



CATÓLICA
LISBON
BUSINESS & ECONOMICS

Revenue-Based Financing

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Dissertation written under the supervision of Prof. Diana Bonfim

Dissertation submitted in partial fulfilment of requirements for the MSc in
Finance, at the Universidade Católica Portuguesa, 2016

Abstract

This dissertation has the purpose to introduce the concept of Revenue-based Financing to the academic literature and to assess its characteristics by studying the existent capital structure theories and comparing it with traditional financing options. This type of firm funding has been used in diverse industries but has not been widely available for use. In recent years there has been an increase in the firms providing this financing instrument. It is thus important to understand if this instrument is important to improve the access to financing and support the growth of certain firms.

Existent literature and data have proved that it is not desirable for all firms to choose between equity and debt due to ownership and control issues or even due to different costs. Also in terms of access of financing, mainly for SMEs, revenue-based financing can be an instrument improving it by closing the gap between equity and debt financing enabling firms to take rapidly investment opportunities and bolster their growth.

The real cases studied in this dissertation vary substantially in the terms agreed such as the collateral needed, the incidence of the costs of financing or other requirements made by the investors. Hence, it is very difficult to develop a unique framework for this type of financing, as each firm is a unique case.

My research leads to the conclusion that Revenue-based financing should be used as a complementary tool and that, in fact, there is a need for this type of financing.

Esta dissertação tem como objectivo introduzir o conceito de financiamento baseado nas vendas à literatura académica e avaliar as suas características. Isto será feito através do estudo das teorias de estrutura de capital existentes e elaborando uma comparação com as opções de financiamento tradicionais.

Este tipo de financiamento empresarial tem sido utilizado em diversas indústrias porém o seu uso não está disponível em muitos países. Nos últimos anos tem vindo a aumentar o número de empresas no mercado a fornecer este instrumento, tornando-se assim importante perceber se este instrumento é importante para melhorar o acesso das empresas a financiamento como também ajudar no seu crescimento.

A literatura existente tem provado que não é ideal para todas as empresas escolher entre capital próprio ou dívida, devido a problemas com o controle ou posse da empresa. Em relação ao acesso a financiamento, principalmente para PME's, o financiamento baseado em vendas pode ser um instrumento que melhora este acesso, reduzindo a lacuna entre financiamento através de dívida e capitais próprios ajudando estas a aproveitar oportunidades de investimento instantaneamente.

Os casos reais observados nesta dissertação variam consideravelmente nos termos acordados como: a necessidade de colateral, incidência dos custos do financiamento ou outras exigências feitas pelos investidores. Consequentemente, é bastante difícil desenvolver um único modelo para este tipo de financiamento porque cada empresa é um caso único.

A minha investigação leva à conclusão que este tipo de financiamento deverá ser utilizado como um instrumento complementar e que há uma necessidade para este tipo de financiamento.

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Preface (acknowledgements)

In the first place I would like to thank my thesis advisor Dr^a Diana Bonfim of the Católica Lisbon School of Business and Economics at Catholic University of Portugal. I am thankful for all Prof. Bonfim availability whenever I ran into a trouble situation or had a question about my research and its development. I have been remarkably lucky to have a supervisor that cared so much about my work and that answered all my questions offering invaluable advice helping me with my vision.

I also would like Dr^o António Lucena de Faria, CEO of Fábrica de Startups because of the inspiration he gave me to explore this subject and also the support with his deep knowledge. Finally, I must express my very gratitude to my parents, who have accompanied me since the beginning and were essential to provide me with everything that I needed.

To my sister who has support me with her wise counsel and motivating words, the constant concern and strength was essential during my pathway.

Thank you for all the love, support, encouragement and dedication.

I also would like to thank to my friends, their support and care helped me in staying focused on my studies and overcome obstacles, their belief in me is something that I greatly value.

1. Introduction

This dissertation has the purpose to analyse an innovative and not very well-known financing tool: revenue-based financing. This tool allows firms to obtain funding, in exchange for a percentage of future revenues earned by the firm. Even though it is possible to find some examples of the use of this tool (some of which are discussed in detail in this thesis), a systematic analysis of the relative advantages and costs of this type of financing was still missing. As such, the goal of this thesis is to analyse in detail the structure of revenue-based financing, in particular, whether it can be considered advantageous compared to traditional ways of financing or whether it can address some of the issues and needs of companies that cannot obtain funding through other more commonly used instruments. The research will be conducted at the light of well-known and developed capital structure theories, which will help providing the right comparison between the choices of firm financing.

The Modigliani-Miller theorem developed in 1958 states that under assertive assumptions the firm choice between equity and debt financing has no impact on the firm value. This theory argues that the risk of underlying assets and the ability to generate revenues are the determinants of the market value of the corporation, regardless of how the investments are financed or if dividends are distributed.

The limit of this theory was the lack of integration of the capital markets in a global scale in the past, implying that under certain circumstances raising of capital would be cheaper in some locations than others. Nowadays, the link between the region of the firm and the capital market is weakening as the global access is easier and capital markets are becoming more competitive.

The capital structure selection has received substantial attention in the last century as one of the puzzles for maximizing the market value of a firm at management and executive level. The importance of the subject has been related to the complexity of managing operations and at the same time accounting for the financial risks involved with each type of financing because investment decisions are usually long-term but at the same time has to be made short-term decisions in terms of managing the underlying assets, inventories and other liabilities.

The literature has received a great deal of attention in the choice between equity financing and debt financing and since these are the main types of financing it is important to understand the implications of both types on several dimensions, in terms of control of

operations, costs of capital, dilution, costs of issuance and time involved, exit strategies for investors and the alignment of interests.

Although there is a preference towards debt and equity financing, both types of financing may not be feasible for all companies and the suitability may vary according to some factors, such as the characteristics of the industry that the firm operates, the strategy that the company wants to follow, the leverage borne by that financing option. It is also possible that the company is not eligible to apply for both types of financing deriving from the structure of its assets and tangibility, the dimension of the business or even because of low growth expectation or business seasonality.

According to Katovitz (1980) the classical sources of capital have been ineffective devices in small firms financing, so the governments started to be more involved in funnelling capital to these firms not only because of the economic development derived from that intervention but also of the social benefit through product innovation.

The inefficiency of the markets is demonstrated by the failure of an adequate capitalization of SMEs even when these firms' present superior returns on investment. For instance, the Federal Trade Commission showed that for the period 1972-76 observed that manufacturing firms produced an after tax return on equity of 15.95% comparing with firms with more than one billion in assets producing returns of 12.91% (Katovitz 1980).

Governments started to focus on decreasing the cost of capital for small firms as a way to attract the creation of more and, in order to strength local economies, but the systems designed to provided help with the use of tax deductions or interest subsidies have not been very prosperous as they do not account for specific needs of this kind of firms.

Revenue-based financing it is an innovative type of financing that has received little attention in the academic literature and only a few companies are using it. This type of financing can provide a solution for the firms not qualified for the classical funding systems or even for firms that struggle to obtain financing because of the conditions of their country's capital market.

In regard to the research purpose of the dissertation, the objective is to assess whether Revenue-based financing can be considered an advantageous way of financing under certain situations. Understanding the terms negotiated in revenue-loans is crucial to provide insightful knowledge of the acquisition of funds process and in which terms they differ from the classical sources of capital and to which situation or condition one source of capital can prevail over the others.

The dissertation has the following structure, in the first section of the dissertation, it will be discussed in depth the characteristics of the traditional financing options, the reasons for the choice between equity and debt, the features of both types of instruments and limitations or assumptions of the classical capital structure theories. In the second part, will be gathered some statistical data with respect to the ways firms obtain financing in a country level and also on a global scale. This data is important because it shows the success rates of obtaining financing according to the source and to observe if there is a need for a new financing instrument.

In the third part, revenue-based financing will be presented, by gathering relevant concepts analysing its features and the conditions to be eligible for receiving the funds. . The following section describes what kind of businesses fit revenue-based financing by matching the features of this type of financing with businesses that could benefit or perform better with this financing mechanism and by observing some common industry characteristics that might be desirable for obtaining a revenue-loan. In the fifth part a comparison will be made between the classical types of financing and revenue-based financing. This part will focus on distinguishing all the types of financing in terms of its features by addressing the issues of control of the corporation, the firm's cost of capital in the several scenarios, the dilution of ownership as well as the risks involved, the time and process of acquiring the funds and the incentives of both parties (principal vs. agent) and their exit strategy. In the sixth part are discussed the reasons for choosing this innovate way of financing and why there is a need for this kind of financing by addressing the small and medium enterprises needs and what efforts have been made to boost lending activities In the following section are presented real cases of companies engaging in this type of financing in different industries and lastly, the conclusion will gather conclusive points as well as discuss the limitations of this research.

2. Literature Review

2.1 Debt financing

Usually, when a firm is created the type of capital used to constitute it is equity, coming from either personal, family and friends funds or venture capitalist investments. After this point the main instrument preferred as external financing is usually debt (Baltaci and Ayaydin, 2014). Debt financing is considered to be the least expensive option of financing, it is a process that take a long time for application, where the bank (lender) will focus on credit history of the firm and also the personal credit, evaluation of the corporate and personal assets creating covenants and restrictions on their trade to guarantee some collateral in the case of firm default. One of the main features of the debt financing is the fact the bank does not get involved in the company operations and how the businesses are conducted despite of some restrictions and covenants on some actions.

The covenants can range between several areas such as: prepayment, financial, dividend and secured (Bradley and Roberts, 2004). Prepayment covenants include mandatory debt payments in the case of an event like selling of common shares or assets. The company if violates this covenant is obliged to pay a fixed percentage of the principal amount of debt, for example if the firms sells a percentage of assets that is higher than the percentage allowed by the bank. Financial covenants are restrictions on several accounting indicators, the banks stipulates that some financial performance indicators must be maintained as long there is debt outstanding such as interest coverage ratio, net worth or current ratio. In relation to dividend covenants this type only restricts the distribution of dividends to stockholders, specifying the maximum amount and the periodicity. Lastly, about the secured covenants, they treat the classification of collateral and which assets can be used as collateral in the case of bankruptcy of the firm.

There are many benefits of using this type of financing such as the tax deductibility of interest payments and also the reduction of problems attached to free cash flow. On the other side, debt financing can increase the probability of distress and increase the agency conflicts between debt holders and shareholders (Fama and French, 2002) but also mitigates agency problems in the case where the firm is fully equity financed between the manager and shareholders. One well known example is the overinvestment problem (Jensen, 1992), where companies that tend to retain more cash-flow also tend to invest more.

In order to reach the optimal capital structure, the manager should choose a level of debt that minimizes the cost of capital and that the same time maximizes the value of the firm, this is done by weighting the bankruptcy costs with the tax shields arising from the interest payment. Most of the literature on capital structure and financing choices focus on the trade-off theory, where this balance between taxation gains and possible costs of distress is made (Myers, 2001).

Other driver for the differences in the capital structure its asymmetric information, given the superior inside knowledge of the managers about the firm's value. Myers and Majluf (1984) state that securities more sensitive to private information will be less issued compared to those insensitive, they also refer that if a firm issues debt with default-risk free the price of the stock does not decrease.

2.2 What influences debt financing?

According to Frank and Goyal (2009), the patterns for capital structure of companies have changed over the last decades. In the 1980s there was a movement in increasing leverage, due to market pressure, attributed to more demand for corporate control. In the 1990s there is evidence of more small firms issuing shares in the stock exchange. The variability in capital structures is explained by Graham & Leary (2011), who argue that in capital structure theory there is no "one size fits all". For example, the pecking order was designed to fit better firms with low growth, mature firms. Thus, for companies with higher growth rates other model may fit better.

The pecking order and trade-off theory assume that taxes shields from paying the debt are one of the main incentives to seek debt financing, but according to Hennessy & Whited (2005) due to transaction costs the tax effects will be hard to notice empirically. Fama & French (2002) showed that the pecking order theory does not perform so well in the 1990s when compared with 1970s and 80s. Modigliani and Miller (1958) have shown that the value of the firm or the cost of capital does not vary with the choice between equity and debt under certain assumptions.

Although the question about how much debt should be used remains unclear there are many common factors in the existent literature. These can be divided into firm-specific or macroeconomic factors.

Jong et al. (2008) study the role of firm-specific determinants that influence the capital structure of a corporation. There is evidence that factors like firm size, risk, growth, the nature of the assets and profitability have a significant impact on the capital structure in line with capital structure theories.

Relating to macroeconomic components, the environment of the corporation is also important for choosing the amount of debt financing- Evidence on 42 countries shows that country-specific factors play a major role. Factors as GDP growth rate, bond market condition and protection rights on creditors influence the capital structure (De Jong, Kabir and Nguyen, 2008).

2.3 Equity financing

When an agent invests money in the corporation in exchange for an ownership stake, this is called equity financing. The percentage of ownership allocated to the agent depends upon the valuation of the company in the time of financing and the investor's returns depend on the dividends, stock splits and the selling price of the shares when the investors want to exit or until the IPO.

According to Schäfer et al. (2004) the firms that tend to receive more equity are risky, with a low cash flow, or have a low ratio of equity to total assets (shareholder equity ratio). Berger & Udell (1998) also show that firms with high-risk and high-growth expectancies whose assets are in majority intangible tend to receive equity financing while firms with opposite characteristics undertake debt financing.

In many cases, corporations issue shares in order raise cash to undertake certain investment opportunities, with positive net present value. However, in some cases the managers have access to private information that could favour them, will refuse to issue new securities according to the interested of the existent shareholders even if it is a good investment opportunity (Myers, Stewart C; Majluf, 1984) because existent shareholders do not want see their position diluted.

In the case of private equity financing, this process can be very costly in terms of resources. It starts by the investor doing the due diligence where there is made an assessment of the company from the financial, legal and commercial point of view¹. This process consists in

¹ Axon, David. "Due Diligence Review: M&A Behind The Scenes." *Financier Worldwide*. Financier Worldwide, 2004. Web. 6 May 2016.

understanding deeply the business of the corporation, valuation of the assets, plan for after the investment, assessing any risks involved and find issues subject to negotiation. Due diligence usually takes from 45 to 90 days² and the success rate of obtaining financing is very low, in the case for small and medium enterprises, venture capital constitutes 1.85% of the total finance (Berger and Udell, 2006).

In order to receive such type of financing the corporation already has to present a sign of possible success, a product with substantial sales, quality distribution network, or a good marketing plan, and this deal normally requires giving up on a minimum ownership of 25 up to 45%³. In terms of costs, one can be induced in error by thinking that there are no payments within equity financing but equity investors make most of the returns on investment in the exit event, which can be either a buyout from another firm or selling publicly shares. The window of investment for a private equity investor is typically 3 to 5 years (Stromberg, 2008). This type of investment can distort the interests of the company because these investors want to exit after the company has grown substantially and, according to Lighter Capital CEO, the higher valuation will make them to have returns 5 to 10 times the initial investment at that time. Private equity providers seek to contract with youngest firms possible in order to accompany the sales growth, as valuation of the firm increases making it more costly to buy it in the future and, hence higher returns.

3. Some facts about financing

According to the Eurostat, in 2010 the data for 20 countries in the European Union shows that the success rate for obtaining a loan varies according to the sources; banks and owners of the business present the higher rates with 72.9% and 70.8% respectively (table 1).

From the side of acquiring funds via equity, banks are still key entities (with 52.9%) as well as existing shareholders presenting a success rate of 79.5%. As expected venture capital funds and business angels hold the lower success rates with only 19.6% and 13.3% (table 2).

² Johnston, Jeffrey E., and Kern, TJ. "The best way to do due diligence – Avoid this three mistakes". *Key Bank*. Web. 3 May 2016

³ Robbins, Stever. "Dividing Equity Between Founders and Investors." *Entrepreneur*. 13 Oct. 2003. Web. 31 Apr. 2016

In regard to the reasons why companies fail to obtain loans the most common reasons are due to the lack of sufficient collateral, the company has already too much debt/loans or the company has insufficient equity (table 3).

In respect to the unsuccess of obtaining equity financing the reasons lie in the fact that the existing shareholders do not have the capacity to provide more funds or that the business potential development is too risky for the new shareholders. Another reason given is the consideration by new shareholders that the business has already too much debt (table 4).

Concerning the other options of funding besides bank debt and equity financing, there are other instruments that are quite easy to access. For 2010, options such as leasing present a success rate of 89.4% of obtaining. Banks overdrafts and credit lines are also quite common presenting a rate of 76.6%, but these options usually limited to a certain amount. Factoring is also easy to obtain (64.7%), as given the nature of this funding source it presents a lower risk for the investor (table 5).

In terms of global scale statistics, according to the World Bank in 2013, 18.3% of the firms observed identified the access to financing as a major constraint to their development and only 49.6% of the firms observed did not need a loan. The same statistics showed that 84.4% of the bank loans required collateral and the average maturity for a loan is 5.06 years.

4. Defining Revenue-based financing

Revenue-based financing (RBF) is a type of financing, usually for small enterprises, that consists in “selling” a portion of revenues. In other words, the principal provides funds to be used by the agent and in exchange the principal requires a percentage of the revenues that the firm earned. It is different from traditional financing methods in the sense that instead of fixed monthly payments, the agent has to pay variable monthly payments depending on the level of the revenues. This usually continues up until the point where the initial investment has been repaid and the principal earned an extra amount. It usually ranges between 1.5 to 2.5 times the initial amount⁴.

Another important feature of this type of financing is the limited liability; the revenue-loan is only secured against the company assets acting as subordinated debt.

⁴ "Lighter Capital | How Our Loan Works." *Lighter Capital*. Web. 25 Mar. 2016.

This type of financing has been used historically in areas such as oil, gas, minerals, healthcare and entertainment (production of movies or musicals) and, more recently, in biotech and pharmaceuticals⁵.

It differs substantially from the traditional funding instruments because it aligns all the objectives for both the agent and the principal, which in this case are the same. This is done at the beginning of contracting, when the performance and revenues percentages are established and agreed upon. In terms of the financial statements, in the statement of financial position (balance sheet) the revenue-loan will be written as a normal liability with the amount of the principal plus the premium value, which is the value representing the return for the investors for undertaking the risk and time. In the income statement the payments of the loan are recorded as an expense with the value corresponding to the percentage agreed of the gross revenues. In figure 1 it is presented a revenue-loan in an income statement.

In the next sections will be explored in more detail the features of this type of financing by describing the conditions to be eligible for receiving funds in this system and later will be compared the features of revenue-loans against the traditional financing tools.

4.1 Minimal conditions to have a revenue loan

Since in the case of Revenue-based financing the repayment will be based on a percentage of monthly revenues, the agent's company that borrows has to have a minimal amount of annual revenues because the loans are based on the average annual gross revenue instead of being based on collateral or on the credit profile. The company Executive Capital Finance, one of the few companies providing revenue loans, states that to be qualified for credit for a US company, the firm has to be profitable and with a minimum annual gross revenue of \$500,000 and they require the percentage of the revenues with a maximum value of 10 percent. For Lighter Capital profitability is not required, but they only fund companies that are in the technological industry with margins higher than 50 percent and the percentage paid is around 5 percent. Given the nature of the financing, businesses with low gross margin are not designed to support a revenue loan given that they cannot accommodate the portion of revenue dedicated to the amortization of the loan. The few firms providing revenue-loans vary in the agreement that they propose to firms receiving the funds; usually the minimum

⁵ Jo, Franc. "Is Revenue Based Finance Good for You?" *Loans Underwriting*. Web. 24 Mar. 2016.

value borrowed tends to be around US\$ 50,000 and it goes to a ceiling that can range from \$2 million to \$3million.

4.2 Initial documents needed for evaluation

- Executive summary

Composed by a short description of the company, the nature of the operations and the reason for application to a revenue loan.

- Income statement and statement of financial position

Preferably from the last two years of activity, it is important for the lender to determine if the company is in good financial condition, meaning that the company possesses sufficiently high revenues enabling the lender to recover the investment and earn a return in a reasonable period. Also investors take a look in the gross margin to conclude whether the company has operating losses after paying the loan expense.

- Allocation of the funds

The lender has to know for what the funds are intended to, in the case of Executive Capital Finance a revenue-loans provider, the company only lends money with the purpose of growth and cannot be used to repay existent debt.

- Financial forecasts

It's desirable for the borrower to present financial forecasts and other projections in the hypothetical scenario where the firm receives the funds that they pretend. Detailed projections on income statement, statement of financial position, cash flows and changes in equity are usually required and they are made for a minimum period to two to three years.

5. What kind of business suits RBF?

There is historical evidence of cases of success with this type of financing in mining, production of movies, music and theater; pharmaceuticals and biotechnology; intellectual property and other industries.

The main feature of this type of financing is the flexibility in the payment of the principal amount, which may offer an ideal solution for small and mid-sized companies. Obtaining financing through the traditional ways can be a difficult process or impossible for many firms. Usually individual investors constrain their amount of investment at €100,000 in a single firm but when referring to venture capital or private equity funds the minimum amount they invest tends to be around €1 million and a large number of applications are rejected. As reported by Small Business Administration, in the U.S. each year, around 300 of the 600,000 new firms are funded by venture capital.

Relating to loans, in the United States per day, more than 30,000 applications for bank loans are rejected (Bank Administration Institute) and in the cases where the funding is approved, personal guarantees must be provided in conjunction with covenants that can restrict some operations.

There is a grey area between the traditional types of financing, because many firms are not qualified for receiving funds through bank debt or venture capital. This could be explained through the asymmetry information disparity that is larger for SMEs compared to larger firms. This asymmetric information problem may lead to risk shifting behaviors or bad management due to lack of expertise. It may also come from the legal and regulatory framework, which in some countries may compromise the transparency by SMEs.

Revenue-based financing can be an answer for businesses that cannot obtain funding through the traditional channels. Typically it is designed to fit companies with an existing revenue stream or firms that will activate their revenues through the use of the funds. The companies should present significant gross margins that allow the payment of the royalties and still have enough cash for the rest of operations. Companies desired by investors show potential and quick growth when they access to the financing and enjoy qualified management supervision. Kristina Michelsen argues that revenue-loans can be a way for the communities to raise money to be borrowed by small farms or agriculture business. These loans fit their type of business because of the flexible payments and because they help contain the risks from the

seasonality. However, it carries risks for those businesses that do not have sufficiently high margins⁶.

In 2000, as a result of the capital market shrinking, royalty-based financing has gained more attention and use by the pharmaceutical industry, mostly by companies, which had seen their stock price at low levels and needed financing for drug development and could not sell shares on the public markets. The ability to match the royalty payments against income expenses, usually as research and development expenses, captured the interest of many firms also because, the company getting funded maintained the same level of financial ratios unaffected the position in the capital markets (Tyebjee and Hardin, 2004).

According to Tyebjee & Hardin (2004) most of revenue-based financing cases occurs on or after the Phase III of drug development where the specific drug studied is administered to a large group to arrive to a definitive assessment and the effectiveness of the product, usually it is the most expensive and time-consuming phase. The reason for most of the investment being in this phase is because of the high probability of success and also the future projections for product sale are easier to predict. Revenue-based financing fits well the pharmaceuticals and biotechnology industry because is an industry with high barriers to entry caused by patents, high investment costs and high competition. According to F. M. Scherer in the *Handbook of Health Economics* in 1992 U.S. Census there were 640 companies in the industry with the top eight companies gathering 36 percent of all the sales and the top 20 accounting for 65 percent leaving a narrow space for new companies. With this type of financing the companies in the industry can share the large amounts of investment in research and development with the co-investor and also the future revenues (risk-pooling), it may enable firms with products with good potential but with insufficient capital to enter the market. This industry is characterized by having a high net cash outflow and with Revenue-loans these companies are able to stay in the market for a longer term, but the downside is the fact that many of these do not present revenues for a longer period (phase of R&D) which makes the investor to receive the payments later in the future diminishing his internal rate of return (IRR).

In the mining sector the method has been widely used. Most of the cases involve an exploration soil company that unearths a deposit of minerals and sells the right of exploration to a mining company in exchange for royalties on the outcomes of the mining. It can also happen that a company involved both in exploration and mining discovers that the

⁶ Michelsen, Kristina. "Revenue-based Financing." *Guide to Financing the Community Supported Farm*. UVM Center for Sustainable Agriculture, 2012. 35-37. Web. 17 Mar. 2016.

properties of the mining site do not fit the strategy of the firm (it can be too large/small to explore or the mineral is not the one that there is a specialization) and transfers the right in exchange for a royalty on the exploration. Also for the same reason as pharmaceuticals industry, the legal, technical, and financial obligations set many mineral property owners aside and they form joint venture based on royalty payments to diffuse the costs and risks (*Mining Royalties, A Global Study of Their Impact on Investors, Government, and Civil Society 2006*).

6. Differences between RBF and other types of financing

In the previous sections we described the most common types of financing used by corporations and the respective features, with a special emphasis on Revenue-based financing. Now it is important to compare those traditional ways of financing with Revenue-loans in depth, to understand the benefits and the disadvantages in using each type of funding and why they are more appropriate in certain situations.

Table 6 summarizes the comparison between the discussed options of financing. In the next subsections there is a detailed discussion of the comparison of specific features and issues of these different options.

| Type of Financing | Debt | Revenue-based | Equity/ Venture Capital |
|------------------------|--|--|--|
| Control | Operational and financial covenants, limited/unlimited liability | No impact on control/ control remains to the previous owners | Protective provisions, preferred securities, board seat, drag-along rights |
| Dilution | None with absence of warrants | None | Medium to high |
| Cost of Capital | Low | Medium | High |
| Exit Strategy | Neutral | None | IPO, Buyout, Leveraged Recapitalization |
| Leverage | Inflexible payments, fixed amount and high leverage risk | Flexible payments linked to revenue, low leverage risk | No payments |
| Alignment of interests | Not aligned | Company growth but mainly revenue growth | Firm growth and exit strategy |

Table 6 – Comparison between Revenue-based financing, equity and debt financing.

6.1 Control

In terms of the control of the company, each type of funding is different. In the case of bank debt the control over the company by the bank is made through the use of covenants. These are also designed to prevent the company from alluring in risk-shifting behaviour (Berger and Udell, 1998). These covenants usually force the corporation to maintain a certain level of financial ratios, mainly relating to the level of debt over the equity or the interest coverage ratio showing the ability of the firm to be able to repay the debt and many other ratios adapted for the type of operations realized. In the study of Demerjian (2007), where 16,364 bank loans are analysed, 78 percent of the agreements have at least one covenant linked to

financial ratios. Also the type of debt can be constituted as a limited liability or unlimited deferring in the sense that the personal assets of the owners can or cannot be seized in the case of default and the liability being higher than the residual value of the company. In equity financing or venture capital, the case is very different. Depending on the type of ownership, investors usually take a board seat position where they can supervise and control the daily operations and affairs of the firm (Lerner, 1995). This can benefit companies with a lack of expertise by giving them insightful knowledge in conducting the business and promote the growth (Berger and Udell, 2006). Equity providers have also more instruments that help them in controlling more or have more decision power over the firm by holding preferred securities or by establishing protective provisions and preferential rights. These instruments use is usually triggered by certain actions such as: the sale of the company, changes in the bylaws, undertaking debt, issue of shares, changing the board composition and many others.

Analysing revenue-based financing is conclusive that the original owners prior to funding still maintain most of their control position over the company and its operations. Usually this type of financing has minimal covenants like a few restrictions on the use of the funds such as not using to consolidate other type of debt or use it on operational capital and in some cases the covenants can be non-existent⁷. Hence, revenue-loans have advantages over the other types of financing to the firm receiving funds, in terms of maintain the same strategy and same people overseeing the daily operations.

6.2 Returns/ cost of capital

In terms of the cost of capital for the firm receiving funds it varies significantly according to the type of financing receiving. There are several factors that influence the cost of capital. These can be divided into two categories, the first with controllable factors that can be manipulated by the firms, and the second with factors inherent to the company actions. The controllable factors are linked to the structure of the company and how it conducts the operations. For example, the capital structure affects the cost of capital if the company issues more equity the cost of equity will increase and the same goes for debt with increasing cost of debt with new issuance. Other controllable factors can be the dividend policy. For many companies the distribution of dividends is non-existent but in the cases where it exists it is usually a fixed percentage, in the case where the firm retains the earnings instead of

⁷ "Lighter Capital | How Our Loan Works." *Lighter Capital*. Web. 25 Mar. 2016.

distributing, the cost of equity will increase, and debt costs will remain unaffected. Also it is important to refer the investment policy of the firm because when the firm changes the investments' riskiness, the cost of capital for both equity and debt will change due to changing probabilities of default.

On the side of uncontrollable factors we have factors like interest rates and tax rates. The variation of the interest rates matters in the payment of interest of debt and with an increasing value the cost of debt will also increase. The level of tax rate is important to the cost of capital in the sense that if the tax rate level increases the cost of debt will decrease because it's an inverse function of tax rate level being the cost of debt the interest rates multiplied by one minus the corporate tax.

According to the Lighter Capital CEO, which is a company pioneer in the revenue-loans area, bank debt usually has a cost that can range between 6 to 9 percent interest without fees, while venture capital investors aim at a return in the order of 10 times the initial investment. On one hand, bank debt financing is the less expensive option and has a low risk associated, but access may be difficult for smaller firms. On the other hand, equity financing is expensive and with a higher risk associated but usually comes along with knowledge expertise and mentorship. Revenue-loan is an option that sits in the middle between these two types of financing: it is more expensive than bank debt but much cheaper than equity financing. Usually RBF investors aim at an annual return that ranges between 15 to 30 percent according to Lighter Capital CEO.

6.3 Dilution & Risks

Relating to the ownership dilution, Revenue-based financing is similar to bank debt with low probability of dilution. Although bank debt and equity financing can be absent of dilution is very rare for it to happen, especially in the case of venture capital due to the large amounts of investment in the firm.

In the case of equity financing where the firm issues new shares in exchange for funds designed to finance growth opportunities or even consolidate debt, the existing investors will see their ownership being reduced proportionally according to the level of funds received (Damodaran, 2009). This is always true in the case where the existing owners do not buy proportionally back the shares or in the cases where there are anti-dilutive provisions protecting the investors and giving them the right to maintain the same level of ownership.

Anti-dilutive provisions are tied to preferred shares or convertible shares that usually convert to common shares using a ratio that favours the pre-owners (Bartlett, 2003).

Venture Capital investors use this and it can be dangerous for previous owners because dilutes their position, for example, a start-up company gets funded in the early stage by VC investors which require preferred shares that can be converted into common shares at a ratio of 10:1, later in the future the company is scarce in funds and decides to do a new round of investment where they issue common shares for the new investors. The VC investors from the first round of funding will be able to convert the preferred shares into common shares and will exist more common shares in total, as VC investors receive ten common shares for one preferred diluting substantially the ownership of the founders of the corporation⁸.

In the case of debt financing the same situation can happen when the company issues convertible debt. Convertible bonds are securities that can be transformed into common shares during the life of the bond and usually are used to signal that the corporation is not overvalued, that is a belief from the market when the firm issues new stocks (Gillet and de La Bruslerie, 2010).

Since Revenue-based financing is a type of loan and it acts as subordinated debt it can occur the case where the funding providers will see their position being diluted if more debt with more seniority than a revenue-loan is issued, meaning that in case of default of the firm, the revenue-based investors will be entitled to the assets after the debt holders with more seniority being paid first causing a reduction in the returns.

Warrants can also be an instrument used in financing that can have dilutive effects both in equity financing and debt. Warrants are similar to options by being a derivative giving the right but not the obligation to buy or sell a security usually linked to equity. These instruments are dilutive because when the holder of the warrant chooses to exercise the warrant he will receive a newly issued share rather than receiving a stock that was previously issued. Corporations choose to issue these instruments as a way to offer a lower coupon rate on the attached bonds, in the case of equity investors can be entitled to dividends if they sell the warrant before its expiration date (Kassouf, 1969).

Given all these characteristics it is possible to conclude that the traditional ways of financing can dilute the ownership of the corporation to the existing owners prior to receiving funds in many ways. Equity financing is the more probable way of financing that will cause dilution of ownership given the amount of investment, the risk of business, time until the exit of

⁸ Renaud, Rob. "What Is Dilutive Stock? | Investopedia." *Investopedia*. 05 Feb. 2006. Web. 10 May 2016.

investors, due to growth opportunities and some other factors. In the case of bank debt the risk of ownership dilution is very low with the only threat to ownership being the existence of warrants linked to bonds or the issuance of debt with higher seniority.

Revenue-based financing is a good option for the owners that do not want to see their ownership position being reduced and giving up on control of the firm because there is no impact on the ownership of the corporation since the financing is tied only to the level of revenue and there are no convertible instruments associated with this type of financing. The only existent dilution of this type of financing is in terms of debt holders' position, because revenue-loans are considered subordinated debt the issuance of debt with higher seniority might dilute the position of previous owners in the case of bankruptcy.

6.4 Access to financing and costs of distress

Another important issue of getting funds is the difficulty in accessing the funds with the rights entities, the timing involved in the process as well as the costs involved for both parties, all the ways of financing differ substantially from each other relating to these issues. Relating to the access to financing, which has already been discussed before, the process of access to the funds can be subject to various factors that difficult it. In the case of debt the corporation needs to have sufficient assets that can be used as collateral as a form to secure the loan in case of firm's default which makes it hard for firms with intangible assets or that present low level of revenues. In the case where the firm is eligible to receiving debt funds, the process for approval, when compared to equity financing, usually corresponds to the same time that venture capitalists take to perform a due diligence on the corporation then has to be accounted the time for the negotiation of terms of the agreement such as type of investment, relating to the type of shares received (equity, convertible debt, preferred equity), the price of the securities (defined by the valuation), liquidation preferences for investors and protective provisions; and also how the ownership is shared between all investors. Hence, it is observable that in terms of time until receiving the funding equity financing it is a long process and it takes more time than bank debt but when compared with revenue-based financing, the whole process is very quick with an average time of one month⁹.

In terms of access of the firm to a revenue-loan is important to note that the corporation has to present some sort of positive projections for the future, in the case of Lighter Capital, this

⁹ "Lighter Capital | How Our Loan Works." *Lighter Capital*. Web. 25 Mar. 2016.

loan provider requires that the firm has at least 50 percent in gross margins while not demanding the firm to be profitable. Hence, this type of financing does not fit companies that are uncertain about the future or are slow-growing businesses and this uncertainty can change the level of investment and the time period.

With regard to the costs of bankruptcy of the firm, a Revenue-based financing act as subordinated debt meaning that it has priority in proceeds of the company in relation to the shareholders but is still subordinated to senior debt. The revenue-loan provider can recover assets from bankrupt clients but sometimes this value can be very low, that can be explained by the absence of personal guarantee. Revenue-loans are only secured against the company assets, which make it favourable in comparison with some bank loans that require unlimited liability, thus seizing the personal assets of the company owners in the default event.

6.5 Alignment of interests and exit strategy

In respect to the alignment of interest between managers and investors for the present and future of the corporation there is always the common objective to maximize the financial gains from the investments made. Despite of the fact that both parties co-invest in the company giving them the general common goal of maximizing earnings, it does not align the interests effectively because their respective position in the organization and outside affects the way they behave and the way they want to see the operations being conducted. One factor influencing the misalignment of interests can be the risk tolerance of the parties involved varying from investor to investor and from manager to manager (Klausner and Venuto, 2013). To exemplify, consider a manager with most of his wealth invested in a firm. He is probably going to be more cautious than an institutional investor, which has a small share of his portfolio, invested in the strategy. In the case of revenue-loans, given the nature of this type of financing, investor's reliability exclusively on the revenues rather than in the net income and the lack of decision power of investors, the incentives will be aligned towards the growth of revenues, but referring to equity or debt the case is not the same as the level of risk aversion can differ facing the investment opportunities and the willingness to undertake it (Klausner and Venuto, 2013). In the case of equity later stages of funding, for example round C and D, which are investment rounds design to scale the business rather than build it, are less tolerant with the risk compared to earlier stages because these stages are for less risky firms that have already some maturity in the industry.

Another factor influencing the alignment of incentives can be the investment time horizon, in most of the cases managers want to keep ownership of the corporation longer than the institutional investors, but due to performance pressures and short-term business difficulties the time horizon can vary through time and for the same reasons explained before revenue-based financing stands out by being the type of financing keeping incentives aligned. Lastly the compensation of the investors matters mainly in venture capitalist financing where the managers of the fund earn the management fees based on the returns of their portfolios which can incentive these managers to concentrate their assistant and follow-up actions on firms that present higher returns in terms of the amounts invested (Jegadeesh, Kraussl and Pollet, 2009).

In terms of the distortion of incentives within debt financing, it arises from moral hazard problems, equity holders can induce debt holders to lend money at lower interest rate by changing the riskiness of the firm right after the funds have been received and before the contract ends or by providing them the wrong assessment of the risk of the firm before contracting (Bliss and Cauley, 2009). Since Revenue-based financing consists in a loan, the same problems can also exist, but since this type of financing does not increase substantially the riskiness of the firm and the equity holders have the motive to boost the growth of the company, mainly the revenues, it can align the incentives of both parties. Since the payment of the loan is linked with the level of revenues and is not variable with an interest rate, there is no incentive for the managers or equity holders to change the riskiness of the firm, so moral hazard and information asymmetry problems will be reduced.

Regarding the exit strategy of the investors, which also constitutes a factor influencing the alignment of interests of all parties, revenue-based financing stands out by the absence of a need for an exit strategy, this type of loan is projected for a certain time period (usually 5 years) but it can differ depending on the growth of revenues. If the revenues grow significantly the loan can be paid quickly, but the main point is that the exit of the investors will occur without the urgency of an exit strategy. The payment of the loan (plus the premium amount) can be paid at anytime without any extra fees.

In the case where the firm starts making losses, if the firm still has revenues it will continue to pay the percentage of the revenues. In the case where the firm does not have revenues there is no obligation of payments to the investors; the company only has to pay when it has revenues. The problem is for the investors who will receive their return on investment later, decreasing their internal rate of return (IRR) and postponing the exit. When the firm defaults

the exit of the investors will happen as if it was a normal bank loan with seniority over equity holders but subordinated to other type of debt.

This differs from equity financing, where the institutional investors aim at boosting the growth of the corporation over their time horizon so they can cash out their investment and respective returns in the occurrence of an event. That can be in an initial public offering (IPO) where the company goes public and sells its securities in a stock exchange or through a buyout where one or several investors sell their holdings to another party that can be another company in the sector, private equity or pension funds and they will detain a position of significant control over the firm.

To conclude, there are many important differences between revenue-loans and the traditional financing options, debt and venture capital/equity financing. These differences should be analysed when making managerial decisions about the choice of financing. The company should balance the features and restrictions of each type of financing against the strategy, the objectives and the long-term projections of the firm in order to observe the adaptability of the financing option. There are many factors that matter to the choice of financing and that vary across companies and each one has to be considered.

7. Why the use of RBF?

Since the most relevant features of Revenue-loans have been clarified previously, it is important to understand better the reasons to support the use of this type of financing. In this section will be presented arguments explaining why there is a need for a financial tool like revenue-based financing. This part is divided into three different topics where we will examine in more detail situations where revenue-loans can be a solution for improving companies' access to finance and other situations where this financial instrument is quite useful.

7.1 Start-ups and difficulties in financing

The past literature has shown that capital decisions and the choice between the type of financing at start-up level have significant impact in the rate of success, firm operations, expected performance and the capacity to growth. According to Berger & Udell (1998) is hard for start-ups to have access to external financing, due to lack of operating history, and

they rely heavily on internal financing. The information asymmetry and the external investor needed to supervise and control the management of the firm make this process harder. There are not many mechanisms that align the incentives effectively and revenue-based financing can be an answer to mitigate agency costs and distortion of incentives. Also, as the tangibility of the firm matters for obtaining financing, many technological start-ups do not possess valuable tangible assets (only intangible assets). In these cases the firms' liquidation value is lower therefore increasing the probability of a greater financial loss to investors (Titman and Wessels, 1998). Hence firms with more tangibility get financed more easily and with lower cost of capital as a result of the liquidity of its assets.

In this case revenue-based financing can be provided as a solution for start-ups with such characteristics. Many of the firms that do not have sufficient tangibility to secure a bank loan can opt for this type of financing, since this financing has a lower risk of default for the company involved, the need for assets to secure the loan should also be lower.

Another issue is the limited liability, which in most of the cases of start-ups is non-existent, meaning that when there is a liability that exceeds the amount of investment or firms go bankrupt, the owner's personal assets cannot be seized to satisfy creditors claims. Despite of unlimited liability being a good incentive for debt creditors, it can have a significant impact on the losses for the existent owners. Revenue-loans also overcome this problem by not requiring unlimited liability.

In Rowlands Review (2009), there is a confirmation of the existence of a financial gap for companies seeking £ 2 million to £ 10 million and the author find several reasons for its existence. One of them is the costs of information that for small and large firms are very similar so investors tend to choose the larger firms because of the transactions costs being a small portion of the total investment. The lack of measures to track the performance of SMEs can make investors more risk averse, thus requiring higher returns that are too high for these firms. From the demand side, many managers from small companies do not want to offer a stake in the business preferring autonomy versus potential growth and hence constraining equity financing.

The financial gap can be also due to market failures, such as the financial incentives of fund managers that are based on fees making them keen to invest larger amounts or due to the effects of the credit crunch with the increasing risk aversion leading to a retreat to more traditional lending options. Revenue-based financing can be key in reducing this financial gap for SMEs that cannot be funded through the debt or equity financing. The fact that this financing tool does not require as much collateral or personal guarantees derived of the low

risk of default of a company practicing a revenue-loan can proportionate a good risk-adjusted return for the investors.

The financial gap is expected to increase from the banking side. The capital adequacy requirements from the Basel III imposed in 2015 will restraint the financing accessibility. As a consequence banks will have to hold more cash as required by the Basel III, leaving less money to lend compared to the levels before the crisis.

So it is important the usage of a financing instrument that fits the needs of small and medium enterprises and that has a facilitated access and revenue-loans possess these characteristics.

7.2 Avoid strict regulation in banking

Shadow banks are financial institutions whose activity falls outside the perimeter of supervisor regulation. These institutions are able to offer products similar to banks without facing tight regulatory limits. Similar to traditional banks, shadow banks perform credit and maturity transformation but without the direct and explicit public sources of liquidity (Federal Reserve's discount window and Federal Deposit Insurance Corporation).

The activities performed by shadow banks were considered financial innovation achieved through the credit risk transfer. Revenue-based loans are often offered by financial institutions that can be considered part of the shadow banking system.

The shadow banking industry appeared as a response to changing laws and regulation in the financial system. Regulation has an important role in this industry as shadows banks are less regulated than traditional banks. An increase in the regulation of the banking system will increase the demand for shadow banking (Schwarcz, 2012).

The increase in regulation in the past decades caused the emergence of shadow banking, helping fostering the economy by providing financial services cheaper and widely accessible. Contrarily of traditional banks, shadow banks do not have as much capital and liquidity as a result of lower regulation and operate with relatively low safety margins.

According to Pozsar et al. (2012), as the result of an increase in the competition in banking industry over the last 30 years, banks substituted deposits for fee-based wholesale funding. The authors argue that, as a consequence, banks started to generate higher returns-on-equity (RoE) by generating loans in the interest of storing and securitize them later.

Securitization is an important process realized by financial institutions, it is a way to transfer credit risk from the bank to the investors, and it helps banks in conserving capital by transform assets with low liquidity into cash. Revenue-based financing can be used as a tool

to be used in securitization by shadow banks, by combining with similar or different types of loans creating a security to be sold later similar to asset-backed securities (ABS). The fact that the repayment of the revenue-loan starts when the loan is received and every month facilitates the creation of a security with low risk associated but with returns higher than corporate bonds.

From the point of view of traditional banks, revenue-loans can be a way to reduce the leverage of the banks in terms of the minimum capital requirements. Given the nature of these loans the banks receives the payments on a monthly basis, if the revenues can be easily forecasted and the risk of the investment is low, the capital requirements incrementally would also be low. Also if the company receiving funding grows significantly in revenues it also will be paying sooner meaning that the bank has to hold less capital for that investment reducing the cost of opportunity from investing in other option (e.g. normal bank debt).

7.3 SMEs exporters need for financing

Nowadays, given the state of the economy many firms feel the need to entering in new markets, expanding their products across borders.

Global trade is essential to foster the internal economy of country, for example, in U.S. SMEs constitute 98% of all U.S. exporters and account 35% of the country revenue in exports.

Companies are realizing the benefits of serving other markets as a way to diversify and gain additional revenues and seek growing in this way but many of them do not have enough capital to cover the extra operations.

There are many factors that complicate the process of becoming an exporter rather than just serve the local markets. Companies exporting aim at receiving the payment as soon as possible while the clients prefer to delay the payments until the items are collected. The high competition in the international markets demands the companies to be efficient and to compete in the terms of the transactions.

The nature of conducting business abroad imposes a financial constraint for many firms as products are sold and shipped overseas, with longer time until payment, extra costs with marketing, inventory, distribution and legal compliance; and there is also the issue of the timing for establishing trust with the customers.

It is very important that companies have proper access to financing, mainly SMEs due to volume of its business. In some cases the payments conditions that the firms require can be a source of competition. Firms can lose sales because another firm offers better terms in the

payment for the same product and this is related to the conditions of financing and hence to how the firm is financed.

The financing costs matter in the sense that these costs will reflect upon the price of the product so is important that firms have a proper access to financing in order to be competitive in international markets.

In regard to the options that exporters have to obtain funding, beside the traditional ways, a company may use export intermediaries such as Export Trading Companies (ETCs) that offer short-term financing or offer insurance in the product being exported.

Revenue-based financing can be an instrument that helps companies becoming exporters, as a trade finance instrument. At the time the firm receives the funds is able to investment in all the extra operations needed to conduct the operations abroad while the flexibility in the payments grant some security. The firm will be better to response to shocks, that can be fluctuations against another currency, unexpected time until delivery, impairments and longer time until the payment.

There are many instruments designed to help companies becoming exporters, for example the European Union has a program for the Competitiveness of Enterprises Small and Medium-sized Enterprises (COSME) which aims at the development of SMEs by providing funds using loan guarantees and by contributing to venture capital and private equity funds. It is observable that the government supports diminishing the issue of access to finance by SMEs but still relies on the traditional ways of financing that, as explained before, do not address totally the needs of a company.

There also other instruments that have a high probability of access such as leasing, banks overdraft/credit lines, factoring, advanced payments and trade credit.¹⁰

Some of these financing instrument are essential to the health of many firms but do not have a flexible payment linked to the performance or the conditions to apply have several implications for the firm. For example banks overdraft are costly because of the high interest rates charged, factoring only allows a maximum amount close to the value of the receivables, advanced payments can have a negative effect on customers and trade credit only postpones the expenses of the firm.

Revenue-based financing is a complete financing tool that overcomes some of the issues of these instruments and facilitates the process of transformation of a national firm into a national/multinational business.

¹⁰ See in appendix the success rate of other financing instruments (table 5)

8. Real cases of RBF

8.1 SkyePharma

This company is specialized in drug delivery, developing innovative oral and inhalation pharmaceutical products with the development of new formulations of products that already exist. In the beginning of the millennium the UK company was struggling with funds to support the development of DepoMorphine, which was a new formulation of the pain reliever, Morphine. The company entered a royalty-financing contract when the study process was on the Phase III of the trials in 2001 receiving a total amount of US\$30 million until 2002. The investment in the company was made by a venture capital group in order to fund the development and regulatory issues of establishing DepoMorphine in the market. The returns for the venture capital group were in the form of royalties in the future revenues of DepoMorphine and also in three other drugs that were already in the market at that time. The deal time was between January 2003 and December 2004 which was the period the venture capitalist group received the royalties from the investment, receiving 15 percent of revenues with a ceiling amount agreed previously, when this ceiling was reached the royalty payments were based on a 3 percent rate until the end of the year 2004. This type of agreement benefited both players, while the venture capitalist won royalties on three products that were already placed in the market giving them some insurance in their investment; the SkyePharma was able to obtain funds to continue developing a promising product with the risks being shared between the parties.

8.2 Drug Royalty

It's a U.S. company that manages private equity funds that acquire royalties from companies from biotechnology and pharmaceuticals industry, universities and inventors with over US\$ 3 billion in assets managed.

The company also produces royalty contracts by granting funds in exchange for a future percentage of revenues.

On the other side it's Avanir Pharmaceuticals (AVN), a company that develops drugs designed for the treatment of chronic diseases and is publicly traded on the American Stock

Exchange. In 2002, the firm had Neurodex a promising product in neuropathic pain and also pseudobulbar affect, both effects were in Phase II of clinical development and also had the number one product in North America for cold sores treatment called Abreva.

At that time Avanir tried to obtain funds for the clinical development through the capital markets but technologic stocks were quite difficult to sell and the firm sold a percentage of the future North American revenues of Abreva to Drug Royalty for US\$ 24.1 million. In December 2002 both companies signed the deal and Avanir received a payment of US\$20.5 million and also retained the rights to 50 percent of the revenues of Abreva in the surplus of US\$ 62 million a year.

In order to secure the investment against Avanir's bankruptcy Drug Royalty used as collateral the intellectual property (IP) rights and it was expecting an internal rate of return (IRR) between 15 to 25 percent but more specific details of the agreement are unknown.

Avanir Pharmaceuticals, at that time, had diverse ways of raising capital to fund the operations because it was publicly traded in the U.S. but despite that the firm used revenue based financing and was able to invest in the projects with the use of nondilutive capital. Consequently, the stock price rose right after the announcement of the agreement and after 18 months the corporation was able to raise equity at prices in excess of those set before the agreement.

It's also important to refer that by 2005 Drug Royalty had more than 25 royalty streams and that the funds used in Avanir deal were generated internally¹¹.

8.3 Diversified Royalty Corporation (DIV)

This company, which has his shares traded in Toronto Stock Exchange, has the business model of purchasing royalties of well-managed companies by acquiring those businesses trademarks and intellectual property (IP), mainly in North America.

¹¹ Source: David MacNaughtan, senior vice president, business development with Drug Royalty in Marks, Kenneth H., et al. *The handbook of financing growth: strategies and capital structure*. Vol. 179. John Wiley & Sons, 2005.

The corporation has entered the public market in 2014 and shortly after it closed three agreements with an amount invested of CAD\$ 275,500,000.

Differently from the other corporations, DIV requires a board seat in the companies invested has a way to monitor their performance. It's also important to state that DIV has a lower overhead and expects to increase his revenue without changing the management structure.

8.3.1 Franworks agreement

Franworks is an Alberta based company operating in the restaurant business owning 82 restaurants divided by the three brands that the company owns all over Canada and some on the United States.

In September 2014, DIV acquired a 6 percent royalty from Franworks Franchise Corporation, expecting CAD\$ 12 million in royalty revenue for the next year (annualized gross revenues accounted for CAD\$ 200.1 million for all restaurants), the deal involved the purchasing of the trademarks and intellectual property for an amount of CAD\$ 103.1 million, with this agreement DIV is entitled to the royalties from all the restaurants and also to the new ones opening in the future. With the financing Franworks intends to use the proceeds from the sale to boots its expansion plans.

According to the System for Electronic Document Analysis and Retrieval (SEDAR), which is a filling system elaborated to the Canadian Securities Administrators, the Franworks restaurants are expected to grow in revenue, in average 4.6% after the financing. Relating to the expansion of the restaurants, it's expected new 9 restaurants per year but at the same time the closure of some restaurants its probable and is estimated to be 4 annually accounting for a difference of 5 new sites per year.

In the next 10 years, DIV is expecting an internal rate of return (IRR) around 16% accounting for CAD\$ 243,384,177 in payments. The fact that this agreement is perpetual on the royalties makes it a good investment for DIV and it can be a money-maker in the future years but the company still faces more than 6 years until it recover the amount invested assuming that Franworks continues to expands and maintain or improves the growth rates. It's also of greater importance the risk faced in this deal as the brands and trends change over time Franworks may no be able to grow according to the projections.

8.3.2 Mr. Lube Agreement

This firm is also an Alberta based company, providing services in the car maintenance area. Mr. Lube is one of the largest quick service chains in Canada. Distributed throughout Canada the company owns 117 facilities and it's the leader in automobile oil change and maintenance with a strategy focusing on convenience, readiness and quality in a sole visit.

In august 2015 Mr. Lube and Diversified Royalty made an agreement where Mr. Lube trademark and intellectual property (IP) was bought for CAD\$ 138,800,000. Shortly after, DIV licensed the trademarks and IP's back to Mr. Lube in exchange for a 6.95% royalty fee on the sales revenues. The agreement was drawn in 117 stores and the future stores also.

With this agreement Mr. Lube can solely focus on expanding into cities where the real estate market it's more constrained or that presented difficulties in the past and Mr. Lube objective is to maintain the leader position in the market through expanding to new areas.

The company is expecting opening 15 stores each year and sales projections account for a revenue growth of 2.5% every year. Diversified Royalty is expecting CAD\$ 12.4 million of annual royalty from the 117 stores already opened resulting in an annual total revenue of CAD\$ 178.4 million accounting for CAD\$ 1.52 million per store.

9. Conclusion and Limitations

In this dissertation it was assessed the viability of a new type of financing called Revenue-based financing by studying in depth the vast literature on capital structure theory. The research was conducted by analysing the existent theories on the traditional funding options (equity vs. debt) in order to try to understand why firms sometimes choose to use one type of financing more than other and under which circumstances. This first analysis gave insights about the many factors affecting the choice for the amount of equity or debt in the structure of the firm. It was conclusive that many factors affect the capital structure of a firm and there is no unique answer for which type of financing a company should undertake neither the right amount of it. Also it was seen that many of the features capital structure models rely heavily on assumptions that might not apply in the real economy.

In the dissertation were described in detail the features of Revenue-based financing. From the comparison made with the other types of financing we can conclude that revenue-loans have distinct qualities. In some cases, depending on the type of strategy that the firm pursues, the

type of industry, the restrictions imposed by the other financing tools, or the timing to take instantaneous investment opportunities, revenue loans can be considered an advantageous method of financing.

However, it is important to consider all the costs involved in the choice of the type of financing. It is clear that bank debt is cheaper than revenue-based financing, but equity financing can be substantially more expensive. When considering all the benefits and restrictions that come along, the net advantages of revenue-based financing will depend a lot from firm to firm.

So when it comes to the question to which business should undertake this type of financing there is no unique answer. Firms must consider how this loan is repaid and make an analysis about whether they can accommodate the payments, if they have sufficient gross margins and if it fits their business plan along with the time horizon involved.

In the real cases where this new type of financing was observed, the deals varied substantially in the terms of the agreement. In some of the deals, the payment of the percentage of the revenues were in a specific product rather than all the firms revenues, in others a board seat was required to monitor the performance of the company during the investment period, some used the intellectual property rights (IP) as collateral while some bought the rights definitely and then licensed them back in exchange for the percentage of revenues. The main point is that there is not a unique way to use this type of funding; in each contract the investor can make requirements to the firm that fit more its needs and the needs of the firm.

Regarding the limitations of the dissertation, the data available imposed a constraint in the research. Firstly there are only few firms in the market providing revenue-loans and many of these firms are private firms and initiated their operations only some years ago, which constitutes a problem in terms of their willingness to provide the success rate of the loans and also the agreement conditions. The fact that many of the firms entering in this type of agreement were private constituted a problem in accessing the financial records during the investment period which difficults an empirical analysis relating to the performance of this instrument.

I hope that my dissertation will allow for a better understanding about revenue-based financing not only to the academic environment but also to business world and serve as a framework for companies that desire to integrate this type of financing as providers. With the better knowledge about the subject I expect that this type of financing can increase in terms of usage and help the development of businesses that do not have proper access to funding.

10. Appendices

| Income Statement | |
|--|---------------------|
| RBF Corporation | |
| 12 Months | |
| Financial Statements in U.S. Dollars | |
| Revenue | |
| Gross Sales | \$10,000,000 |
| Less: Sales Returns and Allowances | \$ 50,000 |
| Net Sales | \$ 9,950,000 |
| Cost of Goods Sold | |
| Beginning Inventory | \$ 3,000,000 |
| Add: Purchases | \$ 1,000,000 |
| Freight-in | \$ 50,000 |
| Direct Labor | \$ 200,000 |
| Indirect Expenses | \$ 100,000 |
| Inventory Available | \$ 4,350,000 |
| Less: Ending Inventory | \$ - |
| Cost of Goods Sold | \$ 4,350,000 |
| Gross Profit (Loss) | \$ 5,600,000 |
| Expenses | |
| Advertising | \$ 5,000 |
| Amortization | \$ 60,000 |
| Bad Debts | \$ 10,000 |
| Bank Credit Card Fees | \$ 200,000 |
| Charitable Contributions | \$ 5,000 |
| Commissions | \$ 100,000 |
| Contract Labor | \$ 5,000 |
| Depreciation | \$ 600,000 |
| Dues and Subscriptions | \$ 1,000 |
| Employee Benefit Programs | \$ 1,000,000 |
| Insurance | \$ 15,000 |
| Interest | \$ 10,000 |
| Legal and Professional Fees | \$ 1,000 |
| Licenses and Fees | \$ 500 |
| Miscellaneous | \$ 400 |
| Office Expense | \$ 5,000 |
| Payroll Taxes | \$ 760,000 |
| Postage | \$ 500 |
| Rent | \$ 275,000 |
| ROYALTY PAYMENT (2.5% of Gross Sales) | \$ 250,000 |
| Supplies | \$ 5,000 |
| Telephone | \$ 12,000 |
| Travel | \$ 10,000 |
| Utilities | \$ 9,000 |
| Vehicle Expenses | \$ 4,000 |
| Wages | \$ 1,500,000 |
| Total Expenses | \$ 4,843,400 |
| Net Operating Income | \$ 756,600 |
| Other Income | |
| Gain (Loss) on Sale of Assets | \$ - |
| Interest Income | \$ 5,000 |
| Total Other Income | \$ 5,000 |
| Net Income (Loss) | \$ 761,600 |

Figure 1- this corresponds to an example of an income statement (Profit & Loss statement) of a company engaged in revenue-based financing. Under the section “Expenses” there is the payment under “royalty payment” which corresponds to the percentage of the gross sales (2.5%).

| Country | Owner(s) of the business | Other employees of the business | Family, friends or other individuals outside the business | Other businesses | Banks | Other loan sources |
|----------------|--------------------------|---------------------------------|---|------------------|-------|--------------------|
| Belgium | 72,9 | 22,9 | 39,8 | 44,9 | 83,1 | 44,9 |
| Bulgaria | 42,2 | 10,3 | 40,7 | 15,6 | 42,5 | 11,9 |
| Denmark | 67,0 | 18,2 | 42,4 | 33,0 | 59,8 | 54,9 |
| Germany | 82,9 | 34,9 | 59,5 | 21,7 | 75,9 | 33,0 |
| Ireland | 45,4 | 10,0 | 61,8 | 3,5 | 53,2 | 49,3 |
| Greece | 39,5 | 4,3 | 8,7 | 0,0 | 59,6 | 13,6 |
| Spain | 54,3 | 16,7 | 15,4 | 36,8 | 59,1 | 35,8 |
| France | 72,8 | 40,0 | 44,7 | 46,2 | 83,3 | 55,4 |
| Italy | 72,5 | 3,3 | 61,6 | 50,9 | 78,4 | 74,9 |
| Cyprus | 100,0 | 0,0 | 100,0 | 100,0 | 76,7 | 100,0 |
| Latvia | 92,7 | 71,1 | 86,2 | 81,5 | 63,5 | 100,0 |
| Lithuania | 73,0 | 18,4 | 17,3 | 45,1 | 58,4 | 46,5 |
| Luxembourg | 73,7 | 18,8 | 37,5 | 21,1 | 68,4 | 100,0 |
| Malta | 92,3 | 0,0 | 0,0 | 50,0 | 91,3 | 66,7 |
| Netherlands | 61,7 | 30,1 | 53,2 | 41,8 | 61,3 | 28,3 |
| Poland | 79,1 | 60,0 | 32,4 | 35,8 | 85,4 | 43,3 |
| Slovakia | 83,6 | 23,8 | 45,6 | 59,2 | 76,1 | 57,7 |
| Finland | 99,5 | 0,0 | 100,0 | 96,0 | 95,9 | 87,7 |
| Sweden | 70,0 | 26,9 | 28,7 | 38,8 | 79,7 | 82,1 |
| United Kingdom | 83,8 | 31,0 | 68,6 | 46,2 | 64,6 | 80,7 |
| Average | 72,9 | 22,0 | 47,2 | 43,4 | 70,8 | 58,3 |

Table 1- Rate of success for loan financing according to the source. The numbers are in percentage and related to the year of 2010. The data represent the total economy except financial and insurance activities (source: Eurostat).

| Country | Other employees of the business | Other businesses | Banks | Existing shareholders | Directors not previously shareholders | Venture capital funds | Business angels | Family, friends or other individuals, not any of the above | Initial public offering or other stock market offerings | Other financial institutions |
|----------------|---------------------------------|------------------|-------|-----------------------|---------------------------------------|-----------------------|-----------------|--|---|------------------------------|
| Belgium | 46,1 | 37,1 | 71,9 | 83,2 | 50,5 | 41,0 | 17,2 | 46,0 | 9,8 | 31,1 |
| Bulgaria | 7,3 | 0,0 | 77,6 | 79,6 | 0,0 | 0,0 | 0,0 | 3,3 | 0,0 | 0,0 |
| Denmark | 65,9 | 44,2 | 49,7 | 79,2 | 47,9 | 24,6 | 14,5 | 60,0 | 44,8 | 0,0 |
| Germany | 86,5 | 8,9 | 0,0 | 93,1 | 77,8 | 67,4 | 0,0 | 58,0 | 26,5 | 93,6 |
| Ireland | 51,4 | 7,4 | 34,7 | 61,0 | 35,1 | 7,4 | 0,0 | 42,4 | 0,0 | 26,8 |
| Greece | 0,0 | 0,0 | 45,5 | 72,0 | 0,0 | 12,5 | 0,0 | 16,7 | 0,0 | 0,0 |
| Spain | 4,0 | 17,2 | 60,8 | 55,4 | 13,7 | 7,9 | 0,5 | 15,8 | 0,0 | 2,2 |
| France | 57,4 | 57,5 | 43,1 | 89,6 | 54,0 | 32,1 | 44,7 | 58,5 | 20,2 | 50,6 |
| Italy | 1,5 | 8,4 | 28,4 | 70,1 | 0,0 | 0,0 | 0,0 | 0,0 | 58,9 | 17,3 |
| Cyprus | 100,0 | 0,0 | 100,0 | 100,0 | 0,0 | 0,0 | 0,0 | 100,0 | 0,0 | 0,0 |
| Latvia | 0,0 | 0,0 | 0,0 | 87,3 | 96,5 | 66,7 | 0,0 | 93,9 | 0,0 | 0,0 |
| Lithuania | 20,0 | 7,7 | 51,4 | 73,6 | 26,7 | 0,0 | 11,1 | 0,0 | 50,0 | 33,3 |
| Luxembourg | 18,2 | 33,3 | 45,5 | 83,9 | 65,5 | 12,5 | 20,0 | 40,0 | 14,3 | 76,9 |
| Malta | 0,0 | 0,0 | 0,0 | 100,0 | 0,0 | 0,0 | 0,0 | 0,0 | 100,0 | 0,0 |
| Netherlands | 37,7 | 58,8 | 47,8 | 56,6 | 45,7 | 29,3 | 39,5 | 85,3 | 73,6 | 51,4 |
| Poland | 100,0 | 0,0 | 97,4 | 100,0 | 100,0 | 0,0 | 0,0 | 0,0 | 100,0 | 0,0 |
| Slovakia | 15,8 | 42,4 | 62,9 | 70,7 | 40,6 | 0,0 | 0,0 | 49,1 | 0,0 | 13,5 |
| Finland | 0,0 | 97,6 | 99,5 | 100,0 | 100,0 | 75,0 | 100,0 | 0,0 | 100,0 | 90,9 |
| Sweden | 5,1 | 2,5 | 61,9 | 47,0 | 6,3 | 6,8 | 0,0 | 11,8 | 0,0 | 0,0 |
| United Kingdom | 81,1 | 38,5 | 79,0 | 88,2 | 73,6 | 7,9 | 17,8 | 30,0 | 0,0 | 93,5 |
| Average | 34,9 | 23,1 | 52,9 | 79,5 | 41,7 | 19,6 | 13,3 | 35,5 | 29,9 | 29,1 |

