PIERRE VERNIMMEN | PASCAL QUIRY | YANN LE FUR

CORPORATE FINANCE

SIXTH EDITION

THEORY AND PRACTICE

WILEY

Corporate Finance

“I discovered finance with ‘The Vernimmen’ about 30 years ago. Since then the different versions have accompanied me throughout my career and throughout the world. Not only was the alignment of the successive editions looking good in my different offices but I must confess I have opened and cherished each of them. Whether an investment banker, a CFO in a universal bank or more simply a world banker . . . ”

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Christophe Evers, Professor of Finance at the Solvay Brussels School, Chief Financial Officer at Texaf

“*Corporate Finance* is a very useful reference book for students and practitioners, it will help both to understand the principles of the financial markets and their practical application in today’s complex environment. The book’s approach is both logical and sequential and presents some interesting cases that make study easier and more stimulating.”

Gabriele Galateri, Chairman of Generali, former Chairman of Telecom Italia and Mediobanca, former CEO of FIAT

“Vernimmen provided people like me who were new to the world of corporate finance a perfect mix of theory and practical examples to help them develop long-lasting financial concepts. The book is a written manual for finance, explaining the fundamentals in a very thought-provoking way, making it intriguing to delve into the complexities. This book is a must-have in your personal library as you will refer back to it even after years.”

Sharat Gangwani, Head of Research Systems - International Equity, Citadel

“The ‘Vernimmen’ is the perfect reference corporate finance book. I used it in my classes, looked back into it during my internships, use it again now to deep dive into corporate finance for my thesis and know I will keep interacting with it later in my career.”

André Geha, Business Development Manager at Omega Financial Solutions

“Vernimmen’s *Corporate Finance* is an outstanding clear and complete manual, a wonderful merger of practice and theory. Its coverage of the market aspects of corporate finance distinguishes its content, but its treatment of all the material makes it essential reading for the student, financier or industrialist.”

Howard Jones, Senior Research Fellow in Finance at Saïd Business School, University of Oxford

“At HEC, Pierre Vernimmen gave me a taste for finance, he taught me the basics. The Vernimmen has been with me throughout my career. It still sits on my desk since I became Chief Executive Officer of Caisse des Dépôts and it is a pleasure to go back to it. Forty years later, I am happy to pay tribute to him here, and to thank his followers for keeping his teaching alive so brilliantly.”

Éric Lombard, Chief Executive Officer of Caisse des Dépôts

“The book itself covers all the important techniques that a financial manager must have in his repertoire of tools. The exposition is clear and concise and, most importantly, relies on commonsense reasoning throughout. This is not a book with obscure formulae, yet is still rigorous and at the same time a model of clarity.”

Richard Roll, Professor Emeritus, Joel Fried Chair in Applied Finance at UCLA Anderson

The Vernimmen remains my bible, the only one updated every year.

Jean-Jacques Guiony, Chief Financial Officer of LVMH

Pierre Vernimmen

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Yann Le Fur is head of the Corporate Finance Group of Natixis Americas after working as an investment banker for a number of years, notably with Schroders, Citi and Mediobanca and as an M&A director for Alstom.

Pierre Vernimmen, who died in 1996, was both an M&A dealmaker (he advised Louis Vuitton on its merger with Moët Hennessy to create LVMH, the world luxury goods leader) and a finance teacher at HEC Paris. His book *Finance d'Entreprise* was, and still is, the top-selling financial textbook in French-speaking countries and is the forebear of *Corporate Finance: Theory and Practice*.

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Preface

This book aims to cover the full scope of corporate finance as it is practised today worldwide.

A way of thinking about finance

We are very pleased with the success of the first five editions of the book. It has encouraged us to retain the approach in order to explain corporate finance to students and professionals. There are four key features that distinguish this book from the many other corporate finance textbooks available on the market today:

- Our strong belief that financial analysis is part of corporate finance. Pierre Vernimmen, who was mentor and partner to some of us in the practice of corporate finance, understood very early on that a good financial manager must first be able to analyse a company's economic, financial and strategic situation, and then value it, while at the same time mastering the conceptual underpinnings of all financial decisions.
- *Corporate Finance* is neither a theoretical textbook nor a practical workbook. It is a book in which theory and practice are constantly set off against each other, in the same way as in our daily practice as investors at Monestier capital and Natixis, as board members of several listed and unlisted companies, and as teachers notably at HEC Paris business school.
- Emphasis is placed on concepts intended to give you an understanding of situations, rather than on techniques, which tend to shift and change over time. We confess to believing that the former will still be valid in 20 years' time, whereas the latter will, for the most part, be long forgotten!
- Financial concepts are international, but they are much easier to grasp when they are set in a familiar context. We have tried to give examples and statistics from all around the world to illustrate the concepts.

The five sections

This book starts with an introductory chapter reiterating the idea that corporate financiers are the bridge between the economy and the realm of finance. Increasingly, they must play the role of marketing managers and negotiators. Their products are financial securities that represent rights to the firm's cash flows. Their customers are bankers and investors. A good financial manager listens to customers and sells them good products at high prices. A good financial manager always thinks in terms of value rather than costs or earnings.

Section I goes over the basics of financial analysis, i.e. understanding the company based on a detailed analysis of its financial statements. We are amazed at the extent to which large numbers of investors neglected this approach during the latest stock market euphoria. When share prices everywhere are rising, why stick to a rigorous approach? For one thing, to avoid being caught in the crash that inevitably follows.

The return to reason has also returned financial analysis to its rightful place as a cornerstone of economic decision-making. To perform financial analysis, you must first understand the firm's basic financial mechanics (Chapters 2). Next you must master the basic techniques of accounting, including accounting principles, consolidation techniques and certain complexities (Chapters 6), based on international (IFRS) standards now mandatory in over 80 countries, including the EU (for listed companies), Australia, South Africa and accepted by the SEC for US listing. In order to make things easier for the newcomer to finance, we have structured the presentation of financial analysis itself around its guiding principle: in the long run, a company can survive only if it is solvent and creates value for its shareholders. To do so, it must generate wealth (Chapters 9 and 10), invest (Chapter 11), finance its investments (Chapter 12) and generate a sufficient return (Chapter 13). The illustrative financial analysis of the Italian appliance manufacturer Indesit will guide you throughout this section of the book.

Section II reviews the basic theoretical knowledge you will need to make an assessment of the value of the firm. Here again, the emphasis is on reasoning, which in many cases will become automatic (Chapters 15): efficient capital markets, the time value of money, the price of risk, volatility, arbitrage, return, portfolio theory, present value and future value, market risk, beta, etc. Then we review the major types of financial securities: equity, debt and options, for the purposes of valuation, along with the techniques for issuing and placing them (Chapters 20).

Section III, is devoted to value, to its theoretical foundations and to its computation. Value is the focus of any financier, both its measure and the way it is shared. Over the medium term, creating value is, most of the time, the first aim of managers (Chapters 26).

In **Section IV**, "Corporate financial policies", we analyse each financial decision in terms of:

- value in the context of the theory of efficient capital markets;
- balance of power between owners and managers, shareholders and debtholders (agency theory);
- communication (signal theory).

Such decisions include choosing a capital structure, investment decisions, cost of capital, dividend policy, share repurchases, capital increases, hybrid security issues, etc.

In this section, we draw your attention to today's obsession with earnings per share, return on equity and other measures whose underlying basis we have a tendency to forget and which may, in some cases, be only distantly related to value creation. We have devoted considerable space to the use of options (as a technique or a type of reasoning) in each financial decision (Chapter 32).

When you start reading **Section V**, "Financial management", you will be ready to examine and take the remaining decisions: how to create and finance a start-up, how to organise a company's equity capital and its governance, buying and selling companies, mergers, demergers, LBOs, bankruptcy and restructuring (Chapter 40). Lastly, this section presents working capital management, cash management, the management of the firm's financial risks and its operational real estate assets (Chapter 49).

Last but not least, the epilogue addresses the question of the links between finance and strategy.

Suggestions for the reader

To make sure that you get the most out of your book, each chapter ends with a summary and a series of problems and questions (over 800 with the solutions provided). We've used the last page of the book to provide a crib sheet (the nearly 1,000 pages of this book summarised on one page!). For those interested in exploring the topics in greater depth, there is an end-of-chapter bibliography and suggestions for further reading, covering fundamental research papers, articles in the press, published books and websites. A large number of graphs and tables (over 100!) have been included in the body of the text and these can be used for comparative analyses. Finally, there is a fully comprehensive index.

An Internet site with huge and diversified content

www.vernimmen.com provides free access to tools (formulas, tables, statistics, lexicons, glossaries); resources that supplement the book (articles, prospectuses of financial transactions, financial figures for over 16,000 European, North American and emerging countries, listed companies, thesis topics, thematic links, a list of must-have books for your bookshelf, an Excel file providing detailed solutions to all of the problems set in the book); plus problems, case studies and quizzes for testing and improving your knowledge. There is a letterbox for your questions to the authors (we reply within 72 hours, unless, of course, you manage to stump us!). There are questions and answers and much more. The site has its own internal search engine, and new services are added regularly.

A teachers' area provides teachers with free access to case studies, slides and an Instructor's Manual, which gives advice and ideas on how to teach all of the topics discussed in the book.

A free monthly newsletter on corporate finance

Since (unfortunately) we can't bring out a new edition of this book every month, we have set up the *Vernimmen.com Newsletter*, which is sent out free of charge to subscribers via the web. It contains:

- A conceptual look at topical corporate finance problems (e.g. accounting for operating and capital leases, financially managing during a deflation phase).
- Statistics and tables that you are likely to find useful in the day-to-day practice of corporate finance (e.g. corporate income tax rates, debt ratios in LBOs).
- A critical review of a financial research paper with a concrete dimension (e.g. *the real effect of corporate cash, why don't US issuers demand European fees for their IPOs?*).
- A question left on the *vernimmen.com* site by a visitor plus a response (e.g. *Why do successful groups have such a low debt level? What is an assimilation clause?*).
- A catch up of our last posts on LinkedIn and Facebook.

Subscribe to *www.vernimmen.com* and become one of the many readers of the *Vernimmen.com Newsletter*.

And lastly a LinkedIn and Facebook page

We publish daily comments on financial news that we deem to be of interest, answer questions from web-users and publish finance- and business-related quotes. These could come in useful when preparing for a job interview or serve as food for thought for those of you wanting to take time out and think about what's going on in the corporate and financial world.

Many thanks

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We hope that you will gain as much enjoyment from your copy of this book – whether you are a new student of corporate finance or are using it to revise and hone your financial skills – as we have had in editing this edition and in expanding the services and products that go with it.

We wish you well in your studies!

Paris, New York, December 2021

Pascal Quiry *Yann Le Fur*

Frequently used symbols

A_K^N	Annuity factor for N years and an interest rate of k
ABCP	Asset-Backed Commercial Paper
ADR	American Depositary Receipt
AGM	Annual General Meeting
APT	Arbitrage Pricing Theory
APV	Adjusted Present Value
BIMBO	Buy-In Management Buy-Out
BV	Book Value
BV/S	Book Value per Share
CAGR	Compound Annual Growth Rate
Capex	Capital Expenditures
CAPM	Capital Asset Pricing Model
CB	Convertible Bond
CD	Certificate of Deposit
CE	Capital Employed
CFROI	Cash Flow Return On Investment
COV	Covariance
CVR	Contingent Value Right
D	Debt, net financial and banking debt
d	Payout ratio
DCF	Discounted Cash Flows
DDM	Dividend Discount Model
DECS	Debt Exchangeable for Common Stock; Dividend Enhanced Convertible Securities
Div	Dividend
DPS	Dividend Per Share
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortisation
ECP	European Commercial Paper
EGM	Extraordinary General Meeting
EMTN	Euro Medium-Term Note
ENPV	Expanded Net Present Value
EONIA	Euro OverNight Index Average
EPS	Earnings Per Share
E(r)	Expected return
ESOP	Employee Stock Ownership Programme
Euribor	Euro Interbank Offered Rate

EV	Enterprise Value
EVA	Economic Value Added
f	Forward rate
F	Cash flow
FA	Fixed Assets
FASB	Financial Accounting Standards Board
FC	Fixed Costs
FCF	Free Cash Flow
FCFE	Free Cash Flow to Equity
FCFF	Free Cash Flow to Firm
FE	Financial Expenses
FIFO	First In, First Out
FRA	Forward Rate Agreement
g	Growth rate
GAAP	Generally Accepted Accounting Principles
GDR	Global Depositary Receipt
i	After-tax cost of debt
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standard
IPO	Initial Public Offering
IRR	Internal Rate of Return
IRS	Interest Rate Swap
IT	Income Taxes
k	Cost of capital, discount rate
k_D	Cost of debt
k_E	Cost of equity
K	Option strike price
LBO	Leveraged Buyout
LBU	Leveraged Build-Up
L/C	Letter of Credit
LIBOR	London Interbank Offered Rate
LIFO	Last In, First Out
LMBO	Leveraged Management Buyout
ln	Naperian logarithm
LOI	Letter Of Intent
m	Contribution margin
MOU	Memorandum Of Understanding
MTN	Medium-Term Notes
MVA	Market Value Added
n	Years, periods
N	Number of years
$N(d)$	Cumulative standard normal distribution
NA	Not Available
NAV	Net Asset Value
NM	Not Meaningful
NOPAT	Net Operating Profit After Tax
NPV	Net Present Value
OTC	Over The Counter

P	Price
PBO	Projected Benefit Obligation
PBR	Price-to-Book Ratio
PBT	Profit Before Tax
P/E ratio	Price/Earnings ratio
PEPs	Personal Equity Plans
PERCS	Preferred Equity Redemption Cumulative Stock
PSR	Price-to-Sales Ratio
P-to-P	Public-to-Private
PV	Present Value
PVI	Present Value Index
QIB	Qualified Institutional Buyer
r	Rate of return, interest rate
r_{F}	Risk-free rate
r_{M}	Expected return of the market
RNAV	Restated Net Asset Value
ROA	Return On Assets
ROCE	Return On Capital Employed
ROE	Return On Equity
ROI	Return On Investment
RWA	Risk-Weighted Assessment
S	Sales
SEC	Securities and Exchange Commission
SEO	Seasoned Equity Offering
SPV	Special Purpose Vehicle
STEP	Short-Term European Paper
t	Time
T	Time remaining until maturity
T_{c}	Corporate tax rate
TSR	Total Shareholder Return
UCITS	Undertakings for Collective Investment in Transferable Securities
V	Value
V_{D}	Value of Debt
V_{E}	Value of Equity
$V(r)$	Variance of return
VAT	Value Added Tax
VC	Variable Cost
WACC	Weighted Average Cost of Capital
WC	Working Capital
y	Yield to maturity
YTM	Yield To Maturity
Z	Scoring function
ZBA	Zero Balance Account
β or β_E	Beta coefficient for a share or an equity instrument
β_{A}	Beta coefficient for an asset or unlevered beta
β_{D}	Beta coefficient of a debt instrument
$\sigma(r)$	Standard deviation of return
$\rho(\mathrm{A}, \mathrm{B})$	Correlation coefficient of return between shares A and B

Chapter 1

Towards a green, responsible and sustainable corporate finance

Trailer for a changing world. . .

The primary role of the financial manager is to ensure that their company has a sufficient supply of capital.

The financial manager or CFO (chief financial officer) is at the crossroads of the real **economy**, with its industries and services, and the world of **finance**, with its various financial markets and structures.

They also have two other roles: that of a controller of the risks and commitments made by the company, thereby ensuring its sustainability; and that of a strategist, which can make them invaluable to the executive.

The financial manager operates in an environment that is undergoing irreversible change due to growing environmental, social and governance concerns within the company. This change is naturally and durably affecting corporate finance, strongly since 2017–2018, and at a speed that has accelerated considerably in 2020–2021.

We believe that this development in corporate finance is so important that we will discuss it in the first three sections of this introductory chapter, before returning to the functions of the CFO, who has a part to play in the area of energy and social transition.

Section 1.1

An unprecedented change underway

The years between 2015 and 2020 saw an irreversible upswing in concern for the environment, social responsibility and sustainability in finance, and in particular in corporate finance, to such an extent that we predict, in a slightly pretentious way, that corporate finance will in the future be green, responsible and sustainable, or it will not be at all!

1/ Some emblematic facts

Here are some recent facts, among others, which illustrate this acceleration in ecological, social and sustainable awareness in the financial world:

(a) Financial analysts from the largest sovereign wealth fund in the world, Norway's oil fund, which manages around €1,133bn, are now accompanied by environmental, social and governance (ESG) analysts when they hold meetings with managers of any of the 9,123 companies in which the fund is a shareholder or is considering becoming one;

(b) Danone (in 2020) and Kering are now presenting new financial tools (decarbonised earnings per share for Danone and environmental income statement for Kering) to measure the impact of the group on carbon emission or environment;

(c) In 2018, the CEO of Blackrock – the largest asset manager in the world with close to €7,400bn in assets under management – wrote in the annual letter to the CEOs of major groups worldwide in which Blackrock has invested money:

"Society is demanding that companies, both public and private, serve a social purpose. To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society. Companies must benefit all of their stakeholders, including shareholders, employees, customers, and the communities in which they operate".

As early as 2016, Larry Finck wrote in his annual letter to the CEOs: *"Over the long term, environmental, social and governance issues – from climate change to diversity and including board efficiency – have real and quantifiable financial impacts."*

(d) In March 2018, the European Commission published its "*strategy to bring the financial system to support the European Union's climate and sustainable development agenda*", which will involve:

"– *establishing a common language for sustainable finance, i.e. a unified **EU classification system – or taxonomy** – to define what is sustainable and identify areas where sustainable investment can make the biggest impact;*

– *creating **EU labels** for green financial products on the basis of this EU classification system: this will allow investors to easily identify investments that comply with green or low-carbon criteria;*

– *clarifying the **duty of asset managers and institutional investors** to take sustainability into account in the investment process and enhance disclosure requirements;*

– *requiring insurance and investment firms to advise clients on the basis of their preferences on sustainability;*

– *incorporating **sustainability in prudential requirements**: banks and insurance companies are an important source of external finance for the European economy. The Commission will explore the feasibility of recalibrating capital requirements for banks (the so-called green supporting factor) for sustainable investments, when it is justified from a risk perspective, while ensuring that financial stability is safeguarded;*

– *enhancing transparency in **corporate reporting**: we propose to revise the guidelines on non-financial information to further align them with the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD)."*

(e) In 2019, a large European bank, Natixis, introduced a voluntary mechanism for the internal allocation of prudential capital, which lowers the cost of financing with a positive impact on the environment, to the detriment of financing with a negative impact, thus increasing its cost. Moreover, it directs its commitments towards actors with a positive approach in this area.

2/ Old or recent roots

We may well wonder why this is happening now and not five or ten years ago, or in four to five years' time. It's difficult to say. Like all groundswell movements, it started as the result of several factors, has been developing gradually and slowly over time and now that has gained momentum, it's shaking up the whole system.

Environmental urgency is another factor: the depletion of the earth's resources, which may well turn out to be a surmountable problem given human ingenuity, and global warming, which it is to be feared may well be a problem that we have underestimated.

It is undeniable that **the 2007–2008 financial crisis** had a major impact on how we see the world, probably more so than any other financial crisis, apart from the 1929 crisis. It naturally impacted on the way finance directors exercise financial management.[1] It also had a major impact on the general public who discovered that a financial product, sub-primes,[2] involved getting clients to borrow more than what was reasonable while getting others to take on the risk in order to get rich at their expense, with no regard for the consequences. This is now seen as morally unacceptable. Never again.

1 *See Chapter 39.*

2 *For our young readers, see the* Vernimmen.com *Newsletter,* ***28****, 7–8, November 2007 or the film* The Big Short.

Finally, a **disenchantment with ideologies** and the growing difficulties that governments are experiencing in maintaining their traditional post-World War II roles of protector and distributor of resources, mean that individuals are now seeking meaning in what they spend most of their lives doing, which is working. Young people in particular want a mission in life and not a job, a mentor rather than a boss, and they want to make an impact and see meaning in what they do. Today, a lot more is expected from companies than in the past. More and more corporate people think that the company has a purpose and that it contributes to the common interest.

Without being cynical, we should also not overlook the phenomenon of **lemming behaviour** which is something we're very familiar with in the world of finance. Companies seem to be competing against each other in the increasingly ambitious ESG statements that they put out. This is not cause for complaint, but now they're going to have to deliver.

Section 1.2
A decisive impetus from investors

What concrete forms does all this take?

Among investors, concerns about socially responsible investment (SRI) first arose in the 18th century in religious communities (Quakers, Methodists), which forbade their members from investing in companies that produced weapons, alcohol or tobacco.

Environmental, social and governance (ESG) criteria have emerged to enable investors wishing to work towards this goal to select the companies they consider to be the most virtuous in these areas. They constitute the three pillars of extra-financial analysis that complement the financial analysis of the accounts that we present in Section I of this book:

- The **environmental** criterion covers the reduction of greenhouse gas emissions, the recycling of waste, the management of scarce resources (raw materials, water, etc.) and the prevention of environmental risks.
- The **social** criterion takes into account accident prevention, staff training, respect for employee rights, employment of disabled people, management of the subcontracting chain, and more generally the quality of social dialogue.
- The **governance** criterion mainly covers the independence of the board of directors, the company's management structure, the transparency of executive compensation, the fight against corruption, and the increase in the number of women on the board of directors and the executive committee. It is detailed in Chapter 43.

Around \$30,700bn is managed around the world using ESG criteria,[3] i.e. a third of all financial assets under management but 49% in Europe, which is leading the world in this field. The strategies implemented are more or less intense: the *Best in Class* strategy advocates investing within a sector in the best performing companies from an ESG point of view; the *Best Effort* strategy is less radical in its selection because it includes more broadly the companies with the best ESG progress. The *norm-based screening* strategy sets minimum ESG standards for a company to be included in a portfolio.

Some investors wish to go further and have developed **SRI** (**socially responsible investment**) defined as "an investment that aims to achieve a social and environmental impact by financing companies and public entities that contribute to sustainable development regardless of their sector of activity. By influencing the governance and behaviour of stakeholders, SRI encourages a responsible economy."[4]

In the field of unlisted investments, **impact funds** aim to generate a positive social and environmental impact in addition to a financial return. The remuneration of their managers is linked to the achievement of predetermined non-financial objectives.

In Section 8.2, 4/, we maintain that from a strictly financial point of view, the most important men and women in a company are its shareholders. SRI is an illustration of this as by overweighting or underweighting certain companies in their portfolios (or even totally eliminating them) investors, like other stakeholders, exercise media and financial pressure on these companies, making them more expensive to finance, leading in the long run to a reduction in their activities.

In May 2021, Engine No. 1 – a small American investment fund with a 0.02% stake in ExxonMobil (market capitalisation of €200bn) – succeeded in rallying the majority of the American oil company's shareholders to elect as directors three people who wanted ExxonMobil to initiate its energy transition, as opposed to three other candidates who were in favour of the status quo and who were supported by the management.

Although there have long been doubts about the compatibility of responsible investment with financial performance, a number of empirical studies have shown that SRI funds achieve identical or better performances than conventional funds. A Russel Investment[5] study shows that asset managers that create the most value already have a large number of stocks that comply with ESG criteria in their portfolios.

3 *2018 Global Sustainable Investment Review.*

4 *AFG, the French Association of Financial Management, grouping of professionals managing portfolios on behalf of third parties, and the Forum for Socially Responsible Investment.*

5 *Are ESG tilts consistent with value creation in Europe? January 2015.*

Section 1.3

Business behaviour and their financing are gradually changing

Under pressure from investors and society in general, companies are becoming aware of their corporate social responsibility (CSR), defined, for example, by the European Union as: "The voluntary integration of social and environmental concerns by companies into their business activities and their relations with their stakeholders. Being socially responsible means not only fully complying with applicable legal obligations, but also going beyond them and investing 'more' in human capital, the environment and stakeholder relations."

1/ The emergence of green and responsible financing

When it comes to financing of companies, volumes of green or sustainable financing are still marginal at this stage, but have increased sharply. Today we get green bonds (Section 20.4), green loans (Section 21.2) and social bonds (Section 20.4).

Green bonds are conventional bonds in terms of their financial flows so the innovation here is not financial! Their green status stems from the issuer's undertaking to use the funds for investing or spending that is positive for the environment (as defined by the company, which is generally assisted by an independent firm). Social bonds finance socially responsible projects.

Monitoring spending and allocating a source of financing to a particular use requires a specific type of organisation that financial departments are not accustomed to. And it has a cost, borne by companies as long as investors are not prepared to pay more for green bonds than for conventional bonds.

Standards for green, social and more generally responsible bonds are established by the ICMA,[6] which publishes the Green Bonds Principles and Social Bonds Principles. This is important as investors rely on these standards in order to demonstrate that their investments are SRI compliant and that these bonds are eligible for inclusion in their funds or their asset portfolios dedicated to such investments.

6 *International Capital Markets Association.*

Companies have another financial tool they can use for ESG policy implementation: green or responsible revolving credit facilities (RCFs[7]). Unlike bonds, these facilities do not require funds to be used for ESG projects (this would be complicated as for large groups, these facilities are mostly back-up undrawn credit lines). Their ESG aspect comes from the fact that their cost (and thus the banks' remuneration) depends on the company achieving ESG goals. The relevance of these goals is initially validated by an independent agency and is subject to monitoring while the credit facility is active. We note that these products entail an ESG cost both for the company and the bank financing it! At this stage, the variability of the credit margin, which is dependent on whether the ESG goals are achieved or not, is still only a few basis points.

7 *See Section 21.2.*

Notwithstanding the above, **ESG-type financing products are also used to mobilise employees internally** given that ESG goals become more concrete since failing to achieve them results in a (small) financial penalty and has a psychological impact that is certainly not negligible.

2/ ESG STANDARDS ARE NOT YET STABILISED

This development has brought its own problems. How do we go about assessing, rating and ranking companies on the basis of ESG criteria? What are the most relevant criteria and for whom are they relevant? Clearly, assessments should be sector-based as an agri-food business will not face the same ESG challenges as a power generating company. Agencies that rate companies on the basis of their ESG policies (Vigeo Eiris, Cicero and Sustainalytics) are emerging, the traditional rating agencies and audit firms are also seeking to get in on the act as are the certification agencies (Bureau Veritas, SGS) while standards (ISO) will soon be developed.

One of the problems that companies are having to face remains the lack of a uniform and dynamic method for selecting these criteria. New criteria are continually arising (sometimes in response to the latest trends or because new controversies have emerged) and companies are having to be agile if they want to hang onto their ratings or certifications.

One of the problems raised by green or social bonds is that funds raised must be used for ESG investments. This means they are easy to issue for very capital-intensive businesses (energy, real estate, etc.), but much trickier for knowledge-based industries (what sort of investment by an advertising agency could be classified as green or social?) So, in today's world, these companies are unable to make use of this tool even if they happen to have impeccable ESG credentials.

This highlights the difference between the holistic and the targeted project approach to ESG. The former is clearly more ambitious but difficult to measure, standardise and grasp for anyone outside the company. There is the fear that companies may indulge in communication one-upmanship and greenwashing without taking any real action, all in the interests of political correctness. The latter approach is more concrete for investors, but involves a risk of financing companies that generally do not have very impressive ESG ambitions and only communicate on a few projects.

3/ A TOUGH CONSTRAINT

But let's not deceive ourselves. This is most definitely not just a passing trend to which homage should be paid for a short time, before returning to the way we used to do things in the good (or rather bad) old days!

> A company that chooses to ignore the ESG concerns is doomed to fail as a result of the dual effect of an increase in its financing cost (since investors will gradually decline to finance it) or increasingly higher costs, which will penalise it vis-à-vis its competitors; and the growing difficulty of attracting human talent without which everything is a lot more complicated. And there is also the permanent risk of being stigmatised and suffering general social opprobrium.

The good news is that the long-term view doesn't seem to be exclusively focused on financial performance. From the point of view of companies, the Boston Consulting Group[8] shows that, out of a sample of 343 groups in 5 sectors, companies with a high ESG score have higher margins than others. The direction of causality still needs to be determined. The fact that companies with higher ethical standards are more attractive to employees is one explanation. Other explanations also highlight better risk management as

8 *Total societal impact, a new lens for strategy,* October 2017.

a result of ESG issues being factored in and the creation of opportunities. As an example, ArcelorMittal has announced that a new technology for treating gas produced by its Gand plant will enable it to transform gas into bio-ethanol that it will be able to sell.

Section 1.4
The three roles of the financial manager

While the primary role of the corporate financial manager is to be responsible for the provision of capital to the company, they also have a role in monitoring profitability and risk, which ensures sustainability, and the ESG commitments made to the investors who finance the company. The best of them are also strategists.

1/ The financial manager is first and foremost a salesperson and a negotiator

(a) The financial manager's job is not only to "buy" financial resources . . .

Financial managers are traditionally perceived as buyers of capital. They negotiate with a variety of investors – bankers, shareholders, bond investors – to obtain funds at the lowest possible cost.

Transactions that take place on the **capital markets** are made up of the following elements:

- a commodity: money;
- a price: the interest rate in the case of debt; dividends and capital gains in the case of equities.

In the traditional view, financial managers re responsible for the company's financial procurement. Their job is to minimise the price of the **commodity** to be purchased, i.e. the **cost of the funds** they raise.

We have no intention of contesting this view of the world. It is obvious and is confirmed every day, in particular in the following types of negotiations:

- between corporate treasurers and bankers, regarding interest rates and value dates applied to bank balances (see Chapter 50);
- between CFOs and financial market intermediaries, where negotiation focuses on the commissions paid to arrangers of financial transactions (see Chapter 25).

(b) . . . but also to sell financial securities

That said, let's now take a look at the financial manager's job from a different angle:

- they are not a buyer but a **seller**;
- their aim is not to reduce the cost of the raw material they buy but to **maximise a selling price**;
- they practise their art not on the capital markets, but on the market for financial instruments, be they loans, bonds, shares, etc.

We are not changing the world here; we are merely looking at the same market from another point of view:

- the **supply** of financial securities corresponds to the demand for capital;
- the **demand** for financial securities corresponds to the supply of capital;
- the **price**, the point at which the supply and demand for financial securities are in equilibrium, is therefore the **value of security**. In contrast, the equilibrium price in the traditional view is considered to be the interest rate, or the cost of funds.

We can summarise these two ways of looking at the same capital market in the following table:

Analysis/Approach	Financial approach: financial manager as seller	Traditional approach: financial manager as purchaser
Market	Securities	Capital
Supply	Issuers	Investors
Demand	Investors	Issuers
Price	Value of security	Interest rate

Depending on your point of view, i.e. traditional or financial, supply and demand are reversed, as follows:

- when the **cost of money** – the interest rate, for example – **rises**, demand for funds is greater than supply. In other words, the supply of financial securities is greater than the demand for financial securities, and **the value of the securities falls**;
- conversely, when **the cost of money falls**, the supply of funds is greater than demand. In other words, the demand for financial instruments is greater than their supply and **the value of the securities rises**.

The cost of capital and the value of the securities vary in opposite directions. We can summarise with the following theorem, fundamental to this entire book: Minimising financing cost is synonymous with maximising the value of the underlying securities.

For two practical reasons, one minor and one major, we prefer to present the financial manager as a seller of financial securities.

The minor reason is that viewing the financial manager as a salesperson trying to sell their products at the highest price casts their role in a different light. As the merchant does not want to sell low-quality products but products that respond to the needs of their customers, so the financial manager must understand and satisfy the needs of their capital suppliers without putting the company or its other capital suppliers at a disadvantage. **The financial manager must sell high-quality products at high prices** but can also repackage the product to better meet investor expectations. Indeed, financial markets are subject to fashion: in one period convertible bonds (see Chapter 24) can be easily placed; in another period it will be syndicated loans (see Chapter 21) that investors will welcome.

The more important reason is that when a financial manager applies the traditional approach of minimising the cost of the company's financing too strictly, erroneous decisions may easily follow. The traditional approach can make the financial manager **short-sighted**, tempting them to take decisions that emphasise the short term to the detriment of the long term.

For instance, choosing between a capital increase, a bank loan and a bond issue with lowest cost as the only criterion reflects flawed reasoning. Why? Because suppliers of capital, i.e. the buyers of the corresponding instruments, do not all face the same level of risk.

The investor's risk must be taken into account in evaluating the cost of a source of financing.

The cost of two sources of financing can be compared only when the suppliers of the funds incur the same level of risk.

All too often we have seen managers or treasurers assume excessive risk when choosing a source of financing because they have based their decision on a single criterion: the respective cost of the different sources of funds. For example:

- increasing short-term debt on the pretext that short-term interest rates are lower than long-term rates can be a serious mistake;
- granting a mortgage in return for a slight decrease in the interest rate on a loan can be very harmful for the future;
- increasing debt systematically on the sole pretext that debt costs less than equity capital jeopardises the company's prospects for long-term survival.

We will develop this theme further throughout the third part of this book, but we would like to warn you now of the pitfalls of faulty financial reasoning. **The most dangerous thing a financial manager can say is, "It doesn't cost anything." This sentence should be banished and replaced with the following question: "What is the impact of this action on value?"**

(c) Most importantly, the financial manager is a negotiator . . .

But what exactly is our financial manager selling? Or, put another way: how can the value of the financial security be determined?

From a practical standpoint, the financial manager "sells" management's reputation for integrity, its expertise, the quality of the company's assets, its overall financial health, its ability to generate a certain level of profitability over a given period and its commitment to more or less restrictive legal terms. Note that the quality of assets will be particularly important in the case of a loan tied to and often secured by specific assets, while overall financial health will dominate when financing is not tied to specific assets.

Theoretically, the financial manager sells expected future cash flows that can derive only from the company's business operations.

A company cannot distribute more cash flow to its providers of funds than its business generates. A money-losing company pays its creditors only at the expense of its shareholders. When a company with sub-par profitability pays a dividend, it jeopardises its financial health.

The financial manager's role is to transform the company's commercial and industrial business assets and commitments into financial assets and commitments.

In so doing, they spread the expected cash flows among many different investor groups: banks, financial investors, family shareholders, individual investors, etc.

Financial investors then turn these flows into negotiable instruments traded on an open market, which values the instruments in relation to other opportunities available on the market.

Underlying the securities is the market's evaluation of the company. A company considered to be poorly managed will see investors vote with their feet. Yields on the company's securities will rise to prohibitive levels and prices on them will fall. Financial difficulties, if not already present, will soon follow. Financial managers must therefore keep the market convinced at all times of the quality of their company, because that is what backs up the securities it issues!

The different financial partners hold a portion of the value of the company. This diversity gives rise to yet another job for the financial manager: **to adroitly steer the company through the distribution of the overall value of the company**.

Like any dealmaker, the financial manager has something to sell, but must also:

- assess the company's overall financial situation;
- understand the motivations of the various participants;
- analyse the relative powers of the parties involved.

2/ THE FINANCIAL MANAGER IS ALSO A CONTROLLER

(a) Of profitability as a guarantee of sustainability

The financial investors who buy the company's securities do so not out of altruism, but because they hope to realise a certain rate of return on their investment, in the form of interest, dividends and/or capital gains. In other words, in return for entrusting the company with their money via their purchase of the company's securities, they require a minimum return on their investment.

The financial manager must therefore analyse the different investment projects proposed by operational people and explain to colleagues that some should not be undertaken because they are not profitable enough compared to the return investors are looking for. In short, financial managers sometimes have to be "party-poopers". They are indirectly the spokesperson of the financial investment community.

Consequently, the financial manager must make sure that over the medium term the company makes investments with returns at least equal to the rate of return expected by the company's providers of capital. If so, all is well. If not, if the company is consistently falling short of this goal, then it will destroy value, turning what was worth 100 into 90, or 80. This is corporate purgatory. On the other hand, if the profitability of its investments consistently exceeds investor demands, transforming 100 into 120 or more, then the company deserves the kudos it will get. But it should also remain humble. With technological progress and deregulation advancing apace, repeat performances are becoming more and more challenging.

If the profitability over several years of the company's operating assets is not at least equal to the return looked for by investors, then the financial manager should discuss how to improve the situation with operational people.

(b) Of risks run by the company

Fluctuations in interest rates, currencies and the prices of raw materials are so great that financial risks are as important as industrial risks. Consider a Swiss company that buys copper in the world market, then processes it and sells it in Switzerland and abroad.

Its performance depends not only on the price of copper but also on the exchange rate of the US dollar versus the Swiss franc, because it uses the dollar to make purchases abroad and receives payment in dollars for international sales. Lastly, interest rate fluctuations have an impact on the company's financial flows. A multi-headed dragon!

The company must manage its specific interest rate and exchange rate risks because doing nothing can also have serious consequences (see Chapter 51).

Take an example of an economy with no derivative markets. A corporate treasurer anticipating a decline in long-term interest rates and whose company has long-term debt has no choice but to borrow short term, invest the proceeds long term, wait for interest rates to decline, pay off the short-term loans and borrow again. You will have no trouble understanding that this strategy has its limits. The balance sheet becomes inflated, intermediation costs rise, and so on. Derivative markets enable the treasurer to manage this long-term interest rate risk without touching the company's balance sheet.

Generally, the CFO is responsible for the identification, the assessment and the management of risks for the firm. This includes not only currency and interest rate risks but also liquidity and counterparty risk. Recent years have shown that a CFO with strong know-how in such matters is highly appreciated.

(c) Of ESG commitments made by the company

As the spokesperson within the company for the investors who finance it, the role of the CFO is also to guarantee the sincerity of the ESG commitments made and their respect over time, because sincerity creates trust. And without trust, there is no funding.

3/ The financial manager is also a strategist

The corporate financier is also a strategist who, because they constantly assess the risk and profitability of the company's activities, and therefore, as we shall see, their value, is in a position to suggest a review of their scope. The company will thus be able to sell to better placed third parties, assets on which it is unable over time to generate the required rate of return in view of their risks, in order to concentrate on the best performing divisions that can be developed through acquisitions.

We are far from the CFOs of the sixties who were mainly top-of-the-class accountants! Nowadays they are required not only to perfectly master accounting and finance, but also to be gifted in marketing and negotiation, not to mention tax and legal issues, risk management, and to be able managers of their teams. The best of them also have a strategic way of thinking, and their intimate knowledge of the company and its human resources allows them to be serious candidates for the top job. As an illustration, the current CEOs of Siemens, Danone, Expedia, Sony and Tata Consulting are all former CFOs of their companies.

* * *

We're going to leave you with these appetisers in the hope that you are now hungry for more. But beware of taking the principles briefly presented here and skipping directly to Section III of the book. If you are looking for high finance and get-rich-quick schemes, this book is definitely not for you. The menu we propose is as follows:

- First, an understanding of the firm, i.e. the source of all the cash flows that are the subject of our analysis (**Section I: Financial analysis**).
- Then an appreciation of markets, because it is they who are constantly valuing the firm (**Section II: Investors and markets**).
- Then an understanding of how value is created and how it is measured (**Section III: Value**).
- Followed by the major financial decisions of the firm, viewed in the light of both market theory, organisational and behavioural theories (**Section IV: Corporate financial policies**).
- Finally, if you persevere through the foregoing, you will get to taste the dessert, as **Section V: Financial management** presents several practical, current topics in financial engineering and management.

SUMMARY

The summary of this chapter can be downloaded from www.vernimmen.com.

Financial managers (or CFOs) are evolving in an environment that is undergoing irreversible change due to the rise in environmental, social and governance (ESG) concerns within society. This change is naturally and durably affecting corporate finance, slowly in some aspects, much more rapidly in others.

It has led to a growing number of investors to define ESG criteria leading to the exclusion from their portfolios or underweighting of companies that do not comply with them. This pushes companies to take these criteria into account, and to finance through new tools, such as green or socially responsible bonds, investments aimed at better complying with ESG criteria. In the long run, a company that chooses to ignore ESG concerns would be doomed to disappear under the double effect of a higher cost of financing and difficulties in attracting talent.

The financial manager has three main roles:

- To ensure the company has enough funds to finance its expansion and meet its obligations. To do this, the company issues securities (equity and debt) and the financial manager sells them to financial investors at the highest possible price. In today's capital market economy, the role of the financial manager is less a buyer of funds, with an objective to minimise cost, and more a seller of financial securities. By emphasising the financial security, we focus on its value, which combines the notions of return and risk. We thereby de-emphasise the importance of minimising the cost of financial resources, because this approach ignores the risk factor. Casting the financial manager in the role of salesperson also underlines the marketing aspect of the job, which is far from theoretical. Financial managers have customers (investors) who must be convinced to buy the securities the company issues. The better they understand their customers' needs, the more successful they will be.
- To ensure the sustainability of the company in three areas: profitability, risks and compliance with ESG commitments made. The financial manager ensures that, in the medium term, the company generates a rate of return on the resources entrusted to it by the investors at least equal to the rate of return required by the latter. If this is the case, the company will create value. Otherwise, it will destroy value, leading investors, if it continues to do so, to withhold funds from it and cause the value of its securities to fall, leading to a change in management or bankruptcy. In terms of risks, the financial

manager must identify and manage the company's risks so that the company's operational performance is not jeopardised by financial risks! Finally, the financial manager guarantees the company's compliance with the ESG commitments the company has made to the investors who finance it.

- The financial manager is also a strategist who can be led to question the scope of the company's activities.

Questions

1/Should the unexpected announcement of a rise in interest rates automatically result in a drop in the stock market index?

2/Would your answer be the same if the announcement had been anticipated by the market? So what is the most important factor when valuing securities?

3/Other than the word "market", what is the key word in corporate finance?

4/What can a shareholder who disagrees at all with the ESG policy of a given company do? What impact will this have on the cost of financing this business if it is not alone in acting that way?

5/You are offered a loan at 3.5% over 10 years without guarantee, and a loan at 3% over 10 years with guarantee. You need the loan. How should you go about deciding which loan to take out?

6/What can a student looking for a job who does not agree with the ESG policy of a given company do? What effect will this have on the company if this student is not alone in doing that?

7/Enel, the Italian electrician, issued a $1.5bn loan in 2019 at 5 years with a coupon of 2.65%, or 5 basis points (0.05%) below its reference curve. In the event that Enel is unable to increase the share of renewable energy from 45.9% to 55% by 2021, the coupon would be increased by 25 basis points from 2022 to 2024, representing an additional cost of $11.25 million for Enel. If Enel benefits from this 0.05% reduction in the cost of its borrowing, who bears this reduction in interest rates? Why?

8/How important is it to think in terms of an offer of and a demand for securities, and not in terms of an offer of and a demand for capital, for:

- shares;
- bonds;
- medium-term syndicated loans;
- bilateral bank loans.

Why?

9/What other financial term should immediately spring to mind when you hear the word "returns"?

10/What other financial term should immediately spring to mind when you hear the word "risk"?

11/What are the two biggest flaws of a bad financial manager?

12/Why do you believe management has to do some roadshows before issuing new shares or bonds?

13/Why would you finance a firm's investments with a very short-term loan? What would the drawback be?

You'll find more questions at www.vernimmen.com.

ANSWERS

Questions

1/*As an automatic reaction, yes, as value moves in the opposite direction to interest rates.*
2/*The answer in this case would be no. The most important factor in valuing securities is anticipation.*
3/*Value.*
4/*If shareholders do not agree with the company's ESG policy, they may vote against certain decisions of the directors. If they are alone, their vote will have little effect. If many of them do so, shareholders may eventually obtain a change in management or strategy. Shareholders can also usefully "vote with their feet", i.e. sell their shares! If many shareholders do this, the share price will go down. This decision will have a greater impact if executive compensation is partly linked to the share price. The corollary effect will be an increase in the cost of financing the business.*
5/*Is it worth providing a guarantee for a gain of 0.5%?*
6/*The student can choose not to join this company. . . and let it be known! If many students decide to turn down job offers from companies that do not act responsibly in terms of CSR, the effect will be more significant: given the shortage of talents and if the snowball effect works, these companies will eventually have to review their strategy or risk seeing their skills weaken. The student could also decide to join the company, to contribute with others to changing it from within, but this is a longer-term action and more uncertain in terms of results.*
7/*Investors, who do not necessarily seek to maximise their wealth at all costs, and who may want to take part in the fight against global warming by encouraging companies on the margin to carry out environmentally friendly actions, even if it means obtaining a lower return on their investments.*
8/*In order: 1 = very important; 2 = of moderate importance; 3 = unimportant: 1,2,2,3, because they are more or less easily traded.*
9/*Returns, the two are inextricably linked.*
10/*Risk, the two are inextricably linked.*
11/*Short-sightedness and poor marketing skills.*
12/*This is called marketing: they are trying to sell at best one product, which is a financial instrument in order to lower their cost of funding.*
13/*To benefit from lower interest rates (as we will see in Chapter 19, short-term interest rates are generally lower than long-term interest rates). But in that case the firm will run a strong liquidity risk as it will constantly be subject to the availability of loans on the market. The firm would probably be better off taking a long-term financing.*

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