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# Chapter 1: Introduction

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## General introduction to the subject

This subject guide provides an introduction to the principles of banking and finance. Therefore it covers a broad range of topics using an economic perspective, and aims to give a general background to any student interested in the subject of banking and finance.

The contents of the subject guide can be broken down into three main parts:

- In Part I, we investigate the structure and functions of financial systems. We focus on each of the three main entities that compose financial systems: financial intermediaries, securities and financial markets. Then we find out the difference in the relative importance of financial intermediaries and financial markets around the world, and thus we propose a historical and economic investigation of the reasons behind the emergence of bank-based systems against market-based systems in different countries.
- In Part II, we examine the issues that come under the broad heading of principles of banking. Here we examine the key economic reasons used to justify the existence of financial intermediaries (and specifically banks). We then investigate the peculiar nature of banking regulation. Finally we outline the key risks in banking and the main methods used for risk management. The areas covered include role of financial intermediation, banking regulation and banking risk management.
- In Part III, we move to the issues known as principles of finance. Here we will examine the techniques used by firms to value real investment projects, and the models used by investors to value bonds and stocks. We then investigate the issues related to the formation of an optimal portfolio by investors, and we derive the equilibrium asset pricing models. Finally, we investigate the efficiency of the market in pricing securities, and thus we propose a theoretical and empirical validation of the efficient market hypothesis. The areas involved include capital budgeting, securities valuation, mean-standard deviation portfolio theory, asset pricing models and informational market efficiency.

**24 Principles of banking and finance** is a compulsory unit for the BSc Banking and Finance. This is an important subject because it establishes many of the fundamental concepts in banking and finance that will be developed in later subjects in the degree, such as **92 Corporate finance**, **29 Financial intermediation** and **143 Valuation and securities analysis**.

Note that the guide uses US references, takes a US view and uses US terminology.

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## Learning objectives

By the end of this subject guide, and having done the relevant readings and activities, you should be able to:

- discuss why financial systems exist, and how they are structured
- explain why the relative importance of financial intermediaries and financial markets is different around the world, and how bank-based systems differ from market-based systems

- understand why financial intermediaries exist, and discuss the role of transaction costs and information asymmetry theories in providing an economic justification
- explain why banks need regulation, and illustrate the key reasons for and against the regulation of banking systems
- discuss the main types of risks faced by banks, and use the main techniques employed by banks to manage their risks
- explain how to value real assets and financial assets, and use the key capital budgeting techniques (Net Present Value and Internal Rate of Return)
- explain how to value financial assets (bonds and stocks)
- understand how risk affects the return of a risky asset, and hence how risk affects the value of the asset in equilibrium under the fundamental asset pricing paradigms (Capital Asset Pricing Model and Asset Pricing Theory)
- discuss whether stock prices reflect all available information, and evaluate the empirical evidence on informational efficiency in financial markets.

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## Essential reading

The following text has been chosen as the core text for this subject guide, due to its extensive treatment of many (but not all) of the issues covered in the subject guide and its up-to-date discussions:

Mishkin, F and S. Eakins *Financial Markets and Institutions*. (Boston, London: Addison Wesley, 2009) sixth edition [ISBN 978032155112].

However, this core text does not cover the material for the entire subject guide.

To analyse comparative financial systems, the essential reading also includes:

Allen, F and D. Gale *Comparing Financial Systems*. (Cambridge, Mass.: MIT Press, 2001) [ISBN 9780262511254].

To investigate issues of principles of finance (capital budgeting and valuation of financial assets, risk and return of financial assets and portfolios), the following text is also essential reading:

Brealey, R.A, S.C. Myers and F. Allen *Principles of Corporate Finance*. (Boston, London: McGraw-Hill/Irwin, 2008) ninth edition [ISBN 9780073368696] Chapters 2, 3, 6, 8, 9 and 11.

The subject guide must be used in conjunction with these three essential textbooks. At the head of each chapter of this guide, we indicate essential reading from Mishkin and Eakins. Alternatively, when no relevant readings are available in Mishkin and Eakins, we indicate reading from either Allen and Gale or Brealey, Myers and Allen.

Several web sites are indicated in the subject guide, mainly as references for activities you are required to do. Please visit these web sites whenever indicated.

For some of the activities in the guide, you need to download and read journal articles which are available in the online library. To help you read extensively, all external students have free access to the University of London Online Library where you will find either the full text of or an abstract of many of the journal articles listed in this subject guide. You will need to have a username and password to access this resource. Details can be found in your *Student handbook* or online at:

<http://www.external.shl.lon.ac.uk/?id=lse>

- Dow, S., 'Why the banking system should be regulated', *Economic Journal* 106 (436) 1996, pp.698–707.
- Dowd, K., 'The Case for Financial Laissez-Faire', *Economic Journal* 106 (436) 1996, pp.679–87.
- Gordy, M.B. