

Introduction to Law and to Finance

Module Introduction and Overview

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1 Introduction to the Module

This module, *Introduction to Law and to Finance*, is designed to introduce you to the basic concepts of finance and law. It does not require previous study of the two subjects although it will add to your knowledge if you have studied an undergraduate module in either of two disciplines. This module intends to be an entry point in the world of finance and the law upon which finance is based. It is designed to enable you to learn some of the basic principles of law and of financial techniques as foundations for the detailed study of finance and financial law that you will study in subsequent modules of the MSc degree.

This module aims to go further than presenting the basics of law and of financial techniques, for the thrust of the academic programme on Finance and Financial Law is the close relationship between law and financial economics. This module is designed to emphasise this relationship and draw your attention to the fact that legal rules and principles play an important role in the structure and operations of financial markets.

Our intention is that after successfully completing the module, students from different backgrounds will understand the basic principles of law and how they interact with finance. We will try to remind you of that close relationship and enhance your understanding of law by way of real examples as to how law affects the operation of financial markets.

Finance and promises

The fundamental element of all finance is a promise: funds are transferred between parties on the basis of a promise. The recipient promises to pay to the supplier of funds an amount sufficient to cover the initial investment and to pay a return (profit or yield) to compensate the investor for two things:

- his or her willingness to undertake the *risk* involved, and
- his or her patience in foregoing the use of the principal for a period of *time*.

It is not difficult to see the fragility of those promises and necessarily the fragility of the relationships underlying financial markets. Some people cheat and lie. Others have no intention of keeping their promises. Some people forget and most people are not always capable of discharging the promised obligations even if they honestly intend to. Records are lost and promises once given are forgotten. All people die. Few people trust wholeheartedly what they are told. Most people, particularly bankers, want some sort of assurances that promises are kept.

But promises are difficult to value. Dishonest people have no intention of sticking to them, which makes them more likely to promise a lot. Even honest people behave oddly under the pressure of too much debt. Banks and other financial firms as gatekeepers in the flow of funds have therefore every reason to be suspicious. Financial markets rely on good promises. This is obvious and reasonable but on close inspection it tends to advantage the dishonest, with

very serious implications for access to finance. Unless banks and other sources of finance such as insurance companies, institutional investors or ordinary stock holders have trust and confidence that the promises will be kept, they are unlikely to part with their money.

Trust in the value of promises is based on personal experience. People tend to trust individuals whom they know, and know that they will pay. Unless law recognises and protects promises, financial intermediaries such as banks and investors will only provide funds on the basis of personal experience and trust, normally confined to close friends, family, political and business acquaintances and very wealthy people who can reassure others that they will pay back. The entire financial system would collapse under the uncertainty caused in the absence of legal institutions.

Poor people do not tend to have wealthy friends and therefore financial markets operating on the basis of personal connections are grossly unfair for ordinary people. They raise barriers to finance opportunities and prevent bright individuals from realising their potential.

In major financial markets the promises involved in finance usually take the form of a written contract. Those contracts take the form of specific financial securities such as bonds, bills, loans, equities or derivatives, with terms and conditions in supporting documents. And those contracts are traded on financial markets, as when equities are traded on stock markets.

To fix those ideas, consider how these common forms of finance encapsulate a promise:

- A simple bond issued by a corporation, government or other body is a contract where, in return for a loan, the bond issuer promises to repay the principal at a named date and to pay interest of a fixed amount on certain dates. (There may also be other rights and obligations contracted by the bond holder and issuer.)
- A bank loan is where the borrower promises to repay the principal and to pay interest (at a fixed or variable rate) in the future. A bank deposit is similar in that the owner lends money to the bank in return for a promise that interest will be paid and the principal will be paid (a withdrawal honoured) under certain conditions.
- An equity (a share or stock), when issued, involves the buyer putting money into the issuing company in return for a promise that he or she has a share in the current and future value of the company, determined by potential future profits. If the company's stock is listed on a stock exchange it also involves a promise that his or her share is marketable on the exchange.
- Derivatives, such as *call options*, are also promises that take the form of a contract. In return for paying a premium, the owner has rights promised to him or her – the right, but not the obligation, to buy the underlying security in the future at a price specified in the derivative contract.

Returns, time and risk

We hope you can see why we say that the fundamental element of all finance involves a promise.

Focusing on the idea that all finance involves a promise enables us to see why finance people and financial lawyers focus attention on three universal concepts of finance:

- returns
- time
- risk.

In this section, we wish to explore a bit further the relation between the promise in finance (or its form as a contract), and returns, time and risk.

We hope that by exploring returns, time and risk, you will also solve the puzzle:

- what is the connection between the law subjects you will study in Units 1 through 5 of this module and the concepts and tools of finance that you will study in Units 6 through 8?

The puzzle arises because in people's minds the basic elements of law are not usually associated with basic mathematical and statistical concepts. The very appearance of the units dealing with each is different, for the law units are wordy while the units on basic quantitative financial tools use symbols and equations. Enabling you to understand the connection between the units of this module that deal with law and the units that deal with quantitative financial tools is the main objective of this section.

The answer to the puzzle is that in finance both sets of concepts – basic legal concepts and finance ideas – enable us to deal with the returns, the time element, and the risk element of finance.

Returns

Finance involves a transfer of funds with a promise to repay and to meet other conditions, and in capitalist markets the funds will only be provided if the recipient's promise enables the provider of funds to expect a profit. The expected profit on the investment, its expected return or yield to the investor, is measured as a percentage rate of return per year (or over some other period).

The return can take several forms, but the most common are interest (on bonds, bills, and deposits), dividends (paid on a company's shares), and capital gains (increases in the price of marketable securities). In some finance, such as Islamic finance, interest is not permitted, but other forms of return are.

The expectation of a return is based on the promise or contract involved in the provision of finance although the promise does not itself specify the return that can be expected. A fixed interest bond, bill or deposit does include the payment of a return on the original investment at a fixed rate.

But a firm that raises money from a variable-rate loan only contracts to determine the interest rate variations according to particular rules, instead of fixing the return. A firm that raises money by issuing new equities, common stock, makes a contract which entitles the shareholder to a share of the company's value; it does not guarantee that dividend payments will be made at any positive rate but the firm does effectively promise to provide information to enable the shareholder to form an expectation about the profit on his or her investment in the share.

The law provides mechanisms to support and enforce the promises made in finance. Finance rests upon the ability to quantify the returns on finance, for financial decisions require people to be able to judge and compare returns with exact tools.

The return on finance is a reward for transferring the funds, but why should a reward be necessary?

One reason is because of *time* – the investor foregoes the use of the money for a period of time, and requires a reward as compensation. The other reason is *risk* – the investor faces the risk that the recipient will not keep the promise to pay, and requires a reward to compensate for the risk. Additionally, the investor faces other risks and a return is required to compensate for all perceived risk.

The returns on a financial security are reducible to the return due to time plus the return due to risk, and the distinction between the two components is fundamental to many of the innovations in financial markets. A riskless security (commonly defined as government bonds issued by the US Treasury or the UK) is assumed to pay a return that reflects only time.

Time

The reward for time has two rationales.

First, when economists think how an isolated individual would behave they assume that individuals innately have impatience: people would prefer \$100 today rather than the certain promise that they will receive \$100 one year later.

Perhaps a certain promise of \$100 + \$5 (= \$105) after one year would be as desirable as \$100 today. In that case, their impatience could be described as a *time preference rate* of 5 per cent per year (\$5 as a percentage of the principal \$100).

The second rationale is of more practical relevance to individuals, banks or firms operating in the context of well-developed financial markets. If money is invested for a period of time, a return is required because the investor is foregoing alternative uses that would have compensated for the time the money is tied up. If, for example, it is invested in a corporate bond for a year, the investor expects to be compensated for the fact that he or she could have invested in a risk free US Treasury bond for that period. The return on the US Treasury bond is the 'opportunity cost' of investing in the corporate bond for that period of time. If the Treasury yield is 5 per cent per annum,

that is a measure of the 'opportunity cost of time' for which the investor must be compensated.

The law recognises the value of time, and the requirement for a reward for time, both in Contract Law and in quantifying payments of damages for torts.

The financial techniques you study in this module are the basis for such calculations, whether by courts or in the normal course of valuing financial securities.

The main tools are those you will study in Unit 6, where we teach the principles that enable us to calculate compound interest. There, too, we show how to use the techniques for calculating the net present value of future returns. In the example we have used here, the 'impatient individual' attaches a 'present value' of \$100 to a future sum of \$105, but finance uses simple quantitative techniques to calculate the 'present value' of more complex streams of future income.

Risk

Arguably, the most important activity of financial markets is their ability to trade in risk. That enables firms and individuals to manage risk and, for that to happen, markets set a price for risk.

Finance entails several types of risk and financial markets have developed the ability to trade in and manage many of them. Both law and the techniques of financial analysis are the foundations for that process, and each has particular roles.

Law is the main (but not the only) instrument for controlling the risk that a lender might suffer due to the possibility that the borrower, or the managers of the borrowing firm, will commit fraud or that the borrower or an intermediary acts with negligence. The law of torts, which we introduce in this module, is the basis for compensation in respect of such behaviour. Even if there is no fraud or negligence, a borrower might default on a loan because of the risks of operating its business in fluctuating markets. If that default involves insolvency (bankruptcy), the law provides the framework for dealing with the conflicts of interest between all the different types of creditor.

However, the roles for the law come into play after the risk has been realised: the possible bad event has occurred. The concept of risk as a component of the return on finance is forward looking. It deals with the degree of probability with which bad outcomes will occur over the life of the investment.

The law has a role in reducing risk in that forward looking sense, for investors who know that the law will efficiently judge and punish fraud believe that it will deter fraud and therefore reduce the risk of it. Similarly, the belief that there is an efficient bankruptcy law which will enable bad outcomes to be dealt with fairly and at minimum cost enables lenders to calculate that the cost of a risky future is lower than if there were no such law.

Another example of the role of law in overcoming risk is that appropriate laws and an efficient judicial system can enable lenders to lend against

collateral, which reduces their risk. We can illustrate the importance of law in that context by comparing different countries.

Consider the value of land as security for loans. Most countries in the world recognise the value of property rights as collateral. It is true that the notion that someone may lose his or her home because of failure to repay debt to a faceless multinational bank is distasteful, but on closer inspection it has nothing to do with the cruelty of individuals. It goes back to the inherent fragility of promises and the need to reassure investors and financiers that the debtor has incentives to keep to his or her word.

With regard to the importance of property rights and enforcement mechanisms for the functioning of financial markets, study after study has shown that in jurisdictions where it is easier for the financier to seize collateral, the more lending takes place. In England, for example, it takes one year on average at a cost of 5 per cent of the value of the house to repossess a house from a defaulting borrower. Mortgage loans amount to a staggering 52 per cent of total income (GDP). In Italy, with similar per capita income, it takes on average four years and 20 per cent of the value of the house in legal costs and lawyers' fees to repossess a house upon default. The value of home loans in Italy is 5 per cent of GDP, only one tenth of the relative value of home loans in England. The high cost of enforcement and the relatively poor quality of the judicial system, demonstrated by the delays and the prohibitive legal expenses of the legal system, affect the cost of loans and prevent the flow of funding to those who need it most (statistics from Bianco *et al*, 2002).

The risks of fraud, default or bankruptcy refer to large singular events. The risks that are the core of financial markets' everyday business arise from the continuous volatility of financial markets themselves. An investor in the shares of a company, for example, faces the risk that the future price of the share, determined by market demand and supply, will fluctuate widely. Even if the future trend of the price is upward at a rate that gives a positive return, as capital gains, adequate to compensate for time, large fluctuations of the daily price around that trend create the risk that the capital gain will not be realised when the share is sold. To compensate for that risk, the expected rate of return would have to be higher than the compensation for time: there has to be a risk margin, risk premium, or 'spread' over the risk-free return for time.

In Unit 7 we use concepts of frequency, probability, and chance to help us understand risk and how financial markets generate a price for risk. Those risks might be the risks that result from the continuous volatility of market prices, or the risk of the large singular events we discussed before. Both types of risk are priced by financial analysts. Insurance companies, for example, are able to calculate the premium (price) for an insurance policy against fraud or negligence; the price of credit derivatives concerns the probability of a borrower's default; and using the probability of default or insolvency, the credit rating agencies (such as Standard and Poor's) give ratings to companies which deter-

mine the risk premium lenders require on bonds and derivatives. It became evident in the financial crash of 2008 that the ways those tools had been used by banks and credit rating agencies in the preceding boom (or speculative bubble) were seriously flawed, but the basics remain valid even though we need to be careful about how they are applied.

2 The Module Authors

Apostolos Gkoutzinis is responsible for the first five units, on law, and **Laurence Harris** provided the last three units, covering financial concepts and mathematical and statistical methods.

