1. Introduction to law and corporate finance

Rolef de Weijs

1.1 Relevance of finance for lawyers
Much of the work of many lawyers is directly related to corporate finance. Lawyers in commercial and corporate practice often document, litigate and regulate issues related to the financing of companies and their activities. Agreements relating to the financing of a company are in essence agreements on who will receive how much in case of success and who will receive how much in case of failure.

Corporate finance has its own dynamics and has developed into a separate field of professionals and a separate branch of academic research. Legal education and the skills possessed by commercial and corporate lawyers have not kept up with the increasing financialisation of our world. The result is not only that lawyers have increasing difficulties in providing expert advice and guidance on financial transactions, but also that the law as such is facing increasing difficulties in regulating and providing meaningful boundaries to financialisation and potentially aggressive and/or value destructing finance practices.

Corporate finance research and academic writing in turn also skip over many issues relevant in the daily practice of documenting, litigating and regulating the financing of companies and their activities. In part this is due to the fact that the law is much more fragmented along the lines of different jurisdictions than the more truly international field of corporate finance. Another factor is that frequently made assumptions within corporate finance, like

1 This chapter is an adapted and expanded version of the introductory chapter to R.J. de Weijs (ed.), Grenzen aan financieringsvrijheid (Kluwer 2020).
perfect markets and fully adjusting creditors, prevent a conceptualisation of what actually goes on in the legal arena.

This book explores the strong interrelation between law and corporate finance. It provides an introduction to corporate finance as well as more detailed law and finance analyses and assessments of standard finance patterns.

1.2 INTRODUCTION OF THE LIMITED LIABILITY COMPANY

Corporate finance is about making investment decisions and the financing of companies and their activities. Companies mostly take the form of a limited liability company. In 1911, the president of Columbia University praised the limited liability company:

the limited liability corporation is the greatest single discovery of modern times . . . Even steam and electricity are far less important than the limited liability corporation, and they would be reduced to comparative impotence without it.

the limited liability company is awarded legal personality and has developed into the dominant life form in commercial life. The limited liability company allows investors to invest in a new project without putting at stake their previously accumulated wealth. Investors become shareholders, and they can reap the profits in case of success. Large transactions mostly take place between limited liability companies. In addition, most natural persons find themselves working as an employee of a limited liability company.

The term limited liability is, however, somewhat confusing. The company itself is fully liable for all its debts. The investors in their capacity as shareholders are not liable at all. Shareholders only stand to lose what they invested in the limited liability company.

2 As will be discussed in Chapter 2 of this book, basic corporate finance theory holds that capital structure does not matter under perfect markets. A clear application of this line of reasoning can be found at the outset of R.A. Brealey, S.C. Meyers and F. Allen, Principles of Corporate Finance (McGraw Hill Education 2020) 10. They write as to their book: ‘Most of this book is devoted to financial policies that increase value. None of these policies requires gallops over the weak and helpless. In most instances, little conflict arises between doing well (maximizing value) and doing good. Profitable firms are those with satisfied customers and loyal employees; firms with dissatisfied customers and a disgruntled workforce will probably end up with declining profits and a low stock price’. This quote and more generally this line of reasoning do not mean that corporate finance textbooks are blind to imperfections. The clearest exception to perfect capital markets is the effect of taxes, where interest payments are tax deductible whereas dividend payments are not. All corporate finance textbooks invariably include analyses as to the calculation of this tax benefit. Furthermore, leading corporate finance textbooks typically also discuss other imperfections such as incentives for overinvestment and risk shifting. See for clear and easy examples, Brealey, Meyers and Allen, Principles of Corporate Finance (2020), chapter 18-3. See also J. Berk and P. Demarzo, Corporate Finance (Pearson 2017), chapter 16.5 ‘Exploiting Debt Holders: The Agency Costs of Leverage’. See also A. Damodaran, Applied Corporate Finance (Wiley 2015) 316–18, for a discussion of the agency costs of debt in three settings, that is, risky projects, subsequent financing and dividends/stock repurchases. Many standard finance patterns which provide clear manifestations of imperfections are however not included in these standard corporate finance textbooks. See, for an overview with references to what extent corporate finance textbooks do tackle these issues, §1.4 below.

Shareholders do not incur any direct liability for the company’s debt.\(^4\) Also managers as the persons actually representing the limited liability company do not incur any liability.\(^5\)

1.3 CORPORATE FINANCE INHERENTLY A MULTI-PARTY SETTING

Although the limited liability company is commonly seen as a legal form through which shareholders can make investments without risking losing everything, the limited liability company is usually not financed by its shareholders alone. The characteristic of the limited liability company of having separate legal personality enables it to borrow money from third parties to make investments and to pay for such investments as well as for its running expenses. The company and its shareholders are to a large extent free in determining the way the company is being financed, or in short in determining the capital structure of the company.\(^6\) Although there are many technical and popular terms to describe the different modalities of finance, there are in essence only two types of finance. Phrased slightly different: There are only two flavours of finance. Finance provided to a company qualifies either as debt or as equity. Debt and equity also find themselves in a ying-yang-like relation. One begins where the other ends. This intricate relation becomes even clearer when one looks at attempts to properly define equity and debt. Equity is then quickly defined as something that is not debt or as ‘the residual interest in the assets of an entity after deducting all of its liabilities’.\(^7\) This does not always help in delineating the respective scope of debt and equity since the definition of one includes the other.

\(^4\) Ferran and Ho make the terminology work as follows (E. Ferran and L.C. Ho, *Principles of Corporate Finance Law* (OUP 2014) 15): ‘Shareholders in a company limited by shares are liable to contribute only a limited amount to its assets’.

\(^5\) Lawyers normally go to great lengths to be as accurate as possible in their choice of words. The term limited liability, however, seems to have escaped such scrutiny. This is the case in most languages where the limited liability company is used as the main form of investment. In England the technical term Ltd is used to refer to a limited company. The Germans speak of the Gesellschaft mit beschränkter Haftung (GmbH), the French of Société à Responsabilité Limitée (Sarl) and the Dutch speak of the Besloten Vennootschap met beperkte aansprakelijkheid (BV). The Japanese use the term Yugen Kaisha (有限会社), which can be translated as a ‘having limitations company’. Despite the widespread use of the term limited liability as a workable shorthand, it should be realised that the company is fully liable, the investors are not liable, and in the end therefore nobody is ‘limitedly liable’.

\(^6\) See on the capital structure of companies L. Gulliver and J. Payne, *Corporate Finance Law, Principles and Policy* (Hart Publishing 2020), chapter 2, 55: ‘A company’s capital structure comprises its mix of debt and equity’. Apart from the company’s capital structure, they also discuss ‘sources of finance’ (chapter 2, 9) where they identify three ‘basic sources’ of finance being ‘share issues, debt and retained earnings’. See similarly Ferran and Ho with the same ‘three ways to finance’ (Ferran and Ho, *Principles of Corporate Finance Law* (2014) 42). Retained earnings will accumulate to equity, and these therefore do not result in a different or third ‘flavor of finance’. See Gulliver and Payne, *Corporate Finance Law, Principles and Policy* (2020), chapter 2 for an overview of financing options. See further on the capital structure of companies J. Barneveld, *Financiering en vermogensonttrekking door aandeelhouders* (Kluwer 2014), chapter 1, 2 and 3 and more specifically §1.2.1.

\(^7\) See the IFRIC 2017 Update. The IFRIC Update is a summary of the decisions reached by the IFRS Interpretations Committee. The struggle to provide a definition of equity without reference to debt continues, where IFRS adds: ‘Consequently, a financial instrument that meets the definition of a financial liability cannot meet the definition of an equity instrument’.
As a starting point, shareholders provide equity and creditors provide debt. The return on equity is dependent on the success of the investment, whereas debt typically provides for an entitlement to a return independent of the success of the investment. The demarcation between debt and equity is blurred by hybrid forms of finance, such as preference shares, subordinated loans, convertible loans which can be turned into shares or floating rate notes. In essence, these are all variations and combinations of the two basic forms of debt and equity.

In turn, for both legal analyses and corporate finance purposes, one should distinguish between different types of debt providers, also referred to as creditors. In discussing the terms debt and creditor, one should be well aware of the perspective one takes on the relation. Credit extended by a creditor shows up as an outstanding debt on the balance of the borrower. From a legal perspective the clearest distinction within the category of creditors is the distinction between secured and unsecured creditors. Examples of security rights are a right of pledge, a right of mortgage and in common law jurisdictions floating and fixed charges. Secured creditors take priority as to the proceeds of the encumbered assets. From a corporate finance perspective, the most important distinction is between interest bearing debt and non-interest bearing debt. Financial creditors will typically demand and receive interest on the credit they extend. Trade creditors and consumers making down payments typically do not receive interest. Typically the positions of being a secured creditor and provider of interest bearing debt go hand in hand. Banks will always demand interest and typically are also secured creditors. Trade creditors typically do not receive interest and often do not have security rights. For the sake of easy conceptualisation, this book and the financial mindmap (see §1.5.1 below) used throughout this book take these positions as a starting point and assume that creditors extending interest bearing debt are secured and that creditors providing non-interest bearing debt are unsecured. Unless explicitly indicated otherwise, the book therefore conceptualises basic capital structures with shareholders, secured lenders as providers of interest bearing debt and unsecured creditors as providers of non-interest bearing debt.

8 There are convertible loans that can be turned into equity if the company performs poorly, and there are loans that can be turned into equity if the company does very well.
10 See for an outline of ‘hybrid securities’, Ferran and Ho, Principles of Corporate Finance Law (2014) 50 ff. See for an overview of ‘hybrids’, Gulliver and Payne, Corporate Finance Law, 50–52: ‘The category of hybrids therefore comprises a number of different devices, which may be utilized for a variety of reasons, the uniting factor being that these securities combine both debt and equity features’.
11 It is well acknowledged that in real commercial life, there are many different positions where non-interest bearing creditors do have some kind of security rights and where financial creditors are lending on an unsecured basis. A clear example of non-interest bearing creditors having some kind of security rights is trade creditors making deliveries under Retention of Title, where they do retain a right in the assets until full payment. There are also important exceptions to the basic starting point that financial creditors are lending on a secured basis. The most important one is formed by unsecured bond holders. Bond holders will typically receive interest and are often, but not necessarily, unsecured. See on the different types of secured and unsecured bonds as well as the terminology used to describe these Brealey, Meyers and Allen, Principles of Corporate Finance (2020), chapter 24, ‘The Many Different Kinds of Debt’. A second possibly more surprising example is formed by large companies that can sometimes borrow on an unsecured basis, but with a positive pledge clause. Lenders then rely on the promise of the borrower to provide security rights to the lender following a request to do so (positive pledge). This is often combined with a negative pledge, containing the agreement not to grant security rights to other creditors.
The law enables parties to create an endless variety of finance agreements. A special feature of such agreements is that they are as a starting point a two-party contract between the company and its counterpart. The company can contract with a bank for a bank loan. Because of the separate legal personality, such a contract is concluded between the bank and the company. The shareholders of the company are not a party to such a contract. The company can also obtain trade credit, which again is a two-party contract between the company and its supplier. Also, the arrangement between a company and its shareholder is a two-party relation (where of course it is quite common that there is not only one shareholder, but that there are actually many shareholders). Creditors are not a party to the agreements between the shareholder(s) and the company.

A key feature of corporate finance is that the different positions of parties financing the company are strongly related and are also communicating vessels. Any corporate finance agreement the company enters into with one party financing the company directly affects the position of other financiers. As to healthy companies, all value that does not need to be paid to creditors accumulates to shareholders. In case of insolvent companies, value allocation to secured creditors reduces the pay out to unsecured creditors. A dividend pay out to shareholders always reduces the equity position of the company, which in turn weakens the position of creditors, especially unsecured creditors: In some case only to an almost negligible extent, sometimes in a one-on-one relation and most commonly to a certain extent by raising the risk profile. Also the creation of security rights has a direct impact on the position of unsecured creditors. At the same time, attracting secured credit will almost always improve the position of the shareholders of the company. If not, shareholders would seek to prevent the company from attracting secured credit and secured credit would not be so widespread.

1.4 STRUCTURE OF THIS BOOK AND CONTRIBUTION TO THE FIELDS OF LAW AND FINANCE

This book is entitled Corporate Finance for Lawyers: Understanding the Power Balance Between Shareholders, Secured Lenders and Unsecured Creditors. It deals with the realities of corporate finance and how basic two-party agreements affect parties outside of this relation. The different chapters analyse various standard finance patterns. As to these standard finance patterns, this book seeks to provide a clear analysis of the corporate finance dynamics and how the law in different jurisdictions approaches the clash of interests between the main constituents of a company’s capital structure, namely shareholders, secured lenders and unsecured creditors.

The structure of this book is as follows.

In Chapter 2, Rolef de Weijs provides an introduction to corporate finance and finance theory. He analyses to what extent value can be created for the company and/or its shareholders by changing the relative portions of debt and equity. This chapter also serves as an introduction to the other chapters.

In Chapter 3, Joost de Vries and Rolef de Weijs provide an easy introduction to company valuation. They explain the difference between the accounting concept of equity on the one hand and the Equity Value of a company. They introduce different valuation methods, most notably EBITDA-multiples and the discounted cash flow method. In this chapter, also the relevance of the distinction between interest bearing debt and non-interest bearing debt for valuation...
purposes will be discussed. Understanding company valuation provides a good understanding of why financing by means of non-interest bearing debt is attractive for shareholders.

In Chapter 4, Joost de Vries provides an in-depth analysis of the discounted cash flow analysis as the dominant valuation method.

In Chapter 5, Rolef de Weijs analyses the dynamics of secured credit as part of the overall corporate finance structure of a company, most notably how the positions of secured creditors and shareholders are closely intertwined. The chapter thereby provides a more relevant framework for analysing the effects of secured credit than presenting the issue of secured credit only as a potential conflict between secured and unsecured creditors.

In Chapter 6, Rolef de Weijs analyses hybrid finance where the shareholder also assumes the role of creditor. The central question is how the finance dynamics are changed if the shareholder finances the company by means of loans and possibly secured shareholder loans and how different legal systems have responded to such hybrid positions.

In Chapter 7, Aart Jonkers analyses financing by means of shareholder guarantees as a way of financing by means of risk evasive capital. The financing by means of shareholder guarantees is an exception to the basic premise that shareholders are not liable for the company’s debt. By providing a shareholder guarantee, the veil of limited liability is perforated selectively by means of a contract.

In Chapter 8, Aart Jonkers and Rolef de Weijs discuss the basic elements of a reorganisation procedure. As will be seen, the quest for more flexible reorganisation procedures has significant impact on the relative position of shareholders, secured lenders and unsecured creditors both inside and outside of insolvency.

The book captures standard finance patterns, from both a legal and a finance perspective. The book aims to provide a meaningful contribution to both the field of law and the field of finance through its combined approach.

Legal rules regulate behaviour. In understanding legal rules and reflecting on the quality thereof, it is important to also have insight into the behaviour relevant for the field. In the field of commercial and corporate law, this behaviour can to a large extent be understood in terms of corporate finance. By exploring the world of finance and by including in-depth analyses of the corporate finance dynamics of legal rules, the book seeks to contribute to a better understanding of the working and effects of legal rules and assist in a reflection on the quality of these rules. It is hoped that this approach of legal analyses combined with in-depth analysis of corporate finance can form an important contribution to the field of law. The specific relevance of corporate finance dynamics for understanding and evaluating legal rules is the essence of this book.

Where law books commonly do little to explicitly explore the world of finance, corporate finance books often skip over standard finance patterns. This book explores six finance patterns that are important for lawyers in their daily commercial or corporate law practice, but which patterns are not explored in depth in leading corporate finance textbooks. The lack of conceptualisation in corporate finance textbooks of these issues highly relevant in daily commercial and corporate legal practice has provided an additional motivation to include these issues in the book and to provide an assessment of the corporate dynamics as well as the legal rules in place or to flag the lack thereof. Since many lawyers will not be familiar with how corporate finance books cover these topics or do not cover them, the six topics important for lawyers but commonly receiving little or no attention in these corporate finance books are briefly highlighted.
i) **Insolvent companies**: The essence of the corporate form from a legal perspective is the limited liability. The corporate finance effect thereof is that shareholders are entitled to the full upside potential but have a limited downside. This second element of a limited downside manifests itself most notably in the case of insolvent companies. Somewhat remarkably, most corporate finance textbooks do not explicitly deal with insolvent companies or discuss the concept of negative equity.\(^{12}\)

ii) **The use of non-interest bearing debt as a cheap way of finance**: One of the main questions of corporate finance is the valuation of companies. Interest bearing debt and non-interest bearing debt have very different effects on company valuation.\(^{13}\) Although touched upon in some textbooks,\(^ {14}\) commonly the use of non-interest bearing debt receives no or only scant attention in leading corporate finance books, notwithstanding its prevalence in corporate finance practice.\(^ {15}\) In addition, its widespread use has also led to European legislation seeking to curb the practice of large companies financing their activities with non-interest bearing credit from small suppliers.\(^ {16}\)

iii) **The different uses of secured credit ranging from investment to distributions to shareholders**: Secured credit is omnipresent and is commonly justified by the reasoning that secured credit fosters investment. The clearest effect of secured credit in insolvency

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12 The concept of negative equity is missing in most leading textbooks. Brealey, Meyers and Allen, *Principles of Corporate Finance* (2020), chapter 32-4, devote six pages explicitly to US bankruptcy law. They evade the possibility or the concept of negative equity. They write: ‘Whenever a payment is due to creditors, management checks the value of the equity. If the value is positive, the firm makes the payment (if necessary, raising the cash by an issue of shares). If the equity is valueless, the firm defaults on its debt and files for bankruptcy’. Equity itself will however always have a specific number, which only in very rare cases will be exactly zero. As to insolvent companies, equity will be negative. Therefore it is better to say that the equity stake or the shares have no value anymore since equity is zero or negative. From an accounting perspective, equity cannot be valueless. Berk and DeMarzo, *Corporate Finance* (2017) 585, also do not work with negative equity as a balance sheet concept and immediately jump to the value of debt and equity. In a downside scenario with a debt of 100 and a value of an investment of 80, they simply put the value of debt at 80 and the equity value at 0. Hereby they skip the accounting concept of negative equity, which would be at –20 in their example. Damodaran, *Applied Corporate Finance* (2015) 76–82, only discusses default in general terms of risk.

13 See for the relevance of the concept of non-interest bearing debt as part of company valuation §3.3.2 and §3.6. The relevance of the distinction is that non-interest bearing debt is not deducted from the enterprise value as part of net debt in order to arrive at the equity value, whereas interest bearing debt is.

14 See for a correct analysis of the distinction between interest bearing debt and non-interest bearing debt as part of non-distressed valuation, A.N. Labohm, W.M. Veerman and P.M. van der Zanden, *Waardering van Ondernemingen* (Paris Publisher 2017), §6.3. Here they only deduct interest bearing debt from the Enterprise Value to arrive at the Equity Value. See similarly S.W. van den Berg, W.G.M. Holterman and H.T. Haanappel, ‘De reorganisatiewaarde onder de WHOA’ 2019 (10) Tvi.


is often that all value flows to secured creditors and that unsecured creditors receive nothing or hardly anything. Therefore the issue of secured credit is often approached as a battle over value between secured and unsecured creditors. The ways **shareholders** benefit from a company attracting secured finance to make investments is undertheorised. In addition, there is a lack of analyses of how secured credit is actually being used. From a legal and a policy perspective, this is problematic since the actual use of secured credit may be very different from its basic justification, in the sense that secured credit might commonly be used not to make investments, but to make distributions to shareholders.\(^\text{17}\)

iv) **Financing by means of shareholder loans where the equity provider is also a creditor:** There are only two basic types of finance, namely debt and equity. In legal practice these are often combined in the sense that shareholders also become creditors by extending loans. Although the question of what happens to the corporate finance dynamics if debt and equity are combined is exciting and highly relevant for the positions of shareholders, secured creditors and unsecured creditors, standard corporate finance books commonly do not address the issue of shareholder loans.\(^\text{18}\)

v) **Financing by means of shareholder guarantees:** Guarantees are very common in the world of corporate finance.\(^\text{19}\) Guarantees by shareholders are de facto a selective and voluntary perforation of the shield of limited liability. Guarantees are normally provided out of self-interest of the guarantor and form an alternative way of financing companies.

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17 In their 2006 version Brealey, Meyers and Allen, *Principles of Corporate Finance* (2020) 415, separated pay out policy from the question of where the cash actually comes from. They wrote: ‘We must isolate pay out policy from other financial decisions’. This is understandable if one wants to understand the effects of pay out policy but leaves little room for conceptualising more contentious uses of secured credit. In their 2020 version, they have connected pay out policy to the other finance questions, but still treat dividends as paying out surplus cash and not so much as attracting secured credit in order to generate cash. They write (Brealey, Meyers and Allen, *Principles of Corporate Finance* (2020) 425): ‘Before deciding to pay dividends or repurchase shares, the manager asks a series of questions. First, is the business generating positive free cash flow after making all investments with positive NPVs? Is that positive free cash flow likely to continue? Second, is the firm’s debt ratio prudent? If the ratio is too high, paying down debt usually takes priority. Third, are the company’s holdings of cash a sufficient cushion for unexpected setbacks and a sufficient war chest for unexpected opportunities? If the answer to all three questions is yes, then the cash is truly surplus. If a corporation has surplus cash, it’s best to pay the cash back to shareholders. Paying out surplus cash reassures shareholders that the cash will not be wasted on questionable investments or consumed by perks or excessive compensation’. They do not discuss the phenomenon of dividend recaps. See Chapter 5 of this book for a more elaborate discussion. See similarly Berk and DeMarzo, *Corporate Finance* (2017) 17.5, who analyse the question in terms of pay out versus retention of cash and who also do not discuss the dividend recap and secured lending for the purpose of making distributions. See also similarly Damodaran, *Applied Corporate Finance* (2015) 317, who discusses the dilemma of using a large cash reserve to make dividend payments or to make distributions.

