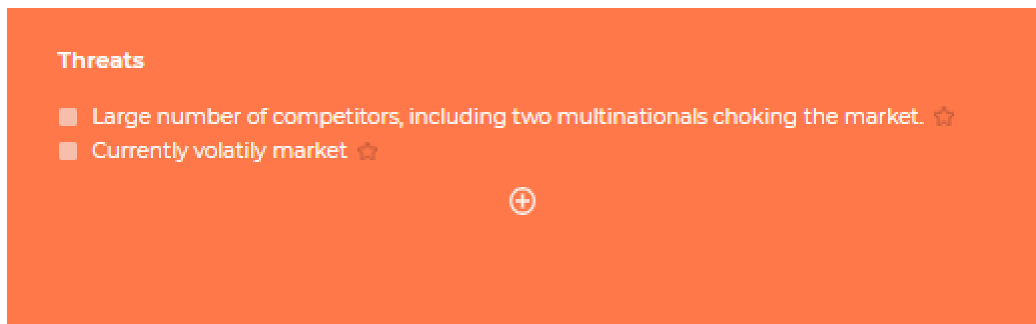
The weaknesses that are here presented are mostly related to the lack of leverage that the companies now have when facing the suppliers, this also translates into complete surrender to the market and its fluctuations and position the enterprises below bigger, more accomplished, competitors.



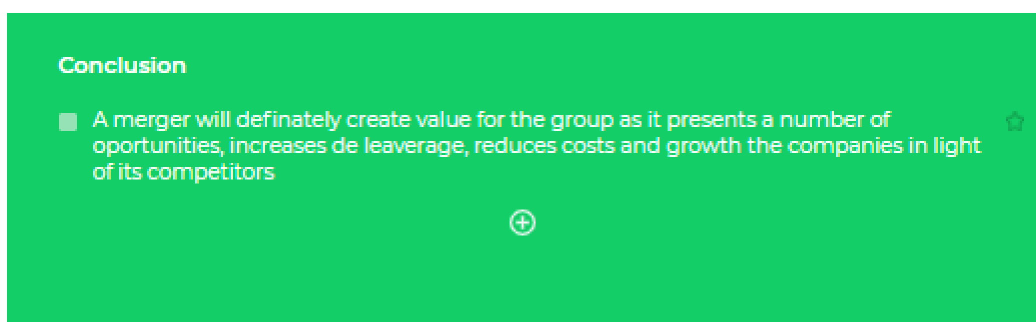
The opportunities shown are all results from the idea of the merger and respond, in many cases, as solutions to the weaknesses presented above. A bigger company will have more leverage towards banks and suppliers, also will gain more visibility across the country growing its scale, thus attracting business, and reducing the gap between the companies and its competitors.

From a marketing perspective, it also makes sense to merge. According to Homburg and Bucerius (2015) the benefits of merging not only are reflected on cost

savings but has a strong impact on financial performance. To support this notion, they present as moderating variables several marketing factors. This indicates that the merged firm will increase its value by performing better in its market because of the advertising that the merger by itself will create.



As was discussed above having many competitors is one of the biggest threats for the success of the merger, because of the large share of the market that they currently hold, this diminishes the capacity for the companies to operate more freely and could potentially pose as an impediment for the merger. A second threat would be the internal discomfort that this merger will probably bring among the managers of each store, this referring specifically to the agency problems that will arise in the beginning of the process when some of the managing partners may resist the idea of losing some of their decision-making power (Schulze et al., 2001).



The conclusion of the SWOT analysis points toward the notion that the merger will bring a lot of benefits for the referred companies. All the statements mentioned in this SWOT analysis will be further studied in the discussion below.

5.2 Net Present Value

To further justify the decision to merge from a financial point of view, a NPV function was applied to the combined cash flows of the businesses, this will help illustrate if an investment in this new unified firm would be advised, or determined as profitable for the investor, all in light in the provided values. A weighted average cost of capital of 7% was considered for the function, as this value was precalculated by the IAPMEI tool.

First the NPV for the merged firms as they are, that is without considering any of the cost's reduction referred above.

Exhibit Q. Net present value of the merged firms as of now

Discount Rate	7%				
Time Periods	**2015**	**2016**	**2017**	**2018**	**2019**
Cash Flows	-1 305 643	286 882	558 515	961 635	1 515 430
NPV	1 398 323,34 €				

Now the NPV for the merged firms considering the cost reduction across the board described above.

