



Previous chapters of the book have underlined how the capital structure of a firm normally involves both debt and equity sources, and how important it is to find the right mix between the sources to maximize the value and reduce the risk.

This chapter deals with the description and in-depth analysis of the various sources of long-term capital, equity, and debt, and how it is possible to raise the funds in either form through appropriate procedures.

Both long-term equity and debt constitute the spine of the company and determine its value and also the capacity of producing goods and services at the appropriate volume and speed.

It is therefore important to understand what are the various sources of equity capital at all stages of the company's life and also understand how a company issues debt instruments for external financing.

The issue is the trade-off between economic convenience, which translates into a lower return to be paid to the investor, and risk, which is born when accessing riskier forms of capital.

Given the geographical peculiarity of some capital structures in the world, the chapter also aims to give a regional perspective on the problem, by analyzing the policies for fund raising in different parts of the world.

After studying this chapter, you will be able to answer the following questions, among others:

- What are the different sources of equity capital? How do they differ according to the stage of the company's life?
- What is a rights offer and how does it differ from direct shares offer?
- What are the different types of debt available to the firm for external financing?
- How can a debt issue be protected through covenants and early repayment?
- What are the approaches for long-term fund raising in different parts of the world?

The first section of the chapter deals with the various types of equity financing, from the start-up stage of the company to a more mature stage of growth and establishment in the market. The second section deals with the debt financing sources and how the company handles the issuance of debt securities. The final part is devoted to a geographical analysis of the long-term fund raising issue, with a deep look into the American and European markets but also to the reality of the emerging markets.

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## 10.1 Early-Stage Funding

### Learning Outcomes

- Explain the role of angel investors in the early financing of a firm.
- Explain the role of venture capital in the early financing of a firm.
- Explain private equity and its role in equity financing.

#### 10.1.1 Angel Investors

Business angels are investors with high net worth investing in entrepreneurial ventures. Their noninstitutional nature, combined with sufficiently high funds available, enables them to invest in high-risk, high-return start-ups. In return they ask for a share of voting, income, and, ultimately, capital gain.

Angel investment represents the very first stage of external independent funding for a company, and it normally involves early-stage ventures where the founding team has exhausted their personal savings and sources of funding from family and friends.

The start-ups targeted by angels are normally so embryonal that they cannot independently stand on their own. The outlook for these companies is normally between failure and takeoff.

They are not mature enough to gain private equity funding, and the management typically lacks experience in a growth venture, and the business needs not only the additional funding but also mentoring to take it to the next stage of development.

There are drawbacks in investing in early-stage companies, which makes the investment unattractive to banks and other institutional investors. Angels are therefore individuals who can afford to lose the money and/or are willing to wait some years before they see a return on their money (Clarysse et al. 2007).

The features of early-stage businesses make them unique compared to mature companies and corporations. First of all, the shares are not traded and there is no market for them.

Anyone investing in start-ups must wait for the company to go on sale or be publicly listed to trade the shares. Novel business concepts and inventions are often associated with emerging and untried markets.

Angel investment is associated to a higher risk than normal corporate investment. The business is subject to a high level of uncertainty, with products or services under development.

The design and knowledge of the product depend on some employees, with usually little or no business experience.

The knowledge of the product and its design may be highly dependent on a small number of key staff, who may not necessarily have proven business experience. Due to their small size and lack of presence in the market, start-ups are generally susceptible to changes in market conditions.

The survival of the early-stage firm depends critically on timing, and the quickness in releasing products, as well as the ability to achieve revenue steps, can make the difference.

The access to funds other than the ones provided by angels is very complicated for a start-up. This is further complicated by the fact that these ventures typically have little collateral to pledge for loans.

There is limited access to further finance if the business encounters delays or undertakes operations which require additional funds. A high cash burn rate characterizes the business, given that they have not yet reached the ability of self-funding.

Expanding the business is also complicated given the limited amount of funds. Given the little or null history of financial performance, it is very hard to give a valuation of the business.

Minority shareholders have little power unless it is through an investment agreement. Even if they disagree with management actions, they have little power and can't sell their shares easily (Lane and Mifflin 2011).

Several types of angels are available in the market. Some of them have direct experience in the industry of reference, and they can help with business development, recruitment, sales, strategy, contacts, and so on.

Some entrepreneurs are so specialized in angel investment that they reinvest the amount cashed up into new ventures and add their experience on the previous successful business to the new one.

However, they may not have experience in the industry in which the firm operates. Wealthy and/or retired corporate executives often make investments in new ventures within their industry.

They can provide not only the money but also the contacts, introduction to other investors, recruitment, and risk assessment services. In some cases, they are simply wealthy individuals with a desire to invest in the private sector, and money is their only contribution to the business.

Analyzing the typical profile of an angel investor is not easy given that there are no public data available about this type of funding. Angels in fact are most likely to stay out of the public eye and refuse to speak about their experience.

A profile of the typical angel investor has been set up by the Center for Venture Research at the University of New Hampshire, in a study solely focused on the US market.

The survey of the centre depicts the angel investor as a capital supplier focused on a specific geographic area, very limited. Individual angels rarely invest more than a few hundred thousand dollars in total.

Angel investors belong to the wealthier social class and are quite old, but not necessarily millionaires. Financial figures include a required return of about 25% and an expected rate of failure on the investment of a third.

They reject seven out of every ten deals that cross their desks, for a variety of reasons, including poor growth potential, overpriced equity, and an inexperienced management team.

Angel investors are the initial bridge to more sophisticated sources of funding like venture capital. At the angel capital stage, the focus is on the capital really needed to start the operations and on the connections made available to expand the business.

### 10.1.2 Venture Capital

Venture capital is the source of funding provided by outside investors, to fund a growing company. The risk associated to such an investment is high; therefore a stake of the shares in the company is requested in exchange for the capital.

It is an important source of funding for start-ups and other companies that have a limited operating history and don't have access to capital markets. The target of venture capital firm (VC) are small businesses with a high growth potential.

Most venture capital firms are structured in the form of limited partnerships. They pool investment capital to be invested in some companies and range in size from a few millions of dollars to many billions of dollars' equivalent value invested in start-ups.

Venture capital is provided either by groups of investors or branches of commercial or investment banks, as well as some insurance companies. In all cases the aim of the VC investor is to employ its business knowledge and expertise to contribute to the growth of the companies. The process is assumed to yield a substantial return on the VC's investment, generally within 3–7 years (Bloomfield 2008).

The trade-off between risk and return on a VC investment is quite pronounced and the failure rate is quite high. On the other hand, a successful investment in VC can yield a return consisting of three to ten times the initial investment.

On top of a stake of equity, the VC also demands decision rights in the management of the target business. The involvement in management and planning decision can be very robust.

The VC offers its managerial contribution through the expertise of its general partners who may be former CEOs, bankers, or experts in a particular industry. It is common that one or more general partners of the VC take positions in the board of the financed company as well. They may also help recruit key executives to the portfolio company.

Matching the needs of the growing business with the right VC partner is one of the main duties the young entrepreneur has to accomplish. Finding the right financing partner can make a difference in the future of the business.

Not all the VCs invest in the same type of companies. Some of them invest small amounts of capital for very early ventures while others focus on early or expansion funding. Other VCs prefer to invest at the end of the business cycle, to finance buyouts and operations of capital restructuring.

In terms of portfolio diversification, VCs may be generalists and invest in multiple industries and locations or (most commonly) specialize in a particular industry. It is therefore very important for a firm that is seeking funds to make sure the target VC is the right choice also in terms of industry specialization.

In addition to industry preferences, VCs also typically have a geographic preference. Being in the same general location as a portfolio company allows the VC to better assist with business operations such as marketing, personnel, and financing.

Not all new businesses can raise VC's attention. Investors are in fact very selective and only those companies that qualify are taken into consideration. The main feature VCs look for is high growth potential.

They aim for companies with very high profitability allowing them to exit with a higher than average return in a time frame of roughly 3–10 years, depending on the type of investment. The consequence of the strict selection criteria is that most funding goes to companies in rapidly expanding industries like technology and life sciences.

Recall that the typical venture capitalists is keen to invest in companies with high growth potential. The future outlook of the company is actually more important than the actual size of the business.

A target company for a VC is one that may be capable of becoming a large market leader in its industry due to some new industry opportunity and competitive advantage. There are some standard factors that lead the choice of the VC when screening a proposed investment opportunity.

First of all, the company must present a product that is commercially viable, one that can be efficiently produced to generate revenue. The market must be clearly identifiable, and once a need for the product is spotted in the consumer market, the company must show a clear plan to meet the identified need in an efficient, revenue-generating manner.

The strength of the management is also important, as well as the level of confidence inspired by the leadership of the company. Management is expected to have the vision and expertise to take the business to the next level.

A very important factor of success for a business, and also the best way to impress a VC, is to show that the business has a competitive advantage. The idea behind the business should be such to establish significant barriers to entry that will inhibit others from encroaching upon its market (Draper 2011).

Obtaining the funds from VC entails a detailed process, aimed at disclosing the necessary information for the investors to be able to make decisions. First of all, a detailed business plan should be submitted, as well as an executive summary of the business proposal.

The VC receives the documents and starts discussing internally about the investment opportunity. If a positive decision about proceeding is taken, the business in

need of funds goes to another stage. This first step may take a few weeks to be completed.

Every VC receives a huge amount of proposal, and only a very limited percentage of them is invited to meet the VC's partners for a more formal discussion. An average of 0.3% of businesses demanding VC funds gets the money.

The second stage involves an introductory meeting between the company and the VC. The purpose of the meeting is to discuss the business in more details once the general idea has been accepted.

The first approach is usually via phone, and if the phone conversation is successful and a mutual fit is seen, the entrepreneur is usually invited to visit the VC for a meeting to discuss the opportunity in more detail. After this meeting, the VC will determine whether or not to move forward to the due diligence stage of the process.

The third phase is the due diligence, which is dependent upon the features of the presented business proposal. The process can be lengthy and involves continuous contact between the company and the VC.

Contacts in this phase include phone calls, emails, management interviews, customer references, product and business strategy evaluations, and other such exchanges of information during this time period.

Upon satisfactory due diligence, the company is commonly offered a term sheet, which is a document that does not bind any party but is meant to list and explain the basic terms offered for the investment. The term sheet is normally negotiable, and it is followed by the legal procedures for documents and due diligence, before the funds are made available (Peterson 2003).

The term sheet contains also the assumed valuation of the target company, set by the VC after a thorough process that involves the analysis of several factors. Factors driving the valuation process are the management team, the market and competitive advantage in the marketplace, and the earning potential.

The amount invested in the company sums up to the above pre-money valuation in order to give the final post-money valuation, which includes the new money invested by the VC.

As for any other deal in life, the best option for the company in search of funds is to have access to more than one interested VC, which would allow to obtain much more favorable conditions due to competition.

The term sheet negotiation is based on a couple of main issues that are very important for all VCs. First of all, the financial aspects of the deal must be satisfactory in terms of the return offered in exchange of the funding.

The second important aspect is control, meaning how the VC will be able to exercise control over your company's decisions. The pertinent negotiations will revolve around these two issues.

The several stages of funding for a new born company are commonly denominated with letters from A to D, with A being the first angels, to D meaning more mature stage of capital raising. After that, the final rounds take the company to the IPO that officially makes the business public and the shares traded on financial markets.

A VC may specialize in providing just one of these series of funding or may offer funding for all stages of the business life cycle. Knowledge of the preferences of the VC is essential, as well as clearly articulating what type of funding the business is looking for (Ryan 2013).

When a business is at the very beginning, with no development of product or organization, it is said to need seed capital. There are not many VCs that give seed capital, and the amount invested is generally very small.

Start-up capital instead is given to companies that already have a sample product available with at least one principal working full time. Such type of investment is also rare, and the money is used for additional recruitment and finalization of products or services.

A third level of funding is called early-stage capital and comes at a later stage of the company's life, after a few years from commencement. The company has a proper management team in force, and sales are increasing. This is the stage where the funding offered by a VC fosters the increase in sales to the break-even point, improves productivity, or increases the company's efficiency.

A later stage is the expansion capital, and it comes for companies that are well established and looking for help to get the business make a decisive further step. Funding at this stage may enter new markets or increase marketing efforts.

The late-stage capital is the final step before the IPO, and the company at this stage has reached an impressive level of sales and profit. The purpose of additional funding is to increase capacity, foster marketing, or increase working capital.

At this mature stage, approaching a VC is also a good way to find a partner to help find merger and acquisition opportunities. There are VCs that focus on this end of the business spectrum, specializing in initial public offerings (IPOs), buyouts, or recapitalizations.

VCs can help planning an IPO as well as developing a mezzanine or bridge financing plan. Such a short-term source of funds can help with the costs the company incurs to go public.

Again, a key factor for the VC will be risk versus return. Investing in a company at earlier stages entails higher inherent risks and a longer time period before the VC can exit the investments. The earlier the stage of investment, the higher the return expected by the VC.

The exit opportunity represents a way for the VC to cash out an investment in a company that is not performing as expected. VCs hope to sell the equity they hold in a funded company, after a maximum of 7 years, ideally through an IPO.

When the IPO takes place, the shares of the company become very liquid and the VC can cash a lot from selling them, therefore making the huge profit they aimed to when they decided to fund the business.

While an IPO may be the most visible and glamorous form of exit, it's not the most common. Most companies are sold through a merger or acquisition event before an IPO can occur. If the portfolio company is bought out or merges with another company, the VC receives stock or cash from the event.

### 10.1.3 Private Equity

Private equity represents a more advanced stage of long-term committed share capital, aimed to companies that are not quoted yet. When a business is in need to start up, expand, buy into a business, or revitalize a company, private equity can help.

Private equity is very different from raising funds through a bank loan or other form of debt. Private equity is invested in exchange for a stake in your company, and the return on the investment is dependent on the growth and profitability of the business.

Private equity capital is assigned upon very selective criteria. Many small companies are “lifestyle” businesses whose main purpose is to provide a good standard of living and job satisfaction for their owners. In these cases, the PE firms will not step into the business, given the lack of the feature of growth aspiration which is mandatory for a business to qualify for PE capital (Carter 2004).

Entrepreneurially focused businesses can be distinguished from others by their aspirations and potential for growth, rather than by their current size. Such businesses are aiming to grow rapidly to a significant size.

The usual term for the business to show its full potential of a high turnover is normally set at 5 years. If the business is expected to take much longer than that to fully exploit its potential, PE will be unlikely to invest in it.

As in the VC case in fact, PE investors are only interested in companies with high growth prospects, led by experienced and ambitious managers who are capable of turning their business plan into reality.

PE investment comes with some good advantages. Companies funded by private equity have shown historically to grow faster than other types of companies due to a combination of capital and experienced personal input from private equity executives.

The goal of a PE company is to turn a business into a success, by increasing the value to its owners, without taking day-to-day management control. They demand a high stake in the firm’s equity, but they can boost the value of the remaining equity to the owners much more than they would realize without PE capital.

Private equity firms raise capital based on a competitive market, same as for the business looking for them to fund their operations. PE firms have to demonstrate a good track record and the prospect of producing returns greater than can be achieved through fixed interest or quoted equity investments (Cummings 2010).

PE firms normally access funds for investment from institutional investors, and when they obtain their funds mainly from their parent organization, they are also known as captives. When captives raise funds from external sources as well, they are called semi-captives.

Funds raised by PE from external sources can have several types of structure. Most commonly they are structured as limited partnership with a fixed life of some years. The funds will have to be returned to the original investors after that period.

This generally requires the investments to be sold, or to be in the form of quoted shares, before the end of the fund. Some funds are structured as quoted private equity

investment trusts, listed on major stock markets, and as they have no fixed life span, they may be able to offer companies a longer investment horizon.

In the United Kingdom, for example, there are Venture Capital Trusts, which are quoted firms collecting funds for small businesses, with the incentive for the investors of tax cuts and deferrals in return for a 5-year investment commitment. The funds obtained through a trust come at the expense of limitations on the future development of the corporate activities, for an initial period of a few years (Dermot 2008).

The first step in choosing a PE firm is to decide whether or not to hire an adviser. Then a few possible funders must be selected, in particular those that match with the business idea and proposal.

The fit with an appropriate PE firm is based on the stage of the company's development or the type of private equity investment required. Other important factors are the industry sector and amount of finance needed and the geographical location of your business operations.

As for the VC funding, there is a match between the stage of the business life and the type of PE firm to be contacted. From seed capital to the established companies, the range of available opportunities is very wide for both PE firms and funding-seeking businesses.

On top of the above seen reasons to acquire capital, there are also management buyout (MBO), management buy-in (MBI), and institutional buyout (IBO). Each of these strategies can be financed through PE capital.

MBO is an operation through which the management of a company and investors can purchase a significant share of equity in the business they manage. The range of MBOs goes from small family-owned business acquisitions to complicated multi-millionaire buyouts. The amounts concerned tend to be larger than other types of financing, as they involve the acquisition of an entire business.

The MBI is a similar operation that involves external managers and investors who are interested in acquiring control of a company they are not currently managing.

The IBO consists in a PE firm acquiring a business through institutional procedure. Immediately after the acquisition is made, the incoming management will itself acquire a stake of equity (Jefferson 2001).

This is a relatively new term and is an increasingly used method of buyout. It is a method often preferred by vendors, as it reduces the number of parties with whom they have to negotiate.

Hybrid types of operations are also possible through the funding provided by a PE. Secondary purchase, for example, is the acquisition of existing shares in a target business, from another PE firm or other shareholders.

Replacement equity consists of existing investors buying the stake of another investor. Rescue investment is meant to finance a company in trouble. PE's funds can also be used to redeem the debt of a company so as to reduce its leverage.

As mentioned above, the industry sector of a firm seeking for funds plays an important role in the choice of the right PE, with sectors like biotech, information technology, and computer related being the most targeted.

The amount of investment is also very important, and the majority of the PE firms normally invest high amounts of capital, with only a few of them investing in ventures that require little amount of funding.

Companies initially seeking smaller amounts of private equity are more attractive to private equity firms if there is an opportunity for further rounds of private equity investment later on (Ochtel 2009).

Whether the amount to be invested is low, high, or extremely high, the effort in the screening required to a PE is more or less the same. The private equity firms have to spend similar resources in appraising the business proposal prior to investment.

This is the main reason why investments of large size are more appealing to PE firms, because in size terms (as opposed to return terms), the interest received on a large investment is likely to be greater than for smaller investments and should more easily cover the initial appraisal costs.

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## 10.2 Initial Public Offering

### Learning Outcomes

- Explain what an IPO is and the road to it.
- Explain how the firm can issue stocks through an IPO.
- Explain the issue of IPO underpricing.

### 10.2.1 Types of Offering

An initial public offering (IPO) can be defined as the process of selling a security to the general public for the first time, with the expectation that a liquid market will develop for trading it. There can be several debt or equity securities as target of an IPO. The most popular are however those involving issues of equity by operating companies.

The early-stage sources of capital examined in the previous section involve investors putting money in the equity of the firms, with no liquid market existing if these investors wish to sell their stock (Cohan and Hungry 2012).

If a company prospers and needs additional equity capital, at some point the firm generally finds it desirable to “go public” by selling stock to a large number of diversified investors.

The enhanced liquidity due to trading in public open market allows the firm to access a wider range of investors ready to deal on more favorable terms. This is much better than compensating investors for the lack of liquidity associated with a privately held company.

The benefits of having access to open-market transactions are balanced by some additional costs. These costs are associated with the need to supply information on a regular basis to investors and regulators for publicly traded firms.

There are also costs that are linked to the IPO, which can be direct or indirect. Direct costs include legal, auditing, and underwriting fees. The indirect costs include the time spent on the operation by the management.

Another indirect cost is given by the dilution of capital due to the sale of shares at a price that is generally below the immediately post-IPO market level. These direct and indirect costs affect the cost of capital for firms going public.

The IPO is subject to market conditions, so that it is hard to predict what the reaction of the market will be and how the price will fluctuate immediately after the offering. This link to the trends of the market involves a high stress for the entrepreneur.

The preliminary part of the IPO goes through several steps, and the procedure must fulfill the general provisions from the regulators in the various markets. As an example, the following are the steps of the procedure in the American market, as regulated by the Securities and Exchange Commission (SEC).

- In the first step, the board of directors approves the offering. Also sometimes it is necessary to increase the number of shares sold, and this must be directly voted by the shareholders.
- The second step involves the preparation of a registration statement to be filed with the SEC. This is a general requirement with some exceptions relating to low-value issues. A registration statement normally consists of many pages of financial information, including a financial history, details of the existing business, proposed financing, and plans for the future.
- In a third phase, the SEC examines the documents and the company starts distributing a preliminary prospectus, which synthesizes the information in the statement. Unless the SEC recommends changes to the registration statement, this becomes effective after 20 days from filing. The SEC does not consider the economic side of the operation at this stage but only its complying with the rules and regulations. Also, the SEC generally does not check the accuracy or truthfulness of information in the prospectus.

After the above steps are fulfilled, the IPO goes into the stage of valuation. Valuing IPOs is in principle not so different from valuing other stocks, and both discounted cash flow (DCF) approach and comparable firms analysis can be used.

Most of the recent IPOs involved high-technology young firms. Since a young firm has a short history of accounting information, it is often impossible to project future profits and cash flows in an accurate manner.

For valuing the IPO, it is therefore necessary to rely on the information about comparable firms. The market often offers comparable firms in the same line of business, for which accounting information is available. In other cases, it may be difficult to find publicly traded “pure plays” to use for valuation purposes.

In practice, the procedure for pricing the IPO involves a pricing meeting to be held the same morning as the SEC clearance to go public is expected to be received.

The outcome of an IPO is generally very uncertain. Many high-expectation IPOs in the past with companies assumed to raise many millions of euros or dollars having to withdraw for exogenous factors.

There is empirical evidence that companies issuing stocks on an IPO in US market historically prefer to have a target stock price ranging from \$10 to \$20. That is why new companies usually tend to stick to the range, by splitting or reverse splitting the stocks.

Stocks with a price below \$5.00 per share are subject to the provisions of the Securities.

Enforcement Remedies and Penny Stock Reform Act of 1990, aimed at reducing fraud and abuse in the penny stock market.

In the case of a cash offer public issue, an underwriter is involved. Underwriting is an important line of business for many large investment firms. These companies offer services like modulation of the issuance method, pricing of new securities, and the actual sale on the market (Kotler 2004).

The underwriter typically buys the issuing securities for a price that is lower than the offering price, thus bearing the risk of a nonsuccessful sale on the market, with a relatively huge loss.

The risk is therefore very high, and that is why usually underwriters combine to form an underwriting group called a syndicate to share the risk and to help sell the securities, so to share the risk and profit.

The offering is then co-managed by one or more managers, with a leading one who takes responsibility for the issues related to dealing with issuer and pricing of the securities. The other underwriters in the syndicate distribute the issue and produce research reports later on.

The compensation received by the underwriter is represented by the determined offering price and the price for buying from the issuer. It is called gross spread, and it is not always in cash. Sometimes it happens in fact that on smaller deals, the underwriter is compensated with warrants and stock in addition to the spread.

The choice of an underwriter entails either an offer on highest bidding or direct negotiation. Companies usually choose to use the negotiation as a method, but in some specific cases like public utility holding companies, competitive underwriting is mandatory (Nakamura 2005).

The use of competitive underwriting has been proven to be cheaper, and the main reason behind the standing dominance of negotiated underwriting in many countries is still debated.

There are two types of underwriting involved in a cash offer.

- Firm committed underwriting involves the sale of the entire issue from the issuer to the underwriter, who tries to resell it to the market. It is the most common method of underwriting in many countries, including the United States. In case the underwriter cannot sell all of the issue at the agreed-upon offering price, it may have to lower the price on the unsold shares. The risk is mitigated by investigations of the market, to test the reception to the offer, which happen before setting the offering price. Moreover, the price is not set in good advance to the actual sale of the issuance, so that the profit is not well known until that time.
- In a best effort underwriting scheme, the underwriter is legally bound to make all the possible effort to sell the securities at a price previously agreed on with the

issuer. There is no other commitment from the underwriter, and no amount of money is guaranteed to the issuer on top of that. This form of underwriting has become rather uncommon in recent years; firm commitments are now the dominant form.

When the price is set and the offer is made, the issue takes place and the investors buy the new securities on the market. The period after a new issue is initially sold to the public is referred to as the aftermarket.

This time is characterized by the sale of securities at not less than the offering price. Also the (main) underwriter can buy the securities in case the market price falls below the offering price. Such a strategy supports the sale on the market, by stabilizing the price against temporary bullish trend.

After some determined time, usually 30 days, if the issue remains unsold, the members of the underwriting syndicate are allowed to leave and sell their securities at the current market price.

In some cases, an underwriting contract may include a provision allowing the underwriter(s) to buy additional shares from the issuer at the offering price. This is called green shoe provision.

This provision is normally contained in all IPOs involving equity issues, while being not present in ordinary debt offerings. The reason for such a provision is to cover excess demand and oversubscriptions.

The green shoe provision is usually set on no more than 15% of the issuance and lasts about 30 days. It represents a cost to the issuer and a benefit to the underwriter, because it can be used when the market price goes above the offering price within 30 days, allowing the underwriters to buy shares from the issuer and immediately resell the shares to the public (Tsuruoka 2004).

Another type of collateral provision on IPOs is the lockup agreement, which specifies the period insiders must wait after an IPO before they can sell some or all of their stock on the market.

The features of a lockup agreement are pretty standardized, and the lockup period is normally set at 180 days. After the IPO underwriters have 6 months before they can cash out.

The provision ensures that they maintain a significant economic interest in the company going public. It is also important because it can happen that the number of locked-up shares exceed the number of shares held by the public.

The consequence of such a concentration is that at the end of the lockup period, a large wave of sales may hit the market and strongly decrease the price. As shown by the evidence, venture capital-backed companies are on average more exposed to a loss in value on the lockup expiration day.

### 10.2.2 IPO Underpricing

One of the main responsibilities of the underwriter(s) in an IPO is to set the offering price at which the stocks of the company will be sold. Setting a fair price is very

important to ensure a smooth IPO and placement of all offered shares. In addition, it is important to ensure the right amount of proceed to the issuing company.

When the price is set to ensure all stocks offered can be sold, the underwriting fees are deducted and the remaining amount goes to the issuer as proceeds of the IPO. When the stocks are finally ready for trade on the secondary market, the supply and demand will determine the equilibrium price for the following time.

Looking at the history of IPOs, even if the underwriters normally excerpt a lot of effort in determining the right offering price, normally IPOs tend to be underpriced in terms of demanded price.

This unfortunately looks clear only after the stocks have been issued, when the market prizes the issuance by raising the price already in the days after following the IPO. On the other hand, the fact that the issuer cashed the offering price instead of the subsequent market-traded price results in a loss.

Underpricing is then defined as the situation when a stock is issued at a price below the market (fair) value. The underpricing is temporary, due to the action of market forces that set the price to the fair value in a relatively short time.

Factors like the fundamentals of the firm and the aim to marketable price normally drive the analysis and calculation of the IPO price. Factors like cash flows, growth perspective, and discount rates are at the basis of models like discounted cash flow (DCF), dividend discount models (DDM), and relative valuation models (RVM) analyzed in other chapters of this book.

One should always recall that investors normally perceive an IPO as a type of investment with a higher degree of risk compared to investing in an already public company. This is mostly due to the lack of public information that normally surrounds private company, especially in terms of financial data (time series of past stock prices).

The resulting asymmetry of information leads the issuer and underwriter to opt for an issuing price lower than a fair price would be. In this way, the issuance is more attractive to investors who benefit from a price discount as a compensation for the higher risk born.

There are normally hundreds if not thousands of IPOs run in the world every year. When companies get to this stage, it generally means they have no other way to raise the funds needed to support a fast growth or a change in scale of the business (expansion).

The literature and practitioners have indicated several reasons why stocks in an IPO are normally subject to underpricing at first issuance. Some concentration of investing power among big investment banks underwriting the issuance has been brought up as a reasonable explanation to that.

On the other hand, other analysts have pointed to the regulatory aspects of an IPO as an important aspect of the deal. The already mentioned asymmetry of information is another important aspect.

Commercial banks in the United States are not allowed to be involved in corporate equity underwriting. This leaves investment banks with a monopoly in the field that may naturally generate a tendency to offer lower prices to the target companies.

In addition, if one looks at the fact that normally the investment banks involved in underwriting of the biggest IPOs in the United States belong to a restricted group, the argument of monopoly becomes even stronger.

Some important acquisitions of investment banks by nonfinancial multinationals like General Electric among others have reduced the monopoly effect by introducing some level of competition in the underwriting sector.

Still, the level of concentration is so high that the issue still stands, and the spreads earned by the underwriters over the issuing firms are generous compared to what it would happen, if the market of investment banks were more competitive.

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## 10.3 Debt Financing

### Learning Outcomes

- Explain the different types of debt financing available to firms.
- Explain the difference between bonds and bank loans.
- Learn what leasing is and how companies can use it.

### 10.3.1 Types of Debt

The class of debt financing includes all the funds that are borrowed by a company with the promise to make interest payments in regular instalments, plus repayment of the principal.

Repayment happens in accordance with an agreed upon schedule. Along with equity (common stock plus retained earnings), debt represents one of the two major sources of capital for business enterprises.

The first source of debt capital to analyze is the money market. It is the market for debt instruments with maturity less than 12 months. An example of money market is the commercial paper.

Commercial paper is issued by financial firms and reliable industrial corporations, either directly or through a broker. It represents an obligation of pure discount in the short term.

When looking at long-term debt sources, the major class of instruments is represented by corporate bond issues. A firm can issue a bond either in its home country or in another country. It is obvious that raising money abroad involves being subject to the rules of the country in which it does so.

The bonds that are sold into foreign markets, to local investors of that specific country, are called foreign bonds. According to recent reviews, the US market is the largest market for foreign bonds, followed by Japan and Switzerland.

The international market for long-term bonds is quite well developed. Groups of underwriters form syndicates to sell the bond issues, and most of them are located in London Exchange.

Many international banks and security dealers, from the United States and other countries, have their branches located in the United Kingdom and make deals in major currencies. The US dollar has been the most popular choice, but a high proportion of international bond issues are made in the euro, the currency of the European Monetary Union.

In the early 60s, the American government wanted to discourage the outflow of capitals. The goal was achieved by taxing the interest made on foreign security so to equal it to the interest on domestic securities.

As a consequence, both European and American multinationals were forced to tap an international market for capital, named as the Eurobond market, not to be confused with the concept of Eurobond (which may be in any currency) with euro-denominated bonds.

The taxation was then removed in the first half of the 70s, and nowadays capital export is not controlled or hindered anymore. American companies can choose where to borrow their funds with freedom.

As a consequence, the interest rates in the United States and London markets, just to give an example, started converging and are usually very similar. On the other hand, the international bond market is not subject to American regulation, and financial management should be aware of small differences in the borrowing costs between markets.

The contract between a bond issuer and a bondholder is legally binding, and takes the name of indenture, or trust deed. It specifies all the important features of a bond, such as maturity, interest payments, interest calculation, optional features and so on.

On top of that the contract also contains all the conditions regarding the bond issue, as well as the financial covenants related to the issuer, and the formulas to be used for calculation of covenant matching.

The indenture is a reference in case of litigation, and should conflict arise between the two counterparties, it is the only document with legal and binding value. This is why it is carefully compiled and it contains all the features of the bond issue.

In times of normal markets, the indenture is not so important and the chance of conflicts is very low. The document becomes very important when there are events that put the issuer in a position at risk of violating a covenant.

The indenture will then be scrutinized closely to make sure there is no ambiguity in calculating the financial ratios that determine whether the issuer is abiding by the covenants.

When the bonds are registered, their ownership is recorded in the company's books and payment for the interest and final principal amount is directly made to the registered owners.

It is a general practice to register the bonds, but in some countries, the alternative way is used, which is called the bearer form. The certificate is the primary evidence of bond ownership.

The bondholder is then entitled to claim interest payments through coupons and then send the certificate at maturity in order to claim the final repayment of principal. International bonds allow the owner to hold them in bearer form. That is why in some countries like the United States, for example, the government has tried in the years to disincentive the residents from buying them.

Dollar bonds are usually expressed with a face value of \$1000 while European bonds have a face value of 100 €. The price is expressed as a percentage of that value, and net of any accrued interest. It follows that the buyer of a bond is supposed to pay the price plus any accrued future interest amount.

It is very important that the company keeps paying the interest regularly, so that lenders are not encouraged to claim their money back instead of waiting until matters may have deteriorated further.

It follows that the interest represents a sort of protection against a loss in value. In some cases in order to offer this type of protection the bond issuer may offer a lower interest rate but a larger discount on the face value.

The investors then receive a significant part of their return in the form of capital appreciation. The special case is the simplest bond, called zero coupon bond, which pays no interest at all, but only the face value at maturity.

The interest rate offered on a bond can be either fixed or floating. A fixed rate ensures that all interest payments will be equal. In some cases the payments vary with the general level of interest rates.

A typical example of floating rate is the bonds tied to some Treasury bill rate, or those linked to the London Interbank Offered Rate (LIBOR), the rate used internationally by the banks for lending to each other. Often these floating-rate notes specify a minimum (or floor) interest rate or they may specify a maximum (or cap) on the rate.

Another important distinction is between unsecured and secured bond issues. Most bonds are in fact issues as unsecured obligations, meaning there is no protection against a default of the bond issuer.

In case of secured bonds instead, if the company defaults on the debt, the trustee or lender may take possession of the relevant assets, and in case these are not enough to satisfy the claim, the remaining debt will be put in line with any unsecured debt, against the other assets of the firm.

Mortgage bonds are the major class of secured bonds, providing a claim against some property (building) or even secured against all of the firm's properties. The value of the mortgage depends on the use of the property put as collateral.

Securities can be also used by a company as collaterals for a loan. When a holding company wants to borrow funds for example, it can use the common stocks in subsidiaries as collateral.

The above securities represent a junior claim to the lender, given that they come after other claims, with a senior right. Therefore, the collateral trust bonds often include limitations to the subsidiaries in order to avoid excessive issue of debt or preferred stock.

Another form of secured debt is called equipment trust certificate, which is mostly used in the heavy transport industry. The agreement gives a trustee the ownership of all the equipment.

The company then makes a down payment on the overall cost of the equipment and a bunch of equipment trust certificates is issued in order to provide the balance. Maturities of the certificates normally range from 12 months to 15 years. When all the debts are paid, the company acquires formal ownership of the equipment.

Like other securities, the equipment trust certificates are rated by agencies like Moody's or Standard and Poor's. The rating of the certificates is normally one grade higher than the company's regular debt, showing their relative low riskiness.

Bonds are in line with a seniority grading, meaning that senior bonds represent claims that will be satisfied first in case of redemption, while junior bonds are subordinated to the senior bonds or to all other creditors.

So if the firm defaults on its obligations, the holders of senior bonds are repaid first. The subordinated bondholders stay in line behind the firm's general creditors, and just ahead of the preferred and common stockholders.

Another way of raising funds through debt is by borrowing money indirectly. Companies in fact sometimes bundle up a group of assets and then sell the cash flows from these assets. These securities are known as asset-backed securities (ABS).

The typical case is of a financial company or bank making a large amount of mortgage loans to home buyers. If such a company is in need of cash, but cannot wait for the loans to be repaid, the solution is simple.

The procedure for indirect borrowing involves creating a separate company that buys the package of mortgage loans from the lending company. The purchase is financed through sale of mortgage pass-through certificates.

The holders of the certificates then receive a share of the mortgage payments. Repayment of certificates goes parallel with the speed of repayment of the actual mortgages.

The indirect way of borrowing funds is not limited to the real estate sector, but involves many types of loans like automobile loans, student loans, and credit card receivables. They are often bundled together and re-marketed as a bond. The major investment banks are nowadays able to repackage every type of loan.

The major part of debt issues is placed publicly through specialized agencies. But in some cases the debt is placed privately with a small number of financial institutions. This is done because the costs of a private placement are lower than for a public debt issue.

There are several aspects under which a private placement differs from a public issue. First of all placing an issue privately with a financial institution (or two) can be usually through a simple promissory note.

This is just an owing declaration that lays down certain conditions to be observed by the borrower. In a public issue one must worry about representation of bondholders in negotiations and the procedures needed for paying interest and principal.

As a consequence, the public issue involves a more complicated contractual structure. Also, publicly issued bonds are very standardized in order to allow fast trading of them without checking the fine print in the agreement.

In a private placement the contract is personalized and tailored for companies with any possible need and problem. This type of contractual link makes the relationship between borrower and lender much more intimate.

In general, bond issues are structured to give protection to the lender through a series of conditions on the borrower. In the case of a private placement the conditions tend to be more severe. Such types of constraints are accepted by the borrowers who

know it is easily possible to replace them in the near future, if some conditions are met.

This is not possible in the case of a public issue, where the contractual conditions, including the limitations to the activity of the borrower, are standardized, and it is therefore almost impossible to rework them at a later stage.

All these features make private debt placement an interesting source of financing and fill a particular niche in the corporate debt market, namely, loans to small- and medium-sized firms.

The target firms for private placement are those who face the highest costs in joining a public issue, which require detailed analysis and often require specialized, flexible loan arrangements. Even if optimal for small and medium companies, private placement is sometimes also used by large firms.

There are also some disadvantages, and a private placement does not come at no cost. First of all, the lenders ask for a higher interest rate, to compensate for the high illiquidity of the assets.

It is difficult to generalize about the differences in interest rates between private placements and public issues, but a typical differential is on the order of 50 basis points.

Another type of private loan is the project finance, which is linked to the outcome of a particular project and that minimizes the exposure of the parent. Such a loan is a signature product of large international banks.

The debt is supported by the project and not directly by the company. Anyway the debt ratios are usually very high because the loan is also supported by other assets and guarantees provided by customers or third parts.

The variability of debt is linked to the fact that two projects are hardly very similar. However, there are some common features that can be summarized and that define the nature of project finance debt.

First of all, the project is usually established as a separate company. The contractors and plant managers acquire majority of project shares, bearing the related risk. Also the project company signs a series of complex contracts distributing risk among the agents involved.

There is usually governmental agreement on providing the necessary permits and allowing the purchase of foreign currency, among other things. The governmental help, combined to the contractual bounds, allows to raise the capital for the project in the form of bank loans, or private placement.

Project finance is widely used in developing countries to fund power, telecommunication, and transportation projects, but it is also used in the major industrialized countries.

Another convenient use of it is for funding power plants, like electric utility companies. If such a company needs a new plant for feeding energy to another industrial plant, the latter can be a convenient incentive to the bank to lend.

In fact, the existence of a receiving plan guarantees that the energy produced in the coming plant will be fully employed and generate a revenue stream. Banks are then happy to lend a consistent percent of the cost of the project because they know

that the cash flows associated to it are free of the most common risks affecting normal businesses.

One should however not ignore the regulatory implications involved in such a strategy. For example, usually the government sets the fees for energy supply to the public, therefore bounding the potential revenues.

The aim is to set charges that allow the plant to recover its cost of capital. The problem is that the cost of capital is not easily measured and is a natural focus for argument in regulatory hearings.

The accounting solution is to roll the cost of capital into the contract price at the time of sale of electric power to a utility, so to make the pass-through to customers less controversial.

Given that the value of the bond is strictly related to the creditworthiness of the issuing institution, sometimes the contract provides protective (restrictive) covenants that restrict the issuer from doing things that would make it less creditworthy.

An irresponsible behavior from the issuer in fact would greatly lower the value of the bond in the secondary market, with an increased probability of default in meeting both interest and principal obligations.

In some cases, the protective covenants may require the assigned trustee to insure the property put as collateral for the bond issue, or it may require that the collateral be well kept.

The protective covenants are set as to compromise between the freedom of the issuer and the need of protection of the buyer. Issuers in fact want to pay the least possible interest and have freedom.

On the other hand, the bond buyers would like to earn the highest possible interest given restrictions on the operations of the issuer, in order to maintain its creditworthiness and protect their investment.

In practice both make a step towards each other agreeing on a fair yield which is inversely related to the level of protection guaranteed to the buyer. As a consequence, the more protection, the less yield, and vice versa. This is consistent with general risk-return financial theories, stating that the greater the risk of the security, the greater its yield must be to attract investors.

Sometimes a company decides to repay part of the issue before maturity. In order to do so, it may collect regular payments into a bucket that is called sinking fund. If the payment is in the form of cash, the trustee selects bonds by lottery and uses the cash to redeem them at their face value.

Regulatory provisions around the world generally state that a company should keep a compulsory sinking fund, but also optional funds are possible if the company decides to satisfy them.

In case of low quality issues, if repayment starts after an adequate period of allocating cash in the fund, the money should be sufficient to redeem the entire issue in equal installments over the life of the bond. High quality bonds on the other hand require a large payment at maturity on top of the instalments paid from the fund.

The sinking fund is an important part of the lending agreement, because in case the company is not able to put money in the fund, the lender is entitled to demand the money back.

When companies are allowed to repurchase bonds in the market, the sinking fund becomes meaningless to give a picture of the solvency of the firm. The financial distress in fact makes the cost of repurchasing debt much lower.

Sometimes corporate bonds include call provisions. A call option attached to a bond allows the company to pay back the debt earlier than maturity. It is sometimes the case, when companies have periods of extra cash.

On the other hand, a puttable bond can be retracted giving the lender the option to ask for early repayment. There are also extendable bonds, that give the investors the option to extend the bond's maturity.

As for the standard options on equity, there are several conditions that make them very attractive. For example, if interest rates fall and bond prices rise, the option to buy back the bond at a fixed price can be very attractive.

It is possible in fact for the company to buy the bond back, and issue a new one with higher price and lower interest rate, making it costless to raise the debt capital.

The choice of the right timing in calling back a bond is a crucial task for a financial manager. Recall that the company aims at maximizing the value of its shares, which translates into minimizing the value of the bond.

As a consequence, the company should never call the bond if its market value is less than the call price. In this case in fact, the exercise of the option would just give an advantage to the bondholders.

So the company should call the bond when the market value is higher than the call price. The investors on the other hand know that the company could call the bond at some point.

It follows that, given the information that the bond will be called as soon as it is worth more than the call price, no investor will accept to pay more than the call price for the bond.

As a consequence of investors' behavior the price of the bond could therefore reach the call price, without going above it. This is the reason why the rule says that a company should recall a bond when, and only when, the market price reaches the call price.

Regarding the relationship between the price of a straight bond and the price of a callable bond with the same features, consider that, if the value of the straight bond is very low it is unlikely that the company will ever wish to call the bonds.

It follows that the value of the callable bond must be very similar to that of the straight bond. On the other hand, if the value of the bond is such to give incentive for recalling it, the value of the callable bond will be slightly less than that of the straight bond.

In case the trend of interest rates is declining, the price of the straight bond will proportionally rise, but there will be no investor willing to pay more than the call price for the callable bond.

It follows that the benefits of a call option on the bond come at some cost. The consequence of making the bond callable is a lower issue price, but still companies embed callable features in their bonds.

This is mainly due to the number of restrictions usually put in place by the indenture of the bond issue. The restrictions are accepted by the companies as long as there is a way out from them. The call provision provides the escape route.

Recall that puttable bonds provide an investor with the option to demand early repayment. The existence of such an option is justified by the uncertainty about every action that the company may take, that cannot be anticipated in the indenture.

Some of the actions in fact could harm the bondholder by reducing the value of the bond. In this case the bondholder can demand for early repayment in order to escape the consequences of the issuer's behavior.

All investors know there is some risk underlying a corporate bond. It is normal that they make sure the issuer behaves properly in order to limit the risk. They don't want it to gamble with their money or to take unreasonable risks.

It is therefore very typical for bond indentures to include restrictive covenants, meant as provisions to prevent the moral hazard of the issuer who may try to purposely increase the value of the default option.

A new bond issue always affects the original bondholders by increasing the ratio of senior debt to company value. The point is that original bondholders would be happy if the company issues common stock simultaneously to the new bonds, in order to keep the ratio fixed.

As a consequence, often the indenture states that the company can issue more senior debt only at the condition of keeping the debt to company value fixed, adjusting it within a specific limit.

The situation of the subordinated bond issues is obviously not of any interest for the senior bondholders given that the subordinated lender does not get any money until the senior bondholders have been paid in full.

The subordinated bonds are therefore similar to equity, from the point of view of the senior bondholders, and they would be happy to see an issue of either. On the other hand, the holders of subordinated bonds care about the proportion of total debt which is senior, therefore coming before them in case of early repayment. This is why in case of a subordinated debt issue, the indenture generally provides restriction on new issue of both total debt and senior debt.

In general, both senior and junior bondholders care about the company issuing more secured debt. This is why an issue of mortgage bonds often imposes a limit on the amount of secured debt.

Another type of restriction involves leasing. It is possible in fact for a borrowing company to buy an asset not only by borrowing the needed money but also through entering a long-term agreement to rent or lease it. From the point of view of bondholders, this is equivalent to an issue of secured debt. This is why the indentures also include limitations on leasing.

Recall that the value of a financial option is affected by dividend payments made on the underlying stock. If the company pays out large dividends to its shareholders the cash dries out and should be replaced by an issue of stock.

If this does not happen, their assets covering the debt are reduced. This worsens the position of the bondholders, and that is why many bond issues restrict the amount of dividends that the company may pay.

Historically, covenants have been widely used in the early 80s. But in the last 35 years the restrictions have been decreasing, and most institutions relaxed their requirements for lending to large public companies and accepted bonds with no such restrictions.

### 10.3.2 Loans Vs. Bonds

Large corporations raise the majority of funds through debt financing, reaching almost 95% of total external financing on market capitals in Europe, leaving only 5% to equity issuances.

Bond markets have become particularly attractive to both investors and companies, especially after the introduction of the common currency in Europe that enhanced the development of markets.

In parallel, the syndicated loan market has also developed, albeit more progressively, currently accounting for around one-third of borrowers' total public debt and equity financing.

Syndicated loans are the most viable financing alternative to bond issuance. In both cases firms can raise huge amount of capital, with maturities ranging from the medium to the long term.

When a company becomes very large, it tends to use only bond issuances and syndicated loans as a source of debt capital. The choice between the two methods of corporate financing is characterized by agency costs and asymmetric information.

The focus in syndicate borrowing has been put on the role of the banks in screening the borrowers. Financial intermediation is so focused on that given that screening comes at a cost for banks.

But such a cost also represents an opportunity that carry many advantages, in that the efforts banks put in lending to large firms get compensated by long lasting relationships, and a good amount of information acquired, as underlined by Boot and Thakor (2008).

The monitoring of borrowers becomes an unnecessary cost in the case of bond markets, where the investors can easily replicate the investment strategies of the monitoring investors, with major ease compared to the case of syndicate loans.

For this reason, banks can be the delegated monitors of depositors also in the syndicated loan market, where the uninformed lenders participating in the syndication delegate most of the screening and monitoring to an informed lender.

The flow of capital in the market is then primarily driven by bonds and bank loans, with private and public institutions using the funds to finance projects and support investments of all types.

From short-term to long-term investments, the range of possibilities for using the money raised is quite wide, and the money can cover a variety of needs including infrastructure development and corporate expansions.

While it is usually common to finance long-term debt capital needs with bond issuances and short-term needs with bank loans, in recent years, there has been a shift to the bond market as it offers liquidity, with lower costs and higher flexibility.

Access to bond markets is not so easy in that it involves high costs and some hurdles compared to bank loans. Aspiring companies must fulfill certain requirements and go through screening so that they can operate in the bond market.

Consider a company capable of using both funding sources and willing to finance the purchase of new machinery, a considerable large investment scheduled to pay off in 10 years.

The decision is on the CFO, who has to deliberate about the funding type to be used. This choice is mostly determined by the amount of capital needed, the cost of the operation, and the tenure involved.

Small and medium size enterprises tend to use the loan market almost for the total of their debt funding. Local banks are their main reference for financial support, and the providing of liquidity.

But there is a wide range of other banking services that is available to them on a daily basis. Eventually, banks engage in a long relationship with SMEs that beneficiates the latter whenever the need for capital arises.

When it comes to the agreement terms on a loan, such a small information asymmetry makes the deal more flexible. A bank loan often allows borrowers to pay off the loan partly or totally, at any time, with little or no warning.

The disadvantage of the system is that there are repayment charges that are directly related to the interest rates in the area of bank and firm operations, plus administrative fees that are charged for it.

The term of any loan can be easily manipulated by lenders that have the power to establish the conditions that mostly suit them. On the other hand, the borrowers are free to go to another lender if they are not happy with the terms offered.

The argument is very different on bond markets, where the company has to build a solid reputation in order to keep its credit score high and the yield it pays on the bonds low. It is mostly about communicating credit quality, which should determine the risk price of the investment.

The highly standardized terms and conditions on the bond indentures plus the public availability of the financial statement of the company make the information asymmetry issue very small in the case of bonds.

Standardisation plays an important role for companies. It enables the ability to reach a wider range of investors, contributes to lower the search costs and acknowledges liquidity.

There are operational costs involved in both borrowing from a bank and issuing bonds. However, there are differences between them that can be analyzed as follows. First of all, in the case of bonds, the expenses are decreasing in time.

It is the case in fact that entering the bond market might be rather difficult and expensive, but once the company is in the market, the costs of borrowing capital reduce significantly, especially from an administrative point of view.

The standardization of terms and conditions allow to reduce the expenses after the process for bond issuance has started. Borrowing from a bank on the other hand, implies being subject to the decision of the bank as well as dealing with sometimes uncertain conditions.

The amount of the money to be lent and the maturity of the agreement then become an important decision factor. The link about the corporate asset and liability is of primary importance for economic efficiency.

Syndicated loans are different from bilateral loans in that it is not issued by a single lender, but a group. The borrower is single, and lenders can be banks or any other type of financial institution.

The borrower gives to a leading bank the mandate to promote the loan to a group of potential institutions interested in financing the company. The lead arranger provides probable participants with a memorandum including borrower specific information.

In normal conditions, each lender is responsible for its share of the total loan, with no legal responsibility for the other participants. Syndicated loans lie somewhere between relationship loans and public debt. Sometimes in fact the lead bank may have some form of relationship with the borrower. But this is not likely to happen in case of a participation at a more junior level.

There have been developments in the syndicated loan market in the last decade, that made the distinction between bilateral loans and syndicated loans very clear. During the 90s for example the growth of the regulated secondary market supplied a lot of liquidity to the syndicated loan market.

In most recent years, syndicated loans rated by independent rating agencies have increased a lot, being another major factor for the establishment of a new standard. As proven by Armstrong (2003), the stronger secondary market activity, combined with independently rated syndicated loans, led to the recognition of these assets by institutional investors as an alternative investment to bonds.

The recent developments in volume, capacity to fund medium and long-term ventures, and the higher transparency of the contracts, have pushed the syndicated loan market to converge towards the corporate bond market, and further away from bilateral bank lending.

A long-term loan comes with several advantages. First of all, the company that has to raise the funds has access to a large number of lenders that can be interested in the deal. Moreover, each of these lenders may be willing to accept different terms for the loan.

Competition among lenders can lead to a discount on the interest rate or more flexibility in the repayment, which is something that cannot be obtained in the bond markets, where the conditions of yield and repayment are highly standardized.

Among the disadvantages of loans one should recall that many banks are not keen to issue loans to business at a fixed rate of interest for a long term. The borrower is then left with the only option to pay a floating rate that will fluctuate according to market conditions.

But bonds also have advantages, like the fact that the borrower has great certainty that the payment rate of the bond will not deviate over time. In case of a long-term loan, if the interest rate is floating or adjustable, the cost of the loan may rise suddenly. In addition, the baseline interest rate for bonds is often lower than for loans.

The main disadvantage of issuing bonds is that they have a very low flexibility. A company must issue the bonds according to very strict rules and regulations. Moreover, compared to a long-term loan, the conditions cannot be modified for any reason.

A company cannot generally modify the terms of a bond and the origination costs of a bond are often higher than those of a long-term loan, as the bond must be pitched to investors.

### 10.3.3 Leasing

A contract of lease sets an agreement between a user, called lessee and an owner, called lessor. The contract gives the user the right to use the asset owned by the lessor, in exchange of a periodic rental payment.

Leasing has some advantages compared to other forms of rental. First of all, the lessee does not commit any financial resources upfront. Assets that can be leased include real estate, durables, equipment and more.

The rental, which sometimes exceeds the purchase price of the asset, can be paid from revenue generated by its use, with a direct impact on the liquidity of the lessee. Lease instalments are exclusively material costs.

After some amount of payment is made, the user has the right to exercise a purchase option, that allows to acquire the leased asset at a convenient final price that represents the residual value of the asset.

In terms of general domestic economy, leasing opens many opportunities to consumers interested in state-of-art technology and expensive products not available otherwise, in that they are very expensive or impossible to acquire by loan arrangements.

There are also disadvantages in the practice of leasing. After all it is an expensive way of financing, in that the lessors want a return on their capital, while protecting themselves from any risk arising in collection of receivables.

Leasing is anyway a common and demanded form of rental, even if controversial under some aspects. For example, in less developed economies, the terms and conditions of the lease may generate inequality, with lessor's economic dominance and lessees signing contracts at unfavorable terms.

Depending on the country, sometimes leasing can also be undesirable because of taxation or for other fiscal reasons, depending on the taxation policy and restrictive legislation of the country.

Companies generally own fixed assets. However, it is the use of buildings and equipment that is important, not their ownership. In order to avoid the burden to raise enough capital to buy the premises, an alternative way to obtain the use of assets is by leasing.

The use of leasing is extensive in the health services industry, because of the high sophistication and cost of some types of equipment, and the extensive use of information technology.

Note that every lease transaction has two parties: the user of the leased asset is called the lessee, while the owner of the property, usually the manufacturer or a leasing company, is called the lessor.

A popular form of leasing is the operating lease, also called service lease. It is a type of leasing providing both financing and maintenance of the asset. This type of lease is typical for computers, office machines, cars, trucks and more.

Operating leases typically require the lessor to maintain and service the leased equipment, with the maintenance costs directly embedded in the lease payment. Operating leases are never fully amortized, and the payments required under the lease contract are not sufficient for the lessor to recover the full cost of the asset.

The lessor overcomes the issue because the length of the leasing is usually much shorter than the operating life of the asset, and the lessor can recover the costs by renewing the lease on it or reselling for an adequate price.

Leases sometimes contain a cancellation clause that allows the user to cancel the contract and return the asset before expiration of the lease. Such a clause helps the lessee in case the item becomes suddenly obsolete due to the development of improved technology.

The lease (rental) payments on operating leases can be structured in two different ways. Under conventional terms, fixed payments are made to the lessor periodically, usually monthly. The cost of the lease is therefore known and both the lessee and the lessor know how much money they are going to pay and gain.

Another type of structure is the procedure terms, under which the user pays a fixed amount each time the asset is used. In this case the cost to the lessee and return to the lessor are not known with some certainty but they depend on volume.

The second form of leasing is the financial lease, also called capital lease, which is generally quite different from operational lease. More specifically they are different under several aspects.

Financial leases do not provide for maintenance and the contracts are not cancelable. Moreover, the length of the lease normally coincides with the life of the asset, therefore being fully amortized.

In a typical financial lease, the lessee selects the item it requires and negotiates the price and delivery terms with the manufacturer. The leasing is then perfected through a lessor buying the equipment from the vendor and leasing it to the user.

The lessor benefits from full amortization of the investment plus a rate of return that is similar to the return to be paid on a secured term loan. A leasing contract is therefore very close to borrowing.

Loan secured agreements involve a lender receiving a series of constant payments comprehensive of capital repayment and interest payment. Lease payments are set up exactly the same way and the payments are just sufficient to return the full purchase price to the lessor plus a stated return on the lessor's investment.

The financial lease terminates with the transfer of ownership of the asset from the lessor to the lessee. In the specific case of a sale and leaseback, the user sells the asset to another party and simultaneously executes an agreement to lease the property back for a stated period under specific terms.

This is a way for the user to receive a quick lump sum payment for the sale of the asset, while then taking the obligation to use the same asset in return of a future series of lease payments to the buyer of the asset.

Nowadays leasing contracts are offered under a wide range of terms, so that the distinction between operating and financial lease is not as meaningful as it was decades ago. Therefore, in practice, leases often do not fit exactly into the operating lease or financial lease category but combine features of both.

The decision between buying and leasing is often based on the effects that taxes can play. For profit businesses, the full amount of each lease payment is a tax-deductible expense provided that the contract is recognized as a genuine lease.

A lease that complies with all of the requirements for taxable businesses is called a guideline, or tax-oriented, lease. In such a contract, the depreciation tax benefits accrue to the lessor and the payments made by the user are fully tax deductible.

If the lease does not meet the guidelines as stated by the regulation in the country where the deal takes place, only the implied interest portion of each lease payment is deductible by the lessee. By being the owner of the leased equipment, however, the lessee obtains the tax depreciation benefits.

In the United States, a tax-exempt lease differs from a conventional lease in that the interest part of the lease periodic payment is not taxable income; therefore it does not generate a tax liability for the lessor.

The rationale for this tax treatment is that the interest paid on most debt financing used by not-for-profit organizations is tax-exempt to the lender, and a lessor is actually a lender.

From the point of view of the financial statement, the lease payments are reported by the user as expense items on the income statement. In the case of a capital lease, the asset is depreciated every year, with the relative expense reported in the income statement as well.

However, under certain circumstances, the leasing payments can be taken off-balance sheet as can be shown by reporting the balance sheets of two hypothetical user companies.

Both parties involved in a lease evaluate it. The lessee on one side calculates the convenience of leasing an asset compared to buying it through financing. On the other hand, the lessor must decide what the lease payments must be to produce a rate of return consistent with the riskiness of the investment.

Among the two points of view, the most interesting is of course that of the lessee. Given the degree of uncertainty related to the choice between leasing and buying, complex decision models have been developed to solve the task.

Without even using these complicated models, a simple analysis combined with savvy judgment is enough to prevent entering into agreements that are not interesting for the business.

There are several steps in the evaluation of whether to undertake a lease agreement. For example, the firm needs to acquire the use of new equipment. The focus of the lease analysis is to understand whether to acquire the item by leasing or purchasing.

The next issue is how to finance the acquirement of the item, deciding between excess cash, issue of new equity, and leased. Recall that a lease is comparable to a loan in the sense that the business is required to make a specified series of payments and that failure to meet these payments could result in bankruptcy. It is therefore appropriate to compare leasing to debt financing, rather than equity financing.

Lease analysis can be better illustrated by using an example. Assume company Xmed is active in healthcare and necessitates a new equipment for cardio surgery. The machinery comes at a cost of 100,000 €.

If the machine is purchased, the bank would lend Xmed the needed 100,000 € at a rate of 6% per year, on a 2-year, simple interest loan. Also assume that Xmed could

depreciate the entire cost of the machine over 2 years for tax purposes, for an amount of \$50,000 in each year, and residual value zero after the 2 years.

If the tax rate is assumed to be flat at 33%, the annual depreciation produces an amount of tax savings equal to.

$$\text{Tax Savings} = 50,000 \times 0.33 = 16,500 \text{ €}.$$

The alternative to borrowing is leasing, and the company can lease for a yearly payment of

$$\frac{100,000 \times 0.06}{2} = 53,000 \text{ €}$$

In order for a decision to be made, the lease analysis goes through several steps. The first thing to do is to estimate the cash flows associated with borrowing and buying the assets.

Moreover, the cash flows associated to leasing the item must be calculated and a comparison must be made, in order to establish what method of acquisition involves the lower cost. It is good to show the cash flows from the buying option, given by:

	Cash flows if the company purchases (€)		
	Year 0	Year 1	Year 2
Equipment	(100,000)		
Loans	100,000		
Interest expenses		(6000)	(6000)
Tax shield		1980	1980
Principal			(100,000)
Tax savings from depreciation		16,500	16,500
Net cash flow	0	12,480	(87,520)

The cash flow statement shows that cash flows are positive at time zero and year 1 but negative in the second year. The cash flows associated with leasing, on the other hand, are given by.

	Cash flows if the company leases (€)		
	Year 0	Year 1	Year 2
Lease payment		(53,000)	(53,000)
Tax savings		17,490	17,490
Net cash flow		(35,510)	(35,510)

In both cases, a difference is made by how taxation affects the cash flows. Both methods of financing involve tax savings associated with interest expense, depreciation, and lease payments, as appropriate.

It is then possible to compare the stream of cash flows from buying with the stream of cash flows from leasing. To do that, a common discount rate is needed, and the best choice for it is the after-tax cost of debt. For Xmed such a rate is given by

$$\text{Discount rate} = 0.06 \times 0.33 = 4.02\%$$

The discount rate is needed to calculate the present value of cash flows for different financing options. By applying the calculated rate, the present value cost of buying is

$$PV_B = \frac{12,480}{1 + 0.0402} - \frac{87,520}{(1 + 0.0402)^2} = -68,888.40$$

and the present value cost of leasing to be

$$PV_B = -\frac{35,510}{1 + 0.0402} - \frac{35,510}{(1 + 0.0402)^2} = -66,956$$

In this case leasing is the best choice for Xmed, because it carries the lowest cost in terms of present value, and it is therefore the cheapest way of financing the asset. This simplified example shows the general approach used in lease analysis, and it also illustrates a concept that can simplify the cash flow estimation process.

## 10.4 Summary

Long-term financing provides the capital for the most expensive and important types of investment the firm can make. Fixed assets are in fact financed with borrowings at longer maturity, to match the potential life of the assets.

Every business starts from scratch and needs initial capital to function. The very first money (seed capital) is usually given by the entrepreneur himself and family or friends. But in order for the production to start, it is usually required that external people put additional capital, in the form of angel investors.

Angel investors are the first external source of funding for a start-up. The support of wealthy investors who are interested in businesses with high growth potential allows the firm to take off and make the first steps.

Venture capital comes after the angels, and it is usually structured in a form of pool of funds, to finance early-stage companies with an already structured idea and plan, but not able to make revenues yet.

Private equity is targeted to more mature types of business, where the financials are already good and show that the firm has started generating profits consistently, being ready for a more important investment.

Once the business has started working, through the intervention of intermediate levels like venture capital and private equity, the time usually comes for the firm to go public through an initial public offering.

Debt financing is the other side of capital structure. There are several types of debt financing, depending on the sources and the nature of the funds raised. Bonds and loans are together the whole of the financing for medium and large corporations.

It is important to understand the difference between loans and bonds in terms of the cost for the firm and the convenience for the management of capital structure.

Sometimes the two sources are mixed in order to achieve an optimal leverage at a convenient cost.

Leasing is another form of debt in that it entails loaning an asset against payment of a monthly fee on the value of it. As oppose as pure debt, leasing may lead to the final acquisition of the asset by the company.

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## Problems

1. What are angel investors and how can start-ups benefit from their support?
2. What are the main features of start-up firms that make them very attractive to early-stage funding providers?
3. Besides money, what other type of support do start-ups normally need?
4. What are venture capital firms and in what sense do they differ from angel investors?
5. What type of companies are normally targeted by venture capital?
6. Describe the process of obtaining funds from a venture capital.
7. What are the typical steps of venture capital funding for a start-up?
8. What is private equity and how does it differ from the other sources of early-stage funding?
9. What type of companies are normally targeted by private equity?
10. What are the main steps involved in the IPO process?
11. What are the costs involved in an IPO?
12. Explain the role of underwriters in the IPO process.
13. What are the types of debt sources normally available to the firm?
14. What are the differences between raising debt capital through bond issuances and raising debt capital through bank loans?
15. What is leasing and how does it differ from other debt sources?
16. What are the types of leasing available to the firm?

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