Table 2- Rate of success for equity financing according to the source. The numbers are in percentage and related to the year of 2010. The data represent the total economy except financial and insurance activities (source: Eurostat).

| Country | Poor credit rating | Lack of own capital | Insufficient collateral or guarantee | Insufficient or risky potential (of the business or project) | Already too many loans or too much debt | No loan history | Poor loan history |
|----------------|--------------------|---------------------|--------------------------------------|--|---|-----------------|-------------------|
| Belgium | 7,3 | 12,4 | 5,8 | 4,7 | 8,3 | 2,8 | 0,0 |
| Bulgaria | 3,3 | 2,6 | 8,5 | 4,9 | 2,7 | 0,9 | 0,9 |
| Denmark | 0,2 | 10,1 | 12,5 | 1,8 | 5,7 | 0,5 | 0,0 |
| Germany | 13,6 | 13,1 | 13,4 | 5,2 | 6,2 | 0,0 | 2,1 |
| Ireland | 2,6 | 8,6 | 12,0 | 5,8 | 19,4 | 0,2 | 0,7 |
| Greece | 10,4 | 7,8 | 9,9 | 4,7 | 9,4 | 3,6 | 2,6 |
| Spain | 11,8 | 2,8 | 12,7 | 2,8 | 12,4 | 0,2 | 0,0 |
| France | 13,3 | 13,7 | 9,2 | 9,9 | 7,3 | 0,4 | 1,6 |
| Italy | 6,2 | 4,4 | 3,6 | 1,7 | 4,3 | 0,0 | 0,3 |
| Cyprus | 3,7 | 1,2 | 15,5 | 7,8 | 27,2 | 0,0 | 0,0 |
| Latvia | 0,1 | 4,8 | 9,5 | 4,9 | 18,4 | 0,0 | 0,0 |
| Lithuania | 12,5 | 9,6 | 11,0 | 5,2 | 8,7 | 0,9 | 0,1 |
| Luxembourg | 7,7 | 13,4 | 10,2 | 5,3 | 4,5 | 1,2 | 0,4 |
| Malta | 0,0 | 8,3 | 25,0 | 8,3 | 25,0 | 0,0 | 0,0 |
| Netherlands | 5,8 | 9,2 | 7,3 | 5,8 | 4,6 | 0,0 | 0,3 |
| Poland | 26,1 | 8,6 | 10,8 | 3,3 | 7,6 | 0,0 | 0,0 |
| Slovakia | 14,0 | 13,4 | 6,9 | 4,5 | 5,9 | 0,5 | 0,7 |
| Finland | 2,0 | 3,8 | 16,3 | 0,9 | 2,3 | 0,0 | 0,0 |
| Sweden | 6,6 | 10,1 | 6,9 | 6,6 | 8,9 | 0,4 | 0,0 |
| United Kingdom | 5,9 | 7,8 | 13,8 | 7,2 | 5,2 | 0,0 | 1,2 |
| Average | 7,7 | 8,3 | 11,0 | 5,1 | 9,7 | 0,6 | 0,5 |

Table 3 - Reasons for partial success or lack of success in obtaining loan finance. The numbers are in percentage and related to the year of 2010.

The data represent the total economy except financial and insurance activities (source: Eurostat).

| Country | Inability of existing shareholders to subscribe for more shares | Too much equity in exchange for the funds offered asked by potential new shareholders | Too many concessions in exchange for equity finance asked by potential new shareholders | Business potential development insufficient or too risky according to potential new shareholders | Business had too many debts according to potential new shareholders |
|----------------|---|---|---|--|---|
| Belgium | 52,1 | 8,8 | 10,0 | 6,3 | 3,8 |
| Bulgaria | 6,9 | 5,7 | 30,3 | 26,9 | 29,1 |
| Denmark | 42,7 | 4,8 | 4,8 | 7,9 | 14,0 |
| Germany | 18,3 | 18,3 | 15,6 | 12,8 | 0,0 |
| Ireland | 48,1 | 2,2 | 10,4 | 26,2 | 0,0 |
| Greece | 45,5 | 18,2 | 9,1 | 15,2 | 9,1 |
| Spain | 25,5 | 7,5 | 4,3 | 23,2 | 25,8 |
| France | 36,4 | 8,7 | 8,2 | 22,3 | 19,1 |
| Italy | 26,1 | 8,4 | 3,1 | 29,8 | 29,8 |
| Cyprus | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Latvia | 25,2 | 0,0 | 0,0 | 36,9 | 10,7 |
| Lithuania | 55,6 | 14,8 | 14,8 | 0,0 | 0,0 |
| Luxembourg | 25,0 | 4,2 | 4,2 | 29,2 | 33,3 |
| Malta | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Netherlands | 13,4 | 0,9 | 13,0 | 15,9 | 22,1 |
| Poland | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Slovakia | 13,0 | 7,0 | 6,1 | 37,4 | 25,2 |
| Finland | 82,6 | 0,0 | 0,0 | 6,5 | 6,5 |
| Sweden | 63,2 | 4,4 | 0,0 | 7,4 | 0,0 |
| United Kingdom | 28,5 | 4,4 | 4,8 | 32,6 | 19,6 |
| Average | 30,4 | 5,9 | 6,9 | 16,8 | 12,4 |

Table 4 - Reasons for partial success or lack of success in obtaining equity finance. The numbers are in percentage and related to the year of 2010. The data represent the total economy except financial and insurance activities (source: Eurostat)

| Country | Leasing | Factoring | Bank overdraft or credit line | Subsidised loans | Subsidies by government | Foreign government bodies or international organisations | Trade credit (by suppliers) | Advanced payments (by customers) | International trade or export finance facilities |
|----------------|---------|-----------|-------------------------------|------------------|-------------------------|--|-----------------------------|----------------------------------|--|
| Belgium | 92,5 | 61,5 | 85,4 | 51,6 | 55,0 | 5,3 | 59,6 | 35,5 | 18,0 |
| Bulgaria | 97,0 | 40,1 | 84,6 | 49,5 | 21,2 | 38,1 | 50,6 | 35,7 | 12,1 |
| Denmark | 86,9 | 69,4 | 70,8 | 63,0 | 89,1 | 84,6 | 21,5 | 25,3 | 41,7 |
| Germany | 98,0 | 33,3 | 85,3 | 58,8 | 75,8 | 12,1 | 81,4 | 72,4 | 38,2 |
| Ireland | 78,3 | 64,3 | 63,3 | 9,7 | 64,5 | 8,0 | 58,2 | 36,5 | 59,2 |
| Greece | 74,1 | 54,3 | 45,0 | 42,9 | 46,2 | 14,3 | 28,6 | 11,8 | 0,0 |
| Spain | 83,8 | 62,3 | 67,0 | 58,5 | 49,2 | 5,2 | 58,5 | 48,0 | 43,0 |
| France | 92,2 | 72,3 | 71,3 | 72,7 | 73,1 | 45,7 | 53,8 | 46,3 | 71,9 |
| Italy | 78,4 | 69,1 | 80,3 | 90,3 | 45,4 | 64,2 | 34,7 | 0,0 | 28,1 |
| Cyprus | 100,0 | 90,1 | 85,4 | 86,6 | 50,0 | 0,0 | 21,0 | 52,3 | 0,0 |
| Latvia | 86,0 | 33,5 | 63,9 | 0,0 | 65,1 | 90,9 | 82,9 | 71,5 | 66,7 |
| Lithuania | 72,7 | 44,7 | 56,3 | 41,7 | 42,3 | 46,9 | 45,7 | 43,5 | 54,3 |
| Luxembourg | 91,1 | 58,3 | 78,5 | 47,6 | 62,7 | 27,3 | 53,9 | 43,0 | 20,0 |
| Malta | 100,0 | 100,0 | 93,5 | 0,0 | 100,0 | 100,0 | 94,7 | 50,0 | 100,0 |
| Netherlands | 80,9 | 15,1 | 57,5 | 2,2 | 48,2 | 0,0 | 19,1 | 48,5 | 0,0 |
| Poland | 92,3 | 89,2 | 86,1 | 100,0 | 94,7 | 93,9 | 80,3 | 75,9 | 0,0 |
| Slovakia | 92,8 | 77,9 | 84,5 | 0,0 | 67,6 | 26,9 | 60,9 | 63,8 | 0,0 |
| Finland | 99,7 | 86,1 | 99,1 | 33,3 | 100,0 | 0,0 | 97,3 | 95,5 | 80,0 |
| Sweden | 98,2 | 85,7 | 90,9 | 58,8 | 66,7 | 58,8 | 93,5 | 86,8 | 58,8 |
| United Kingdom | 92,7 | 86,9 | 83,0 | 50,0 | 92,1 | 0,0 | 86,5 | 88,1 | 99,5 |
| Average | 89,4 | 64,7 | 76,6 | 45,9 | 65,4 | 36,1 | 59,1 | 51,5 | 39,6 |

Table 5- Rate of success for other financing instruments according to the source. The numbers are in percentage and related to the year of 2010.

The data represent the total economy except financial and insurance activities (source: Eurostat).

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