Exhibit R. Net present value of the merged firms with costs reduction

Discount Rate	7%				
Time Periods	**2015**	**2016**	**2017**	**2018**	**2019**
Cash Flows	-385 200,00 €	1 988 489,00 €	1 160 973,00 €	1 445 672,00 €	1 865 012,00 €
NPV	5 101 199,84 €				

As shown in the exhibits presented above, the NPV is positive when considering the added cost reduction resulting from the merger, meaning that investing in the merger of the firms is advised as it would create value for the would be merged businesses. The NPV is also positive for the companies when considering them as of

now, but the NPV is lower than that of scenario b, meaning that the merged companies would create more value for shareholders. This premise shows that the merger will create value for the business and that it is a positive strategy to follow and develop in order to further evolve the firm.

5.3 Sensitivity Analysis

A Sensitivity analysis is a tool for measuring the impact on key parameters on a given objective function (Pianosi, Beven, Freer, Hall, Rougier, Stephenson, & Wagener, 2016) and, given a technique, different objective functions may or may not lead to different result. In our case, as stated above, we consider for the baseline scenario the NPV of the companies as they are now with a weight of 50%, then for the optimistic and pessimistic scenario the NPV is the same as it is that of the merged companies, the difference is the weight as for the pessimistic scenario we consider a 30% weight and a 20% for the optimistic scenario.

For the baseline scenario we consider an NPV of 1.398.323,34 € and a weight of 50%, that gives us a result of 699.161,50 €. As for the pessimistic scenario we consider the NPV of the merged companies 5.101.199,84€ and a weight of 20%, the calculations give us a total of 1.020.240 €. Finally for the optimistic scenario we consider, once more, the NPV of the merged companies 5.101.199,84€ and this time calculate wit a weight of 30%, the result gives us 1.530.360€.

After conducting these calculations, we add the resulting totals to get an expected NPV of 3.249.761€ this indicates that the project remains more valuable when considering the expected the NPV than that of the baseline scenario. This provides even more certainty that the merger will indeed create value for shareholders.

6. Discussion

After looking at the results of this exercise two main strategic views should be considered when discussing this topic, first and foremost the advantage for the merger to go forward, and then how to gain the most from the existing structure and optimize the new one.

6.1 The underpinnings of a merger

Managing several businesses at the same time can be complicated. The necessities, problems, and technicalities for each must be considered individually. In this case, although all the companies work in the same branch of business, the geographical differences, the general scale of each company, the necessity to remain competitive, the culture and ecosystem of each firm must be taken into account.

This situation creates the necessity for the board of directors, which as explained before, is the same for all the companies, to rely in the performance, guidance, and strategic vision of the managing partners of the firms. In practical terms, this predicament only sets apart each company, as all the managers partners think differently and push their own ideas for their businesses to thrive. It is necessary to point out at this moment, that although all of the managing partners are related as members of the same family, there might exist somewhat of a battle of the egos that prevents them from working towards a unified goal. This situation is evident when confronted with the statements made by several managing partners, and the two board members that were interviewed for the making of this project.

As of this moment, there is a necessity from the board of directors to control the companies more easily, this being combining them into one group, this will provoke the enterprise creating cost advantages by making the company more efficient.

The reduction of cost across the units is a direct consequence of the costs being spread over more units of productions, this can be clearly seen in the IAPMEI tool extract, where several of the fixed costs regarding certain items are diluted when the companies are viewed as a unit.

Being bigger in scale will also provide the company with a competitive advantage when compared to smaller companies. An example of how this advantage works, is that by being larger in scale, the group can have more bargaining power with the bank, providing it with the opportunity to make larger purchases of products from suppliers, resulting in a lower cost per unit than that of the independent stores.

This overall situation considers the given assumption that purchases are unified and taken care by one administrative unit for the whole group. This also can be listed as a cost reduction for the companies, as all the administrative decisions and strategies, will be carried out by and independent unit resulting in centralized control and the reduction of administrative staff in all the business units.

Taking all this into account, a merger seems as to be the logical solution for this specific problem, as it will give the board full control over the companies as one group, will push for a unified culture, will grow the company in scale and reduce costs across the board in several departments.

6.2 How to merge

Considering all the assumptions stated above, regarding how the merger should occur several steps should be considering to easy the overall process. First, the health of all the companies involved should be revised, in this sense, when referring to the health of an enterprise we are referring, of course, to financial health. As this exercise has proven all the companies involved are healthy and ready for a merger. Regarding

information about each of the business involved in the merger, it is not a problem because as has been said before the board of directors is the same for all.

Another necessary step that should be part of the merger process, is the goal setting for the merger. This includes mid to long term goals, that should include rewards for the managing partners of each of the companies. This initiative should mitigate the agency problem describe beforehand in this project and should serve to align the actions of managing partners towards a common goal. The goals should have a financial orientation to be easy to measure and should also be revised quarterly.

Regarding these goals, although a top down strategy is being considered, as it should come from the board of directors, managing partners should also create their own goals inside each of the companies in order to attain the general goal structure determined by the board of directors.

After the goals are set, an internal merger transition team should be installed in order to help handle the process of merger during its first stages. This team should be comprised of people from all the companies involved, that have managerial or leadership positions inside the companies so they can respond to situations accordingly when presented with them in day-to-day operations.

As some problems would arise after the merger, some flexibility should be maintained for each business unit, so they are able to tweak and adjust quickly to the rapidly changing situation.

One of the most important stakeholders, and also one that will be most affected by the merger are the employees. Putting aside the possibility of some of them being fired because of personnel cuts, the culture clash is an issue to be considered, bringing together employees who have different expectations when it comes to behavior, performance and socializing can often be a recipe for disaster.

To mitigate the impact of the clash of cultures, the companies should assess their cultural differences, it might be that one company is very formal and the other very casual for example, or that the managerial style of one the companies is very strict when compared with the others. A solution to this issue, could be for all the managing partners to meet and discuss all this possible friction points beforehand and develop a consensus that aligns with the ideas of the board of directors. This is also a clever way to include managing partners into the discussions of how the merger should develop in order to mitigate even more the possible obstacles created by agency.

On this note, managing partners should also include their top employees into their internal discussions of the merging process, in order to hear their opinions, get some ideas, and motivate them to achieve their goals, and feel less nervous about the merger to reduce the friction of the culture clash.

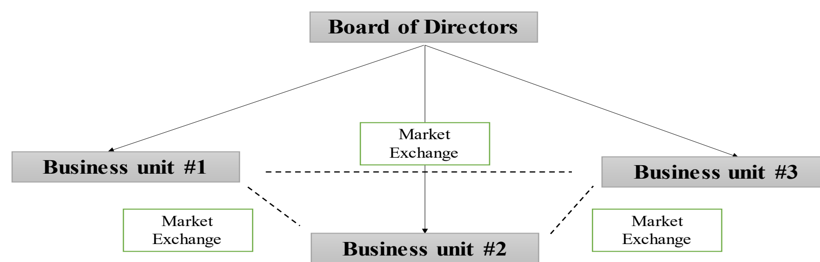
Another dimension that should be addressed is the rebranding process, this topic could be discussed in another full project, but it should be at least develop briefly in this project. As all of the enterprises involved in the merger have strong brands in their local markets, deciding on a brand name or a branding strategy should prove to be a hard topic of discussion. In practical terms, taking a new name would probably be the Solomonic solution to this issue, but would be counter-productive when considering the fact that, as was said before, all of the companies have strong brand names in their local markets.

Also, the cost of renaming and remodel all the infrastructures should prove to be far greater if all of the companies and brand strategies have to change, than if all standardize to one that’s already in existence.

6.3 Choosing a Governance Structure

As it was specified above, one of the ways to unlock the full potential of the newly formed company is to restructure the current governance model, utilizing the merger as an opportunity, and applying Hennart's (2019) internalization model as guidance. The main proposition developed by Hennart (2019) is that rather than having hierarchy based business model, where all the decision come from the boar of directors and are to be applied, rather as a dictatorship, should be replaced with a model that favors the market exchange between businesses, in this case, business units to regulate their relationship, thus internalizing this exchanges and giving the firm an opportunity to reduce costs by optimizing processes between itself rather than depending on other suppliers, that could, and currently do, provoke competition among businesses by forcing different costs for the same resources for each of them. To illustrate this point, the following diagrams are presented:

Figure 2. Current model of the employment relationship between business units



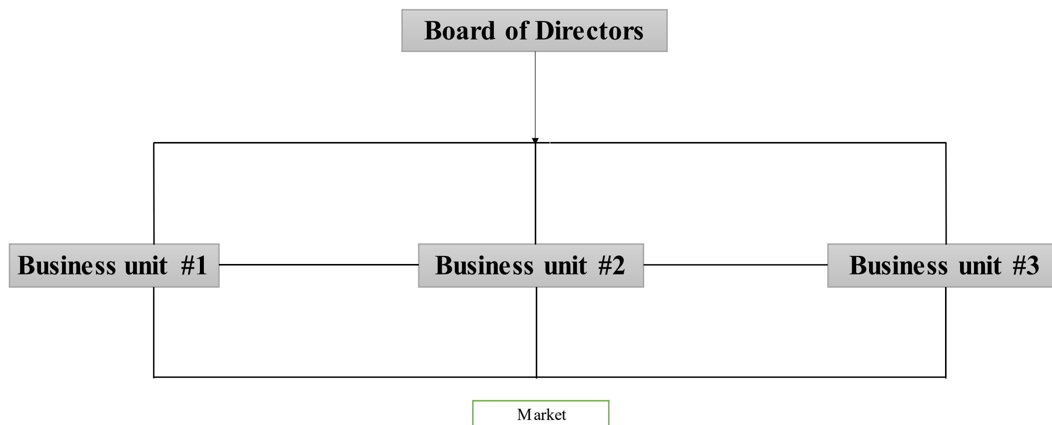
As this graph shows the current model for employment relationship between business units demonstrates that as of today each of the considered business units is treated as a separate business by the board of directors. This situation prevents the firms from sharing key information, and most importantly, resources as they are forced by the market to compete as a direct consequence of the chosen governance structure. Here the

market controls the outcome of every decision and so each business unit is left to its own chances when faced with suppliers and bigger competitors.

A change on to a unified business would let the company grow in scale, because based on the graph presented above the business only have the leverage that they get from their own. This statement, presented in a vacuum, is not the worst thing, what is basically a tragedy is the opportunity to have a lot more leverage by growing in scale, therefore gaining all the benefits presented in the results shown above, by basically reducing cost across the board.

A more interesting, and beneficial to this type of business, governance structure is the one presented below:

Figure 3. Proposed governance structure.



In the model presented above the decision making still comes from the board of directors, but the consequence of that decision is no longer left to chance by seeing if it works in one business and not on the others or vice versa. Here the business units exchange both information, and work with the same resources to guarantee that the result is efficient, equal, and more profitable for the firm.

In this hypothesis the competition for clients, information, and resources is eliminated by the governance context, providing for the perfect environment for reducing costs, improving processes, and attaining better deals both with suppliers and with banks, as the enterprise is bigger in scale and represents a unified blockchain, meaning it has more leverage as predicted by the results of this project, and basically retiring the market influence from the process as many activities of the company are internalized.

7. Limitations

The main limitation that this project has is the fact it is modeled considering past figures. This overall situation leads to the necessity of further studies to consider modelling the future of the merged companies, even though as we are studying a natural experiment the said study should also consider the overall reality of the situation to remain truthful to the structure of this project as it will consist of a follow up.

8. Conclusions

The idea of a merger seemed like a longshot for the companies involved in this project a few years ago. Our sample are three stores owned by the same family, working in the same field but targeting different clientele. Agency problems, and lack of strategic guidance plagued previous attempts for unification, therefore a more tangible analysis was needed to give support to the board members intentions. By utilizing IAPMEI's tool for assessing investments, analyzing NPV and performing a sensitivity analysis, we were able to show that the intended merger will create value for shareholders.

To make proper use of these methods pertinent data from each of the companies was used and was compared taking into consideration two scenarios. Scenario A, considering the companies as they are now without benefiting from the said merger, and scenario B, looking at the firms as an already merged concept, thus benefiting from the advantages of the merger, namely economies of scale and lower agency costs. To simulate this second scenario, some assumptions were made. These assumptions build on Hennart's (2019) internalization theory, board members expectations, and overall results from successful mergers in family firms.

The theoretical underpinnings suggest that the merger if successful can create significant value for the firm in line with previous studies (see for example Tapíes, 2014), as it will make the company bigger in scale and help it attain more bargaining power towards suppliers and banks. But merging family firms can be difficult as no two family firms are alike (Kenyon-Rouvinez,1999 ; De Massis et al., 2018). To mitigate this problem a proper governance structure should be put into place as soon as the merger is achieved (Gallo, 2005). This is where Hennart's (2019) internalization theory comes in to show that by internalizing certain processes the merged firm can be better

managed, align the goals of every branch with that of the board of directors, and more importantly, rule out the influence of the market over the firm.

The evaluation of IAPMEI's tool results, provide the results that the merger, considering the said assumptions could really improve the value for the firm from a financial point of view. Regarding the NPV analysis, it suggested that the merged company would create more value for shareholders than the value the companies create as of now. Finally, the sensitivity analysis proved that the results of the simulation are robust when considering the pessimistic and optimistic scenarios.

Our results support the notion that the merger will create value for shareholders of the companies. This suggests that if conducted correctly, and assuming that the expected results are attained the merger is an interesting strategy for the board of directors to follow. The merger, considering the theorical underpinnings listed above, will also mitigate agency problems namely among managing partners and vis-à-vis the owners, reduce costs, and grow the firm in scale while giving the board of directors more control over operations.