18 Analyses in corporate finance textbooks are mostly limited to hybrid products such as convertible bonds but do not discuss the phenomenon of one person holding both an equity stake and a debt stake as creditor. See on the hybrid products, Brealey, Meyers and Allen, *Principles of Corporate Finance* (2020), chapter 24-2, ‘Convertible Securities and Some Unusual Bonds’, 641. These US-oriented textbooks also do not discuss the US doctrine of Equitable Subordination, under which US courts can subordinate a loan and treat it as equity.

19 See Chapter 7 of this book on the practice of financing by means of guarantees.
Financing by means of shareholder guarantees can be seen as financing by means of risk evasive capital rather than risk bearing. Notwithstanding its prevalence, the topic of shareholder guarantees is however typically not addressed in leading corporate finance textbooks.20

vi) **Different value allocation principles in case of reorganisations:** Corporate reorganisation by means of reorganisation procedures is in essence a reshuffling of the capital structure of companies.21 It forms an alternative way of dealing with insolvency to liquidation. Where traditional liquidation-oriented insolvency procedures provide an answer to the problem of insolvency via the asset side of the balance sheet (left side) by means of selling the assets, reorganisation procedures provide a solution via the liability side of the balance sheet (right side) by means of implementing a new capital structure.22 Corporate reorganisation is thereby an important phenomenon for both lawyers and finance specialists. In addition, the rights of shareholders, secured lenders and unsecured creditors in a reorganisation procedure also affect their position and the power balance between these parties outside financial distress, the so-called ex ante effects.

1.5 METHODS USED: FINANCIAL MINDMAP, COMPARATIVE LAW AND EXPECTED VALUE ANALYSIS

The book combines several methods that deserve further clarification in this introductory chapter. The book uses first of all the financial mindmap as a tool to explain finance. Secondly, the book is comparative in nature and applies the functional approach of comparative law analyses. Thirdly, the book uses the concept of expected monetary value analyses to analyse investment decisions and to analyse if, and if so to what extent, risks are being externalised.

1.5.1 Financial Mindmap

The book uses the financial mindmap throughout. This tool has been developed in order to enable an easy conceptualisation of the dynamics of corporate finance by using colours and different size blocks to depict the different positions in a balance sheet and its related profit

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21 See Chapter 8 of this book on reorganisation procedures.

22 See for a nice short description of the different possibilities of dealing with insolvency, Brealey and Meyers and Allen, *Principles of Corporate Finance* (2020) 880. They write: ‘If the assets of the firm can be put to better use elsewhere, the firm is liquidated and the proceeds are used to pay off the creditors; otherwise the creditors become the new owners and the firm continues to operate’. This short hand description is very workable. Given the scope of their work they understandably do not address the complex issue of different priority rules and their ex ante effects. They do mention (Brealey, Meyers and Allen, *Principles of Corporate Finance* (2020)) possible exceptions to strict priority rules, which they refer to as consolation prizes for lower ranking stakeholders. In their 2006 work, they wrote that such consolation prizes were common (2016, 924). In their 2020 work, they signal a change in bankruptcy practice and write (2020, 881): ‘As creditors have gained more influence, shareholders of the bankrupt firms have received fewer and fewer crumbs. In recent years, the court has faithfully observed the pecking order in about 90% of Chapter 11 settlements’. Brealey, Meyers and Allen do include some comparative analyses of UK and French bankruptcy laws (Brealey, Meyers and Allen, *Principles of Corporate Finance* (2020) 882, 883).
and loss account. Figure 1.1 is a visual\textsuperscript{23} using the financial mindmap depicting both the balance sheet and its related profit and loss account.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Example of visual based on financial mindmap}
\end{figure}

The left side of the balance sheet simply lists the assets that the company owns. The right side of the balance sheet shows how these assets are being financed. The colours of the financial mindmap are intuitive.

Since ownership of assets is generally regarded as positive, all assets are depicted in green. The shades of green indicate the duration of assets. Fixed assets, assumed to be used by the company for longer than a year, are dark green. Current assets (< 1 year) are medium green. And cash, which can be considered to be the most fluid asset, is light green.

The liability side of the balance sheet uses three different colours. Equity, the blue block in the balance sheet, is nothing more than the difference between the book value of the assets and the total nominal value of the outstanding debts. Equity thereby is an accounting concept and is residual. Equity in the accounting balance sheet basically answers the hypothetical question of how much would remain for the shareholders if all the assets were sold for their book value and the proceeds were used to pay all creditors in full. One can therefore also see equity as the ‘what-if item’. Equity is therefore also not something one can actually find in a company. There is no drawer or vault in the company safely containing the equity of the company. To the extent that the company has real money in a drawer or a vault, this needs to be accounted for on the asset side under the light green balance sheet item cash. Since equity is only an accounting equation and not something to be found in the company, the colour of air is used to represent equity: Blue.

Interest bearing debt is red which is based upon the expression ‘being in the red’ when owing money to the bank. Non-interest bearing debts are liabilities that weigh less on the company than red blocks since no interest payments are involved. And therefore the colour orange is appropriate.

The profit and loss account (column to the right of the balance sheet) is closely related to the balance sheet. The clearest connection is that the bottom line result directly impacts the

\textsuperscript{23} The visuals have been made suitable for print by Magenta Xtra (www.magentaxtra.nl).
equity stake. If the company makes a profit, equity increases with this amount. If the company incurs losses, equity is reduced by that amount.

During live teaching, the financial mindmap can be used as interactive software which enables teachers to visualise any finance-related event directly in the balance sheet and profit and loss account. The financial mindmap uses all the benefits of visualisation in teaching.

1.5.2 Comparative Law Analysis, Functional Approach

The legal analyses in this book are comparative in nature and combine predominantly US, German, English and Dutch law. The approach is functional in nature.24 The book does not provide lengthy legal analyses and does not seek to provide an all-encompassing discussion of all legal rules as to a specific topic within a jurisdiction. The functional approach as applied here starts with a societal problem or better, a clash of interests within a society and then analyses how the legal rules play out and which balance is struck.

As the title of the book conveys, the clash of interests that is the focal point in this book is the clash between the different parties in the capital structure of a company, that is, the equity provider, secured lenders and unsecured creditors. It will be seen how different legal systems provide different legal rules, which also result in a different power balance between these groups.

1.5.3 Expected Monetary Value Analysis

The book uses an interdisciplinary approach to law and finance. The book explores the intricate relations between the legal corporate world and the world of corporate finance.

In order to understand, compare and evaluate investments and to compare the position of different stakeholders, the concept of expected monetary value analyses is used.25 Expected value is defined as the ‘weighted average of all possible values’.26 Here, the weights are probabilities of the failure and success of a given investment. If it is used in a financial setting, expected value is also called expected monetary value (‘EMV’).27 EMV can be used to determine how much money one can expect to earn from a certain investment decision.5 In other

words, it is a tool to determine the attractiveness of an investment. The basic premise is that the law should foster investment in projects with a positive expected value and prevent investments in projects with a negative expected value.

The EMV for investments will be calculated as the outcome under the good scenario times the likelihood of the good scenario plus the outcome in a bad scenario times the likelihood of the bad scenario minus the initial investment.\(^\text{28}\) In a formula:

\[
\text{EMV} = (\text{good outcome} \times \text{likelihood}) + (\text{bad outcome} \times \text{likelihood}) - \text{investment}\]

From the expected monetary value, one can easily derive the expected return on investment. This is done by the following calculation:

\[
\text{Expected return on investment} = \left( \frac{\text{EMV}}{\text{investment}} \right) \times 100\%\]

One can calculate the expected monetary value for an investment itself without taking into account that the investment is made using a limited liability company. In such a case, all gains and all losses will be borne by the investor itself. We will refer to the calculation of the investment itself as the stand-alone value. Most investments are, however, made through the

\[\text{Example: Project Solar Power requires an investment of €100 000. In one year, it will be worth €250 000 in case of success, which would be a profit of €150 000. In case of failure the project will only be worth €40 000, which would be a loss of €60 000. In order to know whether this is a good investment or not, one has to know the likelihood of success and failure. The percentage that the rather safe project will be a success will be assumed to be 70% and the likelihood of failure 30%.} \]

\[
\begin{align*}
\text{EMV}_{\text{stand alone}} &= (\text{good outcome} \times \text{likelihood}) + (\text{bad outcome} \times \text{likelihood}) - \text{investment} \\
\text{EMV}_{\text{stand alone}} &= (€250 000 \times 0.70) + (€40 000 \times 0.30) - (€100 000) = €87 000
\end{align*}
\]

Alternative and less preferred way of calculating the EMV:

\[
\begin{align*}
\text{EMV}_{\text{stand alone}} &= (\text{profit} \times \text{likelihood}) - (\text{loss} \times \text{likelihood}) \\
\text{EMV}_{\text{stand alone}} &= (€150 000 \times 0.70) - (€60 000 \times 0.30) = €87 000
\end{align*}
\]

Following up on the example in the previous note, this leads to the following:

\[
\text{The expected return on investment is (€87 000/€100 000) \times 100\% = 87\%.}
\]
corporate form. The expected monetary value of the investment made by the shareholder will then become different from the expected monetary value of the project itself. Shareholders, secured lenders and unsecured creditors will all have a different expected monetary value, depending on how much they will receive on their investment in case of a good outcome and a bad outcome and what the chances of success and failure are.

\[
\text{EMV}_{\text{(shareholder)}} = (\text{good outcome} \times \text{likelihood}) + (\text{bad outcome} \times \text{likelihood}) - \text{investment}
\]

\[
\text{EMV}_{\text{(bank)}} = (\text{good outcome} \times \text{likelihood}) + (\text{bad outcome} \times \text{likelihood}) - \text{investment}
\]

\[
\text{EMV}_{\text{(trade creditor)}} = (\text{good outcome} \times \text{likelihood}) + (\text{bad outcome} \times \text{likelihood}) - \text{investment}
\]

Of course, one needs to first calculate how much the different parties will receive in case of success and in case of failure. And of course, for all parties their individual expected return on investment can be calculated.

Throughout the book we do not\(^{31}\) include the time value of money,\(^{32}\) unless explicitly stated otherwise (as will be the case with the discounted cash flow method).\(^{33}\) Furthermore, in all our examples we assume that it will be clear within one year’s time whether the investment is successful or not. We also do not consider opportunity costs in this book,\(^{34}\) unless discussed explicitly.

The concept of expected value analysis is used to bring to light instances where risks are being externalised and to what extent certain legal rules or lack thereof facilitate further risk externalisation.\(^{35}\) The definition provided by Armour is used, namely that externalities are ‘any welfare effect felt by one party as a result of another actor’s production or consumption


\(^{32}\) If an investor applies a discount factor of 5% annually, money received in one year’s time will have to be discounted to calculate today’s value. It can be calculated as follows. €10 000 to be received in one year has a net present value of €10 000 × 100/105 = €9523. Note that the number is different from simply subtracting 5% of the amount of €10 000, which would result in €9500.

\(^{33}\) See Chapter 4.


\(^{35}\) This approach of identifying externalities comes close to the approach taken in the book *The Anatomy of Corporate Law* (R. Kraakman, J. Armour et al., *The Anatomy of Corporate Law: A Comparative and Functional Approach* (OUP 2017) 2). In the book *The Anatomy of Corporate Law*, the overarching framework is the concept of opportunism. They authors write (numbers added, RdW): ‘Most of corporate law can be understood as responding to three principal sources of opportunism that are endemic to such organization: i) conflicts between managers and shareholders, ii) conflicts between controlling and non-controlling shareholders, and iii) conflicts between shareholders and the corporation’s other contractual counterparties, including particularly creditors and employees’. This book, *Corporate Finance for Lawyers*, delves into the third source of potential opportunism. In that sense, the scope of this book is more limited than *The Anatomy of Corporate Law*. The scope is however broader in the sense that it includes in-depth corporate finance analyses and includes in-depth analyses of the inherent and recurring three-party relation
decisions that is not mediated via the price system'.

If a party is confronted with a negative expected monetary value, that is a strong indication that risks are being externalised. One can view risk externalisation as a problem of efficiency. A common effect of risk externalisation in the context of corporate finance is excessive risk taking. Management may even make investments in projects with a negative expected value if the investment will translate into a positive expected value project for the shareholders. This phenomenon is referred to as the problem of overinvestment. This should also be considered a problem if one assumes that the basic goal of corporate law is to ‘foster overall social welfare’. One can also conceptualise the problem of risk externalisation as simply being unfair towards the uncompensated parties.

1.6 AMBITION OF THIS BOOK

The overall ambition of this book is to provide insights to lawyers into the dynamics of common finance patterns in order to understand the behaviour of parties involved and to be able to critically reflect on the role the law plays in the field of law and corporate finance. We hope and expect the book to also be of interest for finance professionals.