Dr Gkoutzinis is an associate in the Capital Markets Group of the London office of Shearman and Sterling, a major international law firm, where he advises investment banks and corporations on all aspects of international securities and capital markets law.

Prior to joining the firm, he was Lecturer in Financial Law at the University of London, where he taught a range of modules on international finance and capital markets law. He has also published extensively in international banking and financial law journals and has spoken in conferences and seminars in Europe and the US. Apostolos is a graduate of Harvard Law School (LLM '05), the University of London (PhD '04, LLM '04) and the Aristotle University of Thessaloniki (BA 1997). His book, *Internet Banking Law*, was published by Cambridge University Press in November 2006.

Laurence Harris, who has written Units 6–8, was Professor of Economics in the University of London and directed CeFiMS as Chairman of the Department of Financial and Management Studies, SOAS, University of London. He created the financial economics distance learning centre at SOAS, and has previously taught at several universities including London School of Economics; University of California Berkeley; Harvard University; Birkbeck, University of London; the Open University; University of Zimbabwe. For several years, he chaired the University of London External System: Academic Board. Professor Harris has published nine books and eighty articles. Books include *Monetary Theory*; *New Perspectives on the Financial System*; *City of Capital*, and *Peculiarities of the British Economy*.

3 Study Resources

This module will refer to three key texts which will introduce you to the law and the study of law, along with access to a number of current or important articles on law and finance.



Key texts

Holland J & J Webb (2019) *Learning Legal Rules: A Students' Guide to Legal Method and Reasoning*. 10th Edition. Oxford UK: Oxford University Press.

Barker D (2014) *Law Made Simple*. 13th Edition. Abingdon UK: Routledge.

Partington M (2019) *Introduction to the English Legal System 2019–2020*.

14th Edition. Oxford UK: Oxford University Press.

The Partington textbook is a useful guide to how law is made and practiced in the UK and is included here as a reference. You will find it particularly useful in Unit 2.

4 Module Overview

This module is structured in eight units, which follow after this general introductory note on the importance of financial markets for the real economy and the importance of law for financial markets. **Unit 1** will introduce the concept of law and the method applied by lawyers. **Unit 2** is about the sources of law and how we use them. **Unit 3** introduces the basic principles of the law of contracts, the most fundamental foundation of financial markets – indeed, any markets. **Unit 4** introduces the law of property rights, which are essential economic assets in any economy. **Unit 5** deals with the law of torts, which imposes on those disturbing others or causing economic loss through negligence or malicious action such as fraud or defamation the obligation to compensate their victims.

Unit 6, 7 and 8 introduce the basic elements of financial theory.

Unit 6 introduces the concept of returns on financial securities. The unit examines the relationship between the return on a security and the market price for the security. The unit then introduces and explains compound interest, discounting, and the yield to maturity, for bonds which pay out an income stream over a number of time periods. The unit also analyses the returns on equities.

Unit 7 introduces you to the ways in which financial risk is measured. It introduces a distinction between volatility risk and downside risk, outlines standard measures of each, and explains those measures' foundations in basic concepts from probability theory. At the end of the unit, the concept and measurement of the 'equity premium' is introduced, linking securities' risks to the returns they have produced historically.

Unit 8 begins by explaining some of the more basic statistical tools which financial experts and economists use to analyse relationships between financial and economic variables.

Part 1 Introduction to Law

Unit 1 Introduction to Law

- 1.1 The Functions of Law
- 1.2 Subject Areas of Law
- 1.3 Jurisdictions of the World and 'Legal Families'
- 1.4 Legal Method and Legal Reasoning
- 1.5 The Relationship between Law and Equity

- 1.6 Finding Law
- 1.7 Summary

Unit 2 Sources of Law and How To Use Them

- 2.1 Introduction to the Sources of English Law
- 2.2 Judicial Decisions as Sources of Law: Precedent and the Court System
- 2.3 Reading Cases
- 2.4 Statutory Law and Statutory Interpretation
- 2.5 European Union Law as a Source of English Financial Law
- 2.6 Summary

Unit 3 Introduction to Contract Law

- 3.1 Unit Introduction
- 3.2 Financial Markets and the Law of Contracts
- 3.3 Freedom of Contract
- 3.4 Essentials of a Valid Contract
- 3.5 Offer and Acceptance
- 3.6 Consideration
- 3.7 Formalities
- 3.8 Terms and Conditions

Unit 4 Introduction to Property Law

- 4.1 Unit Introduction
- 4.2 Financial Markets, Property Rights and the Law of Property
- 4.3 Property Rights and the Fundamentals of Property Law
- 4.4 The Transfer of Property Rights and Obligations
- 4.5 Introduction to the Concept of Trust
- 4.6 Equity and Equitable Remedies
- 4.7 Agency and Fiduciary Duties

Unit 5 Introduction to Tort Law

- 5.1 Unit Introduction
- 5.2 What is a Tort?
- 5.3 The Function of the Law of Torts and Financial Markets
- 5.4 Negligence
- 5.5 Economic Loss
- 5.6 Misrepresentation
- 5.7 Summary and Conclusion

Part 2 Introduction to Finance

Unit 6 Returns and Time – the Price of Time

- 6.1 Introduction
- 6.2 Returns, Time and Risk
- 6.3 Returns and the Price of Financial Securities
- 6.4 Compound Interest
- 6.5 Discounting and the Yield to Maturity
- 6.6 Returns on Equities
- 6.7 Crunching the Numbers

6.8 Conclusion

Unit 7 Returns and Risk – the Price of Risk

- 7.1 A Price for Risk
- 7.2 Risk of What?
- 7.3 Probability Distributions – the Basis for Measuring Risk
- 7.4 The Real World – Volatility
- 7.5 Downside Risk
- 7.6 Some Criticisms of Risk Measures Based on Standard Deviations
- 7.7 Risk and Returns – the Equity Premium
- 7.8 Conclusion

Unit 8 Interpreting Financial Sector Data

- 8.1 Introduction – Cause and Effect
- 8.2 Is There a Correlation of Bank Rate and Bond Yield?
- 8.3 Do Countries' Legal Systems Affect the Development of Their Financial Systems?
- 8.4 Understanding the Use of Regression Analysis
- 8.5 Interpreting the Regression Results of La Porta, Lopez-de-Silanes, Shleifer & Vishny
- 8.6 Conclusion

5 Learning Outcomes

When you have completed the study of this module and its readings you will be able to:

- demonstrate the importance of law as a component of vibrant and successful markets, particularly financial markets
- analyse the importance of the law of contracts and the law of non-contractual liability for the smooth functioning of financial markets
- discuss the basic principles, sources and methods of law
- identify and discuss the points of contact between law and market behaviour of investors, banks, corporations and other players in national and international financial markets
- use basic mathematical formulas that are used in financial decisions
- discuss concepts of returns, risk, and time, which underpin rational financial decisions and interact to determine prices of financial securities
- explain how returns, risk, and time are represented by mathematical formulas used in finance
- discuss how concepts of probability relate to risk and how they are represented by statistical formulas used in finance.

6 Summary

In this Introduction to the module we have outlined the idea that the fundamental element of finance is a promise. The provider of finance accepts

such promises and transfers money in the expectation of receiving a profit, or return. The return on any financial investment is determined by two elements: time and risk.

Both the elements of law and the basic quantitative tools of finance that you will study in this module relate to those aspects of finance: the promise, the returns, time and risk.

As you study them, please keep that relationship in mind and reflect on how each topic relates to those fundamental ideas. In your future modules in the MSc programme you will explore particular topics relating to returns, time, and risk, and you will make use of the elements and tools that you learn in this module.

7 Study Advice

As with all other modules, you are advised to have a pen and paper while you are studying the text. Make sure that you complete the readings, making clear notes on important points, and answer any questions or exercises set. If you are not confident that you have understood a particular section, go back and try again. It is better to spend more time in understanding a particular point than continuing regardless. The module is structured in its development of the study material, and so future sections build on previous information, and you will be at a disadvantage if you did not understand it in the first place.

We do not assume that you have access to well-stocked libraries or bookshops, but we do assume that you have access to the web and to specialist electronic resources, which form part of the study material, like those available through WESTLAW. You will need to become familiar with the University of London Online Library, available through the VLE. The module Units will indicate when to connect to the Internet, and for what purpose.

Reference

Bianco M, T Jappelli and M Pagano (2002) 'Courts and banks: Effects of judicial enforcement on credit markets'. *Centre for Economic Policy Research: Discussion Paper*, 3347, April.