This project serves both the academic community and the companies in which this project is based upon. For the academic community it represents a rare opportunity to analyze real data in a practical setting, as this overall situation can be regarded as a natural experiment. It also represents one of the firsts applications of Hennart's (2019) internalization theory for an endeavor of this regard. The companies involved benefit from this project as it provides solid ground for them to base the strategic decision to merge, as it shows from a financial point of view that the said merger will create value by providing tangible results.

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10.Annex

1. Characterization of the companies involved in the project

1.1 Lusocontek

Lusocontek is an innovative, original company with a current concept. You have at your disposal a wide range of articles in areas as diverse as:

• Machines

•Tools

•Car accessories

• Hardware

• Security and Protection

• Painting material

•Bathroom

•Construction

• Heating and air conditioning

• Channeling

• Electricity and Home Automation

• Workshop Equipment

• Lighting

• Garden and Agriculture

• Home

•Wood

• Metalworking

• Fishing

• Locksmith

With an area of 1600 mts2, you will find more than 88 000 articles and more than 150 national and international brands of referenced quality, the best prices and a very professional personalized service. A wide range of services accompanies and reinforces our product offering.

With vast experience acquired over the years in the sectors of Industryand Construction Contek is increasingly a partner alongside the costumer’s personal challenges or professional projects.

More than the marketing of products, Contek seeks to combine its wide range of offerings from the most prestigious brands with the competence and technical knowledge acquired over the years, to provide you with a high quality, reliable and professional service. Therefore, we try to serve you better every day, meeting your needs, so that Contek is, for you, much more than a store: a reliable partner.

From the three companies involved, Contek is the one more oriented toward the day to day DIY customer, and helping them out by providing specialized service to help them complete any project.

1.2 Coelho da Silva & Castelo

The company C. S. Castelo, located on the outskirts of Porto (Areosa), with 44 years of activity in the construction and decoration materials sector, represents high quality and prestigious brands, both nationally and internationally.

Clients have at their disposal a young and dynamic team, able to help them find the best solutions. It has a showroom measuring around 700m2, where design, innovation and elegance combined with very competitive prices form the perfect combination to be a successful partner.

This enterprise focuses mainly in trading ceramic products and its accessories, it differs with the other companies in the merger as it is more project oriented, giving the customer a service around this idea. Also from the group, it is the one that has more years in the market giving it an advantage as it is very well known in its field.

1.3 Picoven

Picoven, opened its doors on March 19, 2004, in São João da Madeira. During 2009, in order to improve the conditions for displaying and storing stocks, it moved to the former premises of the "Cisne" factory, on Rua Oliveira Júnior, with a total area of 9,000 m2, with 4,800 m2 destined for the exhibition of products and articles in general, thus allowing a solid and sustained growth to date.

In order to improve customer satisfaction and achieve sustained growth, ISO 9001 was implemented in its management model, in order to allow an agile response to current market demands. Picoven is an innovative, original company with a current concept.

Given the numerous products in stock, the store is divided into the following areas;

- Construction: articles for all types of needs
- Industry: industrial machinery and accessories, free quotes and technical advice.
- Power tools and materials for industrial maintenance from the best brands.
- Safety
- Paints
- Ceramics and Sanitary
- Air conditioning: Heating and cooling solutions: heat recuperators, radiators, air conditioning and sanitary water heating, heat pumps, boilers for industry and for the home.
- Electricity: electrical material, quality products at special prices for your home and industry.
- DIY: huge variety of tools for new ideas and "do it yourself". Hardware and material for carpentry and metalwork and others.
- Gardening and Watering:
- Agriculture: New Tools for Precision Agriculture
- Other articles: Upon consultation, we will respond in a short period of time and at competitive prices, in order to assist you and guide you towards your needs.

With a team of over 35 employees. A portfolio of approximately 5,000 active customers, and a permanent stock of over 80,000 items available. Picoven has outstanding national and international partners, with more than 150 brands, guaranteeing the quality and reliability of the products sold.

Picoven also intends to be a space that allows immediate responses to the constant changes in the markets and pressing customer needs.

Regarding the three companies involved in the merger, Picoven is the most industry oriented, focusing more specifically in the professional customer rather than on the day to day DIY buyer.

2. IAPMEI Tool

Below the IAPMEI assessment tool is presented in its entirety in pdf. Here part of the calculations relative to this project can be seen..

IAPMEI Assetment Tool.pdf