UNIVERSIDADE CATÓLICA PORTUGUESA

Factors that determine Factoring as a Financing alternative:

The case study of BNP Paribas Factor

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Católica Porto Business School
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Resumo

Factoring é uma alternativa de financiamento muito utilizada pelas empresas, onde um dos principais objetivos é minimizar o tempo médio de recebimento auxiliando a tesouraria da empresa. Este estudo incide nas características das empresas que mais influenciam a escolha do factoring como alternativa de financiamento, através do estudo de caso do BNP Paribas Factor.

Para a realização do estudo foram recolhidas 707 observações, das bases de dados BNPP Factor e Iberinform, das características das empresas portuguesas, tais como dimensão, volume de negócios, forma jurídica, setor, idade e ativo.

Foram testadas várias hipóteses e concluiu-se que as empresas de menor dimensão, quer em volume de negócios, em número de trabalhadores e em valor do ativo são mais propensas a recorrer ao factoring. Por outro lado, os setores da manufatura e distribuição não demonstraram ser características muito relevantes, assim como a idade da empresa e sua forma jurídica.

Esta pesquisa sobre o factoring através do estudo do caso do BNPP Factoring vem trazer um contributo na pesquisa deste tema, ajudando a perceber como a escolha do factoring está muito relacionada com as características de cada empresa.

Palavras-chave: *Factoring*, *Invoice Financing*, BNP Paribas Factor

Número de palavras: 9758

Abstract

Factoring is a financing alternative widely used by companies, where one of the main objectives is to minimize the average time of receipt assisting the company's treasury. This study focuses on the characteristics of the companies that most influence the choice of factoring as a financing alternative, through the case study of BNP Paribas Factor.

To carry out the study, 707 observations were collected from the BNPP Factor and Iberinform databases of the characteristics of portuguese companies, such as size, turnover, legal form, sector, age and assets.

Several hypotheses were tested, and it was concluded that smaller companies, both in turnover, in number of employees and in asset value are more likely to resort to factoring. On the other hand, the manufacturing and distribution sectors have not shown to be very relevant characteristics, as well as the age of the company and its legal form.

This research on factoring through the study of the case of BNPP Factoring comes to bring a contribution in the research of this topic, helping to understand how the choice of factoring is very related to the characteristics of each company.

Keywords: Factoring, Invoice Financing, BNP Paribas Factor

Number of words: 9758

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Chapter 1

Introduction

The financing of a company is one of the most important areas regarding its capital structure, namely the guarantee of liquidity within the company. The decision of a financing method is neither universal nor widespread, each company has its characteristics and convictions and by which some methods are more effective in some cases. It is necessary to study and understand the problem to theorize about the best method for each company (Myers, 2001, vol. 15). Having a healthy Working Capital that allows the company to have the financial availability to make important decisions when it comes to investing and managing, especially in the short term, such as the purchase of raw materials in large quantities to enjoy more attractive prices, the acquisition of capital goods to increase/improve production processes, investment in marketing/advertising campaigns for the promotion/dissemination of its products/services. This type of investment that companies need to make to remain competitive in the market is only possible if they have available cash flow from their sales and activities that allow them to achieve the best results.

The problem lies in the buying and selling process between the company that produces the goods/services and the one that buys them either as a final good or an intermediate good (used in the production of another good and/or service). One of the most frequent problems that happen between suppliers and customers is the payment method, as the payment model often used is: “buy today, pay later”, that is, the payment is not made at the time of the acquisition of the products/services, there is a longer period between the sale of the product and the receipt of the sale value. Not all companies can manage these periods in an agile and efficient way, the accounts receivable is an unrealized asset, it does not serve as a guarantee before a bank at the time of requesting a "traditional" loan, in this sense, companies that cannot provide the necessary guarantees, mainly Small and Medium Enterprises (SMEs)

need another type of financing that provides them with liquidity (Malikhatun Badriyah et al., 2017). In Portugal, SMEs represent 99.9% of the portuguese business fabric, 96% of which are micro, 3.3% are small and 0.5% are medium-sized, according to the National Statistics Institute (INE). Given this statistic, we can infer those issues such as difficulties in securing liquidity through conventional bank loans, therefore, this type of companies use alternative financing methods that increase their available cash flow and can guarantee accounts receivable. Factoring acts here as an alternative and totally effective financing method that adds, in addition to the financial service, the accounts receivable management service, as well as the protection against credit risk (Klapper, 2006).

In the European context, in 2020 the three largest markets were France (18.2%), Germany (15.4%) and the United Kingdom (15.3%) and, worldwide, China and Taiwan are those with the highest volume of credits taken through factoring, according to statistics from Factors Chain International (FCI).

In the national context, in Portugal factoring has assumed an important role in the economy of the companies. The first factoring company to appear in Portugal was International Factors Portugal S.A, in 1965, setting the tone for the beginning of the factoring market as well as the entry of new companies dedicated to the sector. The growth of factoring in Portugal has been notorious, the greatest expansion began in the 1990s, the factors that contributed the most was the growth in the offer of service modalities, the entry of new companies and the greater focus on charging for the control of the average time of receipt, thus obtaining treasury to pay suppliers.

In 1997, the factoring sector already represented 120 million of annual production, the companies operating in Portugal already represented a great dynamic response to market needs and consequently companies started to have more time to manage the business by delegating the collection service for factoring companies and at the same time saw their treasury balanced.

In the last decade, the volume of credit generated by factoring has varied between 12% and 15% of GDP, according to statistics released by the sector. In 2019, the volume of credits taken through Factoring was 33,800 million euros, representing a positive variation of 6.4% compared to the previous year.

This work aims to study the main determinants of companies that choose factoring as a financing method, based on the case study of BNP Paribas Factor. In this way, it is intended to understand in detail the characteristics of the company, namely its size, its age, its turnover, its sector of activity, its legal form and the reason for its choice for factoring.

This work is organized as follows; chapter 1 presents the literature review on capital structure and factoring, developing the concept, the history, the types of factoring contracts, the advantages and disadvantages of factoring, the main differences between factoring and bank credit and the evolution of factoring in Portugal. The chapter 2 is dedicated to characterization of BNP Paribas Factor as a case study for this work and the development of the hypotheses to be tested. Chapter 3 introduces the description of the database and the study method used. In chapter 4 the results and their interpretations are presented and finally, chapter 5 concludes the study.

Chapter 2

Literature Review

2.1 Capital Structure

The capital structure of a company is the way companies choose to finance themselves, minimizing inherent costs to maximize the profits that the company expects to obtain. The capital structure is the combination of debt and equity to finance global operations and growth.

According to Mayers (2001, vol 15) there is no universal theory about firms' financing choice between debt and equity, nor a reason for doing so. There are several useful theories to satisfy the needs of companies, since they do not all have the same dimension, the same objectives, the same strategy, ideologies, and preferences.

For example, the trade off theory tells us that companies choose their debt levels by evaluating the trade offs between the benefits obtained through tax shields and the costs in case of defaulting on tax payments.

The Pecking Order theory is another model of capital structure, in which Myers & Majiuf, (1981) emphasize that companies prefer to finance themselves first with less risky methods, internal financing, and later with riskier methods such as debt or issue company stocks. Companies prefer to finance themselves with internal sources rather than external because of risk and information asymmetry. This theory explains why more profitable companies use less external financing, as they have more internal financing, while less profitable companies, as they do not have this capacity, need to accumulate more debt (Myers, 2001, vol. 15).

Another proposal of capital structure is proposed by the theory of Free Cash Flow, which says that the more debt a company has, the greater the value of the company, regardless of the company's risk of insolvency, if its operating cash flow is greater than its opportunities for investment. This type of capital structure is applicable to mature companies with a tendency to invest a lot. Buus, (2015), concludes that factors such as risk, growth rate and discount rate give us a plausible explanation for some cases such as: blue chips with low leverage tend to use the pecking order model more order; or the use of high leverage by companies with low growth.

On the other hand, Modigliani & Miller, (1958) assuming perfect, frictionless markets in which financial innovation would extinguish any deviation from the standard, proved that the choice between debt and equity did not change the value of the company or the cost and availability of capital.

Studies carried out on the choice of the best alternative for the capital structure, reveal factors such as taxes, access to information, agency costs or psychological factors of company managers regarding their relationship with risk. No theory can be considered universal, since technology and the profile of markets are constantly changing, and each company has its own particularity and dynamics.

2.2 Factoring

2.2.1 Factoring: Definition

Klapper, (2006) defines factoring as a type of supplier financing in which companies sell their accounts receivable to a factoring company in exchange for immediate cash. According to this author, factoring is not a loan, nor does it represent

an additional liability on the balance sheet of companies, although it provides working capital to companies.

Moore (1959) defines factoring as an ongoing agreement between the factoring company and the seller of goods and/or services in an open account, in which the factor performs a series of services with respect to the accounts receivable of the sellers of goods and/or services, namely, purchase of all accounts receivable for immediate cash, manage accounts receivable and collect debtors.

Another definition, from the Portuguese Association of Leasing, Factoring and Renting (ALF) is as follows, "Factoring or financial assignment consists of the acquisition of short-term credits derived from the sale of products or the provision of services in the domestic and foreign markets." Also, in accordance with Decree-Law No. 171/95. D.R. n. º 164, Series I-A of 1995 07-18: "In the factoring activity, complementary actions of collaboration between Factoring Companies and their clients/buyers are understood, namely studies of credit risks and commercial legal support and accounting to the good management of traded credits."

Basically, factoring is a financing method in which companies can shorten the Average Receipt Time of goods/services sold to 0, that is, companies are able to obtain immediate payment precisely when the invoice is issued (Michalski, 2008). Factoring companies advance between 80% and 90% of the value of their client's invoices and the rest is paid when the debtor pays the invoices to the factoring company.

BNP Paribas Factor defines its factoring service as the transfer by the client/buyer of commercial credits to the factoring company (Factor), in which the latter ensures the financing of up to 100% of the amounts of credits assigned, manages and the collection of credit portfolios and the coverage of client's credit risk.

For Klapper (2006) and Moore (1959), factoring, in addition to its main financing function, that is, advancing the value of invoices to the client/buyer, includes two other important functions, namely:

- Collection service – The collection service is based on notifying the debtor and carrying out the respective collection of the invoice within the stipulated deadlines. This process aims to minimize "bad credits", in the event of non-compliance with the payment, the factor will be responsible for proceeding with the collection through the judicial system.
- Credit service - Credit services involve assessing the solvency of the clients of the factor's clients whose accounts the factor will buy. This assessment is normally made using publicly available data and data that the factor already has.

In other studies, such as Malikhatun Badriyah et al., (2017) and Michalski, (2008), we can sub-divide the services provided into:

A. Financial Services

The factoring company buys between 80% and 90% of the account receivable invoices from the client/buyer and the rest of the amount after the invoice is collected from the debtor. The factoring contract can be based on an agreement with or without recourse based on the needs and concerns of the client/buyer and the factor's assessments.

B. Non-Financial Services

A factoring service is, in addition to financing its clients, a financing alternative for companies that can incorporate other important functions such as credit, collection and risk services.

- **Risk protection**

When the client sells his invoices to the factor, he is transferring the risk that the debtor does not pay him for the goods sent or services provided to the factoring company, since the latter will be responsible for the collection to debtors.

- **Collection service**

The collection service is based on notifying the debtor and carrying out the respective collection of the invoice within the stipulated deadlines. This process has the objective of minimizing "bad credits", in the event of non-compliance with the payment, the

factor will be responsible for proceeding with the collection through the judicial system.

- **Credit service**

Credit services involve assessing the solvency of the client's customers whose accounts the factor will buy. This assessment is normally made using publicly available data and data that the factor already has.

Factoring, as previously mentioned, is a set of services in which they are more important, financial, reducing the average time of receipt of companies to practically zero, collection service, charging debtors of purchased invoices and the credit that implies the assessment of debtors in terms of their ability to meet payments.

2.3 The Factoring Contract

In factoring operations there are three actors: the factor, the client/buyer and the debtor. More specifically, the factor constitutes the factoring company, the client consists of the factor's client company and the debtor, who is in debt with the client/buyer.

A factoring contract involves some complexity, as implies the classification of the buyer's portfolio, the notification of each of the debtors that the credits will be assigned to a factoring company, as it is which will charge them.

Below, a typical factoring operation is presented and explained in detail:

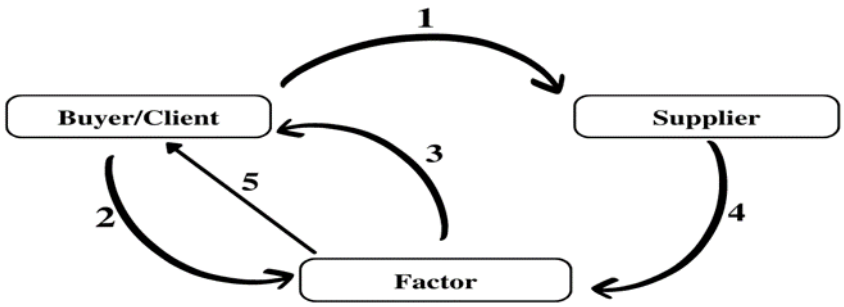

Figure 1: Factoring Contract
Source: BNP Paribas Factor

By analysing the scheme shown above, a factoring operation is carried out in the following steps:

1. Sale of goods or services: the Client/buyer (supplier) sells its goods and/or services to the Debtor (client).

2. Cession of credit: the Client/buyer delivers a copy of the invoice and original of the transport document to the factoring company.

3. Advance: the factoring company finances a percentage of the amount of the invoice ceded (for example 90%) to the Client/buyer.

4. Payment: on the invoice due date, the Debtor pays the invoice directly to the factoring company.

5. Refund of retention: upon receipt of payment of the invoice, the factoring company returns to the Client/buyer the amount retained (e.g., 10%).

For us to better understand how factoring can impact the financial health of a company, it is important to demonstrate how the advance of the value of accounts receivable by the factoring company can significantly change the analysis of the company's balance sheet. If the company chooses to finance itself through a bank, the money would be a loan and the accounts receivable would merely be a guarantee for

the loan. (Moore, 1959) Only through factoring can the Client's Working Capital be improved, since the purchase of the account receivable is involved, the client can present a stronger balance sheet.

Balance Sheet Without Factoring	
Cash	$7,050
Accounts Receivable	$45,000
Inventory	$6,750
Current Assests	$58,800
Accounts Payable	$39,900
Notes Payable	$3,000
Current Liabilities	$42,900

Table 1: Balance Sheet Without Factoring an example
Source: Moore C., Factoring – A Unique and Important Form of Financing and Service

In the table 1, it´s represented a balance sheet of a company that it´s not financing by factoring and as we can see the table the company has $45,000 in the account receivable that is not protected against possible, "bad credits". In this case, Working Capital is $15,900 and Current Ratio is 1,306.

If the company chooses to finance itself with a factoring company, the adherent would sell its account receivable to the factor and instead of having numerous accounts due from customers, it would only have one due from the factor. Assuming that the advance would be $40,000, the company would use this money to pay $3,000 of the notes payable and $30,000 to settle the accounts payable and still increase its cash position by $7,000, as we will see next:

Balance Sheet with factoring	
Cash	$ 14,050
Due from Factor	5,000
Inventory	6,750
Current Assets	$25,800
Accounts Payable	$9,900
Current Liabilities	$9,900

Table 2: Balance Sheet With Factoring
Source: Moore C., Factoring – A Unique and Important Form of Financing and Service

Through the analysis of table 2, which represents the balance sheet of the same company, but in this case with factoring financing, it appears that the Net Working Capital remains at $15,900, however the Current Ratio improved and went from 1,307 to 2,607 which makes it more attractive for the credit objective.

A company that enters a factoring contract manages to reduce its Average Receipt Time to practically zero, which constitutes a great improvement in its balance sheet as we can see in the above statement. A company with the advance of the value of the invoices that factoring provides can reduce almost entirely its accounts receivable and with this available money it is able to pay credits that are overdue, increase cash and reduce its liabilities to improve company ratios. By improving these ratios, the company comes out strengthened, making it more capable of investing the available money in other areas of the company and thus increasing the company's value. Michalski (2008) states that the efficient management of a company's operational cycles must contribute to the main objective of each company, the maximization of the company's value. The company's value creation strategy must

be executed considering risk and uncertainty, given the reduction of the operational cycle limit and risk transfer to the factoring company.

From the point of view of a factoring company, the analysis of the factors that most influence the choice of companies to finance is something that makes sense to describe in this study. Soufani (2002) analysed some determinants, the most relevant being the turnover, the type of product sold, the age of the company, the debtors and collectability (the ability of the factoring company to collect the value of the debtors), management (the management team leading the company) and credit notes (instruments that allow their holders to claim financial refunds, replace damaged items or items that did not meet the specifications stipulated in the purchase agreement and may also reflect the deduction amount from future invoices). Other determinants that were not relevant to the decision were the number of workers, the industry, the sector of activity, the financial statements, profitability.

2.4 History of Factoring

The origin of factoring is not consensual among authors, since some Salamacha (2004) refer that factoring dates to Ancient Greece and the Roman Empire, while others place the origin of factoring in the 15th and 16th centuries during the period of colonization of European powers (Cordeiro, 1994).

The beginning of factoring is somewhat lost in time[1]. In the beginning, factors were itinerant traders who were entrusted with goods belonging to others. They were

[1] "The term 'factor' is derived from the Latin verb, facere, to make or do, and means one who brings about or accomplishes things-literally, "he who gets things done/ Factors played an important part in the industry and com- merce of ancient Rome. Wealthy Romans hired them to manage and dispose of the produce of their estates, and throughout much of recorded history there are references to factors engaged in the distribution of the products of commerce and industry." Silverman, "Factoring as a Financing Device", Harvard Business Review, September

the intermediary between countries with a developed economy and those countries whose economy was still in the early stages of development (Moore, 1959).

The development of the activity, with some similarities to the concept we know today, takes us to the 15th and 16th centuries, during the period of exploration and colonization in which the Portuguese were pioneers (Cordeiro, 1994). As there was a great interest in the commercialization of products for the colonies, there was a need to make the sales process safer and more efficient. To overcome some constraints such as the dangers of navigation, difficulties in communication and distance, factors were created in the colonies, which received and stored the goods and then sold them. The factors were the representatives of the producers and traders of the parent countries and in this sense the factors were responsible for selling the goods at the most advantageous price.

Factors prospered in the colonial period and because of English expansion and mercantile activity between England and the United States, mainly driven by the textile industry (Soufani, 2002), factoring was assumed to be more financial than commercial. Factors began to provide consultancy services and to grant advances to producers on the prices of goods before they are sold. It was in these terms that factoring developed and grew, being the basis of the factoring concept as we know it today. Initially, factoring was carried out only in the textile industry, however with the specialization and experience of the activity, from 1960 onwards, factoring was adopted by other industries, namely manufacturing, distribution and transport.

Currently, factoring is transversal to all sectors of activity as a management and financing tool that complements bank credit, leasing or venture capital.

2.5 Types of Factoring

I. National Factoring

National factoring is based on the fact that all stakeholders are based in the same country, sometimes called Domestic Factoring. The most common factoring modalities are[2]:

a) Factoring with Recourse (or right of recourse)

The client benefits from the credit management and collection service and may also choose to finance the assigned credit portfolio. The Factor has the right of recourse against the client/buyer, in relation to the credits taken that are not paid by the Debtors[3].

In this modality, if the factoring company verifies that the credit has not been received within the stipulated period, it requires the client to settle the same, that is, there is a return of an invoice by the Factor at a discount.

b) Factoring without Recourse (or without right of recourse)

The Adherent company benefits from the credit management and collection service, as well as the coverage of insolvency and/or default risks by the Debtors and may also opt for the anticipation of funds[4].

In this type of contract there is a transfer of risk from the client to the Factor, since the Factor assumes the risk of insolvency on the part of the Debtor, since the Factor cannot recover this amount through the client.

[2] Source: Portuguese Leasing, Factoring and Renting Association - ALF
[3] Source: Portuguese Leasing, Factoring and Renting Association - ALF
[4] Source: Portuguese Leasing, Factoring and Renting Association - ALF

c) "Full" Factoring

This is the most complete type of contract, that is, the client combines the three essential components of Factoring in the same product: credit management and collection service, coverage of commercial risks arising from insolvency and/or default by the Debtors and anticipation of funds based on the loan portfolio[5].

d) Non- Notified Factoring or Confidential

This type of factoring is identical to the "Full factoring" described above, except for the collection service. In this case, the Debtor is not notified by the factoring company that its debts related to the client of the Factor, now belong to them. The Debtor will not be informed of the signing of the contract. In this case, all payments will be deposited in an account for the collection of credits belonging to the factoring company.

e) "Confirming" or Reverse Factoring

In this type of factoring contract, Factor makes the payment to its client's suppliers and this payment can also take the form of an advance. In the latter case, the supplier will become a member of a factoring contract[6]. A company that enters in this type of contract with a factoring company aims to pay its debts to its suppliers on the due date or in advance if so agreed. The payment of the client's supplier invoices by factoring provides an enormous advantage to the Client, since by paying "in advance" the goods and/or services can benefit from discounts and advantages that offset the cost of financing through factoring.

According to Gonçalves (2011), Reverse Factoring allows companies to free themselves from the administrative work of having to pay suppliers, as well as to obtain greater credibility with them, due to the payment being made

[5] Source: Portuguese Leasing, Factoring and Renting Association - ALF
[6] Source: Portuguese Leasing, Factoring and Renting Association - ALF

through a banking institution, which minimizes the risk inherent in contracts. In this way, the client is freed from payment management responsibilities, focusing exclusively on his business activity. Payment by Factor to suppliers may take the form of an advance. Reverse Factoring works as follows, according to BNP Paribas Factor.

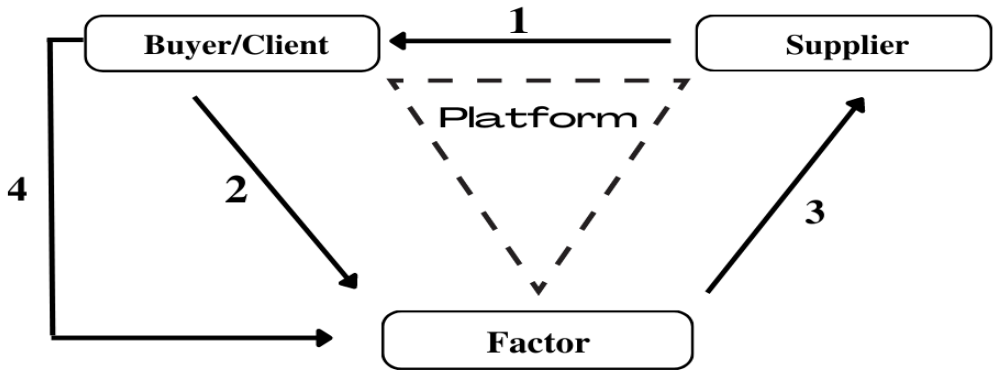

Figure 2: Reverse Factoring
Source: BNP Paribas Factor

By analysing the above scheme, we can interpret the Reverse Factoring contract as follows:

1- The supplier sends invoices for the goods/services sold/provided to Factor's client.

2- The client/buyer, in turn, sends invoices from his suppliers to Factor.

3- Factor makes payment (advance) of invoices received from suppliers.

4- The client pays the invoices to Factor on the due date.

In Reverse Factoring, as its name implies, it represents a factoring contract that is carried out in reverse, since in this type of contract it is the Client who hires the Factoring company to manage the payments of its debts with the suppliers (Goncalves, 2011).

II. International Factoring

International factoring can be of two types[7]:

- Import Factoring – National Debtors and Foreign Clients/buyers
- Export Factoring – National Clients and Debtor abroad.

In the case of the International Export factoring agreement, this is based on the assignment of the Client's credits to the -domestic factoring company on international clients (the Debtors) resulting from sales or provision of services. This service normally works in partnership with factoring companies based in the Debtors' countries of origin, who are responsible for the collection service.

III. Green Factoring

Green Factoring's main objective is to contribute positively to the sustainability journey of companies and society. The factoring line may have the purpose of supporting and financing projects, activities of a proven environmental and/or social nature and may benefit from more attractive financing conditions. The cost of the factoring line is indexed to the client's compliance with previously agreed sustainability performance objectives, which will be measured through the annual report of various sustainability KPIs[8].

Among the various types of contracts there are some that are less known and less used, however they follow the same basic structure of a traditional factoring contract having some specifications, namely: **Undisclosed factoring, Bulk factoring, Partial factoring, split factoring and split risk factoring, Selective transfer credit, Mill agent factoring or drop shipment factoring.**

[7] Source: Portuguese Leasing, Factoring and Renting Association - ALF
[8] Source: Dr. Zoraida, BNP Paribas Factor

2.6 Advantages and Disadvantages of Factoring

2.6.1 Advantages

According to Cordeiro (1994), a factoring contract is a short-term financing for the Client, that is, the one who assigns the financial credits. Factoring can have many advantages for those who opt for this type of financing, especially for SMEs and new companies in emerging countries, which often find it difficult to finance themselves through bank loans due to lack of credibility and lack of guarantees. that satisfy bank requirements (Klapper, 2006).

Silva (2009), in turn, points out as the main advantage the integrated set of services that a factoring institution offers in its contracts, namely, the credit service as well as the administrative service.

A factoring contract has several advantages related to the various services it offers and, in this aspect, considering the advantages based on ALF, (Silva., 2009) and Cordeiro (1994).

Financial Service

- Advance on credits;
- Provides immediate liquidity by financing the amount of sales;
- Allows for better treasury planning;
- Increases borrowing capacity and improves debt ratios;
- Increases its profitability to the extent that the client, with liquidity, will immediately pay its own suppliers, thus obtaining more favourable prices;
- Transform fixed costs into variables through subcontracting the collection, adapting costs to the companies' sales cycles.

Administrative Service

- Reduction of administrative costs by transferring the charges to Factor;
- Greater discipline in collections;
- Simplification of credit management operations;
- Reduction of administrative personnel and communications costs;
- Increase in the effectiveness of the commercial area:
    - Exclusive dedication to technical and commercial tasks;
    - Expansion not limited by treasury difficulties.

Risk coverage service

- Analysis of the debtor portfolio;
- Security of credit sales;
- Regular consultation of information on debtors through monthly statements and collection journals.

Through the analysis it makes of the debtors of its clients, Factor collects a lot of information and this time there may be cases in which there is repetition of debtors and in this way the factoring company will no longer need to carry out new credit and risk analysis resulting in a reduction of costs, a process that we can call economies of scale (Summers & Wilson, 2000).

2.6.2 Disadvantages

Regarding the least favourable part of a factoring agreement, there are some less favourable points when carrying out a factoring agreement. (Michalski, 2008) Despite the great benefits such as the reduction of investing funds in the

net working capital and the reduction of debt collection costs, financing through factoring is linked to certain charges.

A Factoring contract has some disadvantages, (Cordeiro, 1994):

- Costs – a factoring contract includes some costs, namely interest rates and commissions. The commissions charged are the general commission payable to the Factor company, the commission on the volume of invoices sold and guarantee commissions (as a risk premium assumed by Factor). And finally, the interest rates for the anticipation of the principal.
- Factor may, upon persistent default by the Client's customers, suspend credit.
- By means of the totality of credits that the Client can propose, factoring reserves the right to accept only part of them according to the selection criteria used for its evaluation.

2.7 Evolution of Factoring in Portugal

Factoring emerged in Europe in the 20th century, with the creation of the first factoring companies in England and France. During this period, merchants used this type of service as the main method of financing when the first American colonies emerged. Traders used this service to finance the transport of raw materials between Europe and the colonies. In a first phase, this service guarantees the transport of goods, from collection to sale. With the specialization of the service, agents stopped having an active participation in the transport of goods and started to finance and guarantee the payment of customers with credit.

In Portugal, factoring emerged through International Factors Portugal S.A., in 1965, the first factoring company in Portugal. In 1972 it was founded the second factoring company, Heller Factoring Portuguesa, at this time factoring companies were regulated by existing legislation for banking activity, being recognized as parabanking, recognized and authorized by Decree-Law No. 46302 of 27 April 1965.

In 1986, specific legislation was published for the sector of activity in Portugal and from that moment there was a great growth of the sector in the country, evident in the late 1980s, due to the liberalization and deregulation of the system. The Portuguese financial system allowed to set interest rates administratively. In 1989, the Portuguese Association of Factoring Companies – APEF was created to respond to its members, to publicize the activity and to respond to the need to implement adequate infrastructure for its continuation. The years 1990 and 1991 are years of great importance for the sector, with a considerable increase in the number of factoring companies in Portugal. In 1990, factoring contracts already represented 1.9% of the Gross Domestic Product (GDP) and the banking sector also became eligible to carry out operations in this model. In 1992, companies in the sector started to be recognized as credit institutions and in 1994, loans taken through factoring accounted for 3% of GDP, registering an increase of 17% over the previous year.

The combination of factors such as the growth in supply, consolidation of the sector with the entry of new companies, greater focus on collection to control the average collection time, thus obtaining cash to pay suppliers. In 1997, the sector already represented 120 million euros of annual production. At that time, companies in the sector already represented a great capacity to respond, with efficiency and speed in the provision of their services. As a result, Portuguese companies began to better manage their treasury and average payment times, obtaining more time to manage the business.

The Portuguese economy is characterized by delays in payment, including the public sector. In this sense, factoring is of great importance in the national scenario and reveals a great acceptance of the product by companies, given that 90% of the Portuguese business fabric are SMEs. According to Klapper (2006), factoring may represent a relatively greater importance for SMEs and new companies since many of them have great problems in obtaining bank loans.

With factoring, companies can obtain financing for their business continuity and for the management of accounts receivable, in addition, the factoring process is more efficient and companies do not have to present any guarantees (Malikhatun Badriyah et al., 2017).

In 2021, in the first half of the year, factoring represented 15.4% of GDP, which represented a total of 15.8 billion euros in borrowings. These values are the result of a growth compared to the same period, the first half of 2020, a period marked by the confinement imposed due to covid-19. According to Pedro Cunha, Vice-President of ALF, "Factoring is a fundamental piece to give companies a support that ensures them agility and security in payments and receipts, allowing them to focus on fundamental challenges and investments, such as innovation, digitization, combating climate change and, fundamentally, developing their business"[9].

As we can see in the chart, since 2014, loans taken out in Portugal by factoring have grown significantly, having in 2018 reached a growth peak of 17.58% compared to the previous year, reaching 31,757 million euros, representing 15.8 % of national GDP. In 2020, we can see a sharp drop, given the confinement by the covid-19 pandemic.

[9] Source: Jornal de Negócios

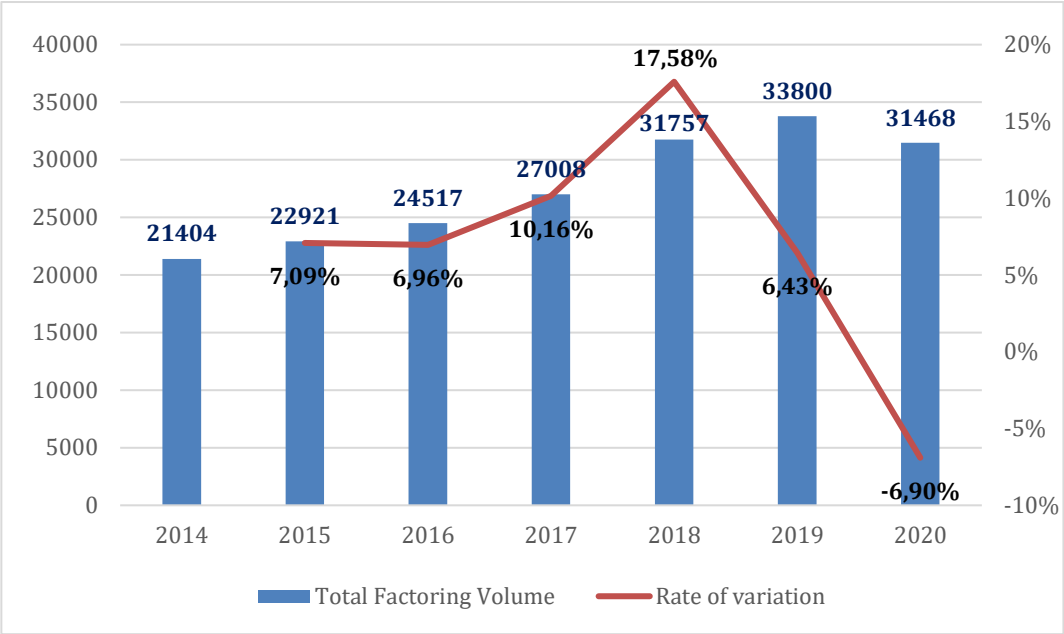

Figure 3: Total Factoring Volume and the variation.
Source:

2.8 Differences between Factoring and a Bank loan

Factoring as an alternative to business financing is and can often be compared to a bank loan. Both options are credits provided by banking institutions, however they have very different operating processes in which companies can benefit more and better if they understand the concept of each one.

The most significant differences are[10]:

- The emphasis is on the value of the receivables and quality of the debtors and not only on the assessment of the client's creditworthiness.
- A bank loan involves two parties, while factoring involves three parties: factor – client of a factor (supplier) – debtor of a client (buyer).
- Factoring is a flexible short-term financing.
- Factoring influences the balance sheet ratios of a client in a positive way
- Tailor-made solutions are possible depending on the client´s requirements.

[10] Source: BNP Paribas Factor Portugal

- Higher credit facilities are possible based on the sales ledger.
- Factor may contact both parties (buyer, seller) which brings more security.
- Risk mitigation on several buyers instead of one client.

2.9 The main characteristics of companies that use factoring

The objective of the work is to study the main characteristics of companies that use factoring and to understand if there is any relationship between certain assumptions and the use of factoring. The most used characteristics to study this choice of companies are financial, geographical, size, legal and economic activity characteristics.

Through the study by Soufani (2000), in which the author tries to trace the profile of companies that use factoring, using some characteristics. First, the author emphasizes the factor of the size of the company through the characteristic of the number of workers revealing that it is not a very significant characteristic. Another measure of the size of the company is turnover and this already important feature to understand what the needs of companies, their development phase and their segmentation. Being a very important tool for factoring companies. The industry also reveals some important characteristics, as the main sectors of activity of the companies that use factoring are manufacturing, distribution and services.

Regarding the age of companies, the author points out that companies under 1 year are not popular by factoring companies, most companies focus on the range between 1 and 5 years. And companies over the age of 15 are already considered to be in a maturity phase, where they can easily turn to banks and

have administrative and accounting teams, not requiring a factoring company. The legal way is a way of relating the ownership of the company with the use of factoring, and the author concluded that limited companies represented most companies that use factoring.

Soufani (2002) developed a later study in the United Kingdom which focuses particularly on SMEs enterprises as well as banking. This study was based on the variables already described above by adding financial variables. The author concluded that in terms of the size of the company, turnover was an important indicator, revealing that the companies with the lowest turnover are the ones that use factoring the most, because they did not have enough collateral before a bank. The manufacturing, distribution and services sector has shown the greatest significance in companies that use factoring. As for financial variables, he concluded that the more difficult it is to have credit access by a bank, the more likely it is to use factoring. Banks require collateral, so smaller companies don't have the ability to introduce them to factoring. The financial difficulties of companies are also an important element, since the author concluded that the more companies experience financial difficulties, the more likely they are to use factoring.

Based on this work on these studies and on the ability to build a profile for the type of company that uses factoring.

Chapter 3

BNP Paribas Factor: Case Study

3.1 Company Framework

BNP Paribas is one of the largest European banks, with a presence in 68 countries and was created in 2000 through the merger between the National Bank of Paris (BNP) and Paribas (Banc de Paris et des Pays-Bas S.A.). It has over 193,000 employees, including around 148,000 in Europe.

The group has key positions in its main activities:

- Domestic Markets and International Financial Services (whose retail banking networks, and financial services are covered by Retail Banking & Services).
- Corporate & Institutional, which serves two client franchises: corporate clients and institutional investors.

The group helps its clients to carry out their projects through solutions that cover financing, investment, savings and protection insurance. In Europe, the Group has four domestic markets (Belgium, France, Italy and Luxembourg).

BNP Paribas Factor – Financial Credit Institution, S.A. has been present in Portugal since 1987 on the initiative of its shareholder, BNP Paribas. It was the third factoring company to operate in Portugal and the first to be part of "Factors Chain International". As part of an international group and FCI, BNP Paribas Factor can intervene in the main international markets and provide factoring services to Portuguese exporters in more than 82 countries.

The activity carried out by BNPPF, although being an IFCI – Financial Credit Institution which allows it to hold and manage a wide range of businesses, is only geared and focused on factoring.

Therefore, the risks to which the institution is most exposed are credit risks and operational risks. Credit risk is defined as the probability of negative impacts on results or capital, due to the inability of a counterparty to fulfil its financial commitments to the institution. Operational risk in the BNP Paribas universe is defined as the occurrence of negative impacts on results or capital, resulting from failures in the analysis, processing or settlement of operations, from internal or external fraud, from the activity being affected due to the use of outsourced resources, ineffective internal decision-making processes, insufficient or inadequate human resources or inoperability of infrastructure.

In this way, it is important to understand how a factoring contract is conceived, from its initial approach to its conclusion. It can be said that the process of granting credit through factoring generally has four parts: (i) market analysis (prospects), (ii) debtor analysis and Coface[11] rating, (iii) invoice taking and financing and (iv) on the due date, the collection of invoices from debtors, an operation performed by the glance.

The commercial department analysis the potential Client. The analysis falls at an early stage on the client's market or sector of activity, as well as the type of marketable good or service. At an initial stage, a KYC (Know Your Client) of the client is also carried out to ensure that all parties involved, shareholders, members of the board of directors, UBOs (Ultimate Beneficial Owner), parent companies, are properly identified, as well as how to do an exhaustive search on various platforms in order to prevent Money Laundering. In the next phase, the desired ceiling for taking invoices by the client is determined, making an annual estimate of the value of the transfer of invoices. This ceiling is determined by the expectation of a certain volume of business, associated with the economic and financial situation of the client. This situation is directly related to the client's

[11] Coface's rating represents the risk level of the client. A value is assigned according to the results obtained from the analysis of the financial statements. The range of values is between zero and ten. The higher a customer's rating number, the more risk it presents to Coface.

rating, that is, its level of risk. The next point is the analysis of the list of debtors to be included in the contract. This start-up phase is called the "prospect".

In the second phase, there is the exchange of proposals and counter-proposals regarding the pricing of the operation, the supporting documents and all the details of the operation, until the contracts are signed. Managers have the task of receiving clients invoices and being able to give the approval for financing or payment of invoices, while re-lanceurs have as their main task, to collect debtors. The contract begins with the first assignment of invoices, if there is any case of non-compliance, the litigation department takes all due legal steps. There is one aspect that should be highlighted in the event of non-compliance. However, in the event of a debtor's default, the risk of BNP Paribas is safeguarded by the insurer.

3.2 Hypotheses development

BNPPF has a vast portfolio of clients and it's a company highly respected in the market for its seniority, credibility and presence. Under the protocol described above, companies perform a series of steps until they are effectively customers of the company. Companies are of various sectors, sizes, legal forms, geographies, among other factors.

Since these companies have these characteristics and in order to meet the main theme and focus of study of this work, the determinants considered here were chosen based on other works. Soufani, (2000) conducted an investigation in the UK, which included companies using factoring. The categories used were size (No.of employees, and turnover), sector, age and type of ownership or legal form.

In a later study, Soufani, (2002) compared the relationship between UK-based companies and banks. He used similar characteristics and financial variables.

Vázquez et al. (2018), conducted a study on the use of factoring by SMEs in several European countries and concluded that companies based in countries with a weak legal environment, where lenders are not as protected there is a greater tendency to use factoring, and one possible explanation will be that in these countries access to bank credits may be more restricted. Companies, whose country is growing economically, are also more likely to use factoring.

The choice of these variables allows us to draw conclusions about the profile of companies that use factoring as a financing method. Based on studies done focused on the characteristics of companies that use factoring or not, we have the following hypotheses.

Hypothesis 1: Companies that use factoring are smaller in terms of employees, turnover and assets.

Hypothesis 2: Companies that use factoring tend to be more of the manufacturing and distribution sectors.

Hypothesis 3: Companies that use factoring tend to be younger.

Hypothesis 4: Companies that use factoring tend to be more of Limited Company.

Chapter 4

Data and Research Methods

4.1 Sample

To study the determinants that most influence the use of factoring by Portuguese companies that use factoring through the BNP Paribas Factor bank, we used a database composed of companies that use factoring and companies that do not use factoring. The information was collected from the BNP Paribas Factor database, using a sample of its customers and from Iberinform, a sample

of Portuguese companies that do not use factoring. The data collected are from Portuguese companies, are updated data from 2022, totalling 707 observations.

4.2 Measures

The following model variables, described in Table 1, were used to explain the use or non-use of factoring in order to conclude which determinants most influence that decision.

Variable	Description
Factoring	Dummy variable for each company, depending on whether they use factoring or not.
Turnover	Sales volume, in thousands of euros, of each company.
Sector	Sector of economic activity of each company.
Organizational Form	Legal form of each company.
Age	Number of years of each company.
Employees	Number of employees of each company.
Assets	Volume, in thousands of euros, of the assets of each company.

Table 3: Description of the variables

Dependent Variable

Factoring is a dummy variable that takes the value 1 if the company uses factoring and takes the value 0 if the company doesn´t use factoring.

Independent Variables

Turnover is the sales volume of the company, in thousands of euros. This variable was used in two ways, first we transformed the variable into different intervals[12] and in a second experiment, intervals were grouped to test a different hypothesis

[12] See the attached table with the results of the first experiment, where the various intervals regarding turnover were established.

derived from the first experiment, shown in the results table. It´s a measure of the size of the company.

Sector is the economic activity of each company. The sectors present in the sample are: Trade, Construction, Manufacturing, Agriculture/Forestry/Fishing, Services and Transportation/Communication. The sectors were divided, and each sector was transformed into five dummy variables.

Organizational form is the legal form of each company. In the sample, there are three different legal forms: Sole Proprietors, Limited Companies, Partnership. The legal forms were divided, and each legal forms were transformed into two dummy variables.

Age is the number of years of each company since its economic beginning. This variable was incorporated in the model to understand if the newer companies would resort more to factoring compared to older ones.

Employees is the number of number of workers of each company. It's a measure of company size, in order to see if smaller companies resort more to factoring compared to larger ones.

Assets is the volume, in thousands of euros , of the company assets. It is a financial measure, as well as a measure of the size of the company. This variable was used in two ways, first we transformed the variable into intervals and used it in this way in the model. In a second experiment we used the absolute value so that there was a comparison between the two models.

4.3 Method

In order to test the hypothesis of the study, the Logistic regression model was applied. The logistic regression is used to control jointly for the determinants of factoring use. The logistic regression was used to model a binary variable, set to 0 for those companies that do not use factoring and 1 for those that do, as a function of the determined explanatory variables. A cross-section model was estimated in order to verify which factors/variables most influence the use of factoring as a financing method.

Equation 1: Logistic regression

$$logit\ (Factoring) = \alpha + \beta\ Dummy\ Turnover + \gamma\ Dummy\ Sector + \delta\ Dummy\ Organizational\ Form + \varepsilon\ Dummy\ Assets + \zeta\ Employees + \eta\ Age + \varepsilon$$

where the logit of a binary variable is defined as $logit(X) = ln\ P(X=1)/\ P(X=0)$

Chapter 5

Results

5.1 Descriptive Statistics

Analysing the descriptive statistics present in table 4, we can perceive the main characteristics of the companies present in this sample. The average age of the companies present is approximately 36 years, and the oldest company is 266 years old. Regarding the factor of the size of the company it can be verified that, starting from the number of workers of each company, we have the average number of workers is 275 and the largest company employs more than 10,000 workers. As for the company's turnover, the average is around EUR 48 467 million and the minimum value is EUR 100 million. Another statistic that was included was the mean of the variables only for companies that use factoring and

from this perspective, the average age of the company is similar to the sample mean and all other variables have slightly lower values.

Quantitative variable	Mean	SD	Minimum	Maximum	Mean using factoring
Age	35,88	21,81	4	266	35,84
Employees	275,25	769,19	1	10343	244,75
Turnover	43996	1,10e+007	100	1,99e+008	48467,45
Assets	54374	1,98e+007	69	3,38e+008	64344,43

Table 4: Descriptive Statistics-of quantitative variables

The following table describes the qualitative variables in order to understand the dimension of these factors in the sample represented here. The sectors with the most expression in the sample of companies that use factoring are services, trade and manufacturing. In this sample, the organizational forms are few and thus the division is uniform.

Qualitative variables	Total (%)	% of the total firms	% of firms using factoring
Sector			
Services	121	17%	26%
Retail	178	25%	30%
Manufactoring	278	39%	27%
Construction	43	6%	10%
Agriculture/Forest/ Phishing	51	7%	3%
Organizational Form			
Limited Companies	244	35%	41%
Sole Proprietors	463	65%	59%

Table 5: Descriptive Statistics of qualitative variables

5.2 Results

Factoring and business size

Analysing the business fabric that exists in Portugal, it is observed that there is a set of small and medium-sized companies. In general, they are companies with a smaller size, with a family management and that in many situations rely on alternative financing methods to meet the demands of their market. Studies from, Soufani (2002) suggest that smaller companies with a lower

turnover level are those in which there is the most incidence of factoring use. They also report that companies that have low sales volume and, above all, are more recent, have more difficulty in finding institutions that entrust them with an effective method of financing. Through the results obtained by the first experiment made using 5 dummy variables, dividing the turnover in 6 intervals, it was found that all turnover intervals are negatively significant, which means that the higher the turnover of companies, the lower the probability of using factoring compared to those that have between 0 and 1 million euros in turnover[13].

	Coefficiente Estimate	SE	Significance
Constant	5,10112	0,886120	<0,0001***
Age	0,00189086	0,00658923	0,7741
Employees	−0,000204370	0,000124060	0,0995*
Turnover (Over 1M)	−2,91776	0,535761	<0,0001***
Sector			
Retail	−0,662561	0,704966	0,3473
Manufacturing	−0,451426	0,676906	0,5048
Transport/Comunication	0,0755055	0,679484	0,9115
Construction	−1,62267	0,800679	0,0427**
Agriculture/Forest/ Phishing	0,231910	0,986999	0,8142
Organizational Form			
Limited Companies	−0,545901	0,314186	0,0823*
Sole Proprietors	−1,26269	0,524962	0,0162**

Tabela 6: Regression Coefficients
Note: The symbols ∗, ∗∗, and ∗∗∗ indicate statistical significance at 10%, 5%, and 1%, respectively. McFadden's R-square is 0,174209.

In order to confirm this result, a regression was made in which we grouped all the intervals in order to compare it with the smaller interval, as shown in the above-mentioned results. As can be seen, the higher the turnover of the company, the less likely the company is to resort to factoring compared to companies that have a turnover below 1 million euros.

[13] The results of the first experiment are shown in table 7 of the Appendix.

As for the number of employees of each company, it is observed that for each additional worker in the company, the probability of resorting to factoring is lower, as can be seen by the negative coefficient.

Considering the value of a company's asset as measure of the size of the company, it was decided to include this variable to observe its impact. In a first experiment, the variable was divided into 4 dummy variables and in this situation all coefficients proved to be negative, the negative and non-significant coefficients reveal that there is not much impact on the use of factoring[14].

On the other hand, another regression was made grouping all intervals greater than 1 million euros to compare with the interval below this value. And it was found that all companies that had the asset below 1 million euros used factoring, so we can relate that companies with lower assets are those that resort more to factoring.

Factoring is not an exclusive financing method for a certain stage of business development, however there can be some relationship between a more premature stage of development and a stage in which the company has more arguments in order to finance itself.

As companies with lower turnover, fewer employees and lower assets were more likely to finance themselves through factoring, we accepted Hypothesis 1.

Factoring and the activity sector

The sector of activity that companies are inserted in can provide some conclusions about the payment method and the payment period that companies can practice. Evidence from several studies finds a greater focus on manufacturing companies, due to some characteristics such as late payments (Binks & Ennew, 1992, 1994, 1996). Analysing the results obtained by this study,

[14] The results of the first experiment are shown in table 7 of the Appendix.

it is verified that all coefficients are negative, except for the agriculture/forest/fishing sector, thus meaning that all these sectors: Trade, construction, transport/communication and manufacturing are less likely to use factoring than services. In line with Soufani (2000), it says that factoring companies tend to exclude some industries due to some problems with payment periods, the type of contract and a scant customer base.

As there was no evidence that manufacturing and distribution could have an impact on the use of factoring, perhaps because BNP Paribas Factor itself has a diversified portfolio of clients from various areas, Hypothesis 2 is rejected.

Firms' age and factoring services

The pattern of demand for factoring services emphasizes the focus that it is the younger companies that use this type of financing. According to the results of Table 5, the age variable presents with a negative and non-significant coefficient, an additional year in the age of the companies means a lower probability of resorting to factoring, however it is not a significant result. From the sample of this study the average age of companies is 35 years, then demonstrates that BNP Paribas Factor has a more experienced customer base. Hypothesis 3 is rejected.

Factoring and firm's ownership

By analysing the results of tables 5, it can be observed that both limited and single owners are less likely to use factor compared to partnerships. This can be verified through negative and significant coefficients. By the results we reject hypothesis 4.

Chapter 6

Conclusion

This dissertation is based on the study of factoring and its choice as a financing alternative. The investigation is based on a case study of BNP Paribas Factor, in which the main objective is to study the characteristics of companies that most influence their choice to use factoring.

Factoring is a form of financing that addresses the need to reduce the average time of receipt of a company, thus helping the company's treasury to have greater liquidity and to meet its current cash needs. Factoring is not a financing method, exclusively for smaller companies, however companies at an early stage of development are those that most resort to factoring. One of the reasons for this to happen is precisely the fact that when companies resort to a bank loan, the bank will demand guarantees that this type of company cannot provide.

From this starting point, the search for the characteristics of the companies that most influence this decision is targeted in this study. Several hypotheses were tested in relation to various characteristics of the companies, such as size, age, number of employees and legal form. As a result of this research, it was found that the smaller the size of the company, in relation to turnover, number of employees and assets, the greater the probability of these companies resorting to factoring. Regarding the sector of activity, it cannot be said that manufacturing and distribution companies have a greater tendency to use factoring, since no significant results were obtained. Some studies suggested that companies with less experience in the market could resort more to factoring, however in this study this hypothesis was not confirmed. As well as the legal form of the company, the results did not show any trend, since both legal forms had negative coefficients.

It is concluded that the most relevant point was, the characteristic related to the size of the company, companies with lower turnover, assets and size at the level of workers is an indicator that the company will probably resort to factoring.

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Susilowati, I. FACTORING AS A FINANCING ALTERNATIVE OF BUSINESS DEVELOPMENT FOR SMALL AND MEDIUM ENTERPRISES.

Appendix

Results of the Initial Experiment

In a first approach, the regression was performed using the turnover and asset variables as dummy variables that were divided into several intervals.

	Coefficient Estimate	SE	Significance
constant	24,9550	18504,0	0,9989
Age	−0,000623341	0,00638782	0,9223
Employees	−0,000447825	0,000168829	0,0080***
Turnover			
€1M – 5M	−2,76606	0,683297	<0,0001***
€5M – 10M	−2,89408	0,605518	<0,0001***
€10M – 50M	−2,86926	0,618223	<0,0001***
€50M – 100M	−3,49148	0,692478	<0,0001***
Over €100M	−2,59676	0,803744	0,0012***
Sector			
Retail	−0,845422	0,734137	0,2495
Manufactoring	−0,646820	0,694377	0,3516
Transport/Comunication	−0,213428	0,711434	0,7642
Construction	−2,00196	0,858169	0,0197**
Agriculture/Forest/ Phishing	0,0444974	1,00267	0,9646
Organizational Form			
Limited Companies	−0,642674	0,343212	0,0611*
Sole Proprietors	−1,33206	0,544187	0,0144**
Assets			
€1M – 10M	−19,7176	18504,0	0,9991
€10M – 100M	−19,3089	18504,0	0,9992
€100M – 200M	−19,8867	18504,0	0,9991
Over €200M	−17,0838	18504,0	0,9993

Table 7: Regression Coefficients of the Initial Experiment

Note: The symbols ∗, ∗∗, and ∗∗∗ indicate statistical significance at 10%, 5%, and 1%, respectively. McFadden's R-square is 0,208183.

As can be seen from the table below, the turnover variable was divided into 6 dummy variables, the smallest referring to the amount less than 1 million euros. The asset variable was transformed into 5 dummy variables, the smallest with a value of up to 1 million euros.

As can be seen, the coefficients of all turnover intervals are negative and significant, meaning that the higher the turnover, the lower the probability of the company resorting to factoring. Likewise, the coefficients of the asset intervals are negative and non-significant, which means that the larger the asset, the lower the probability of resorting to factoring, however, these variables are not relevant to explain the measure.

This time a second approach was carried out and presented in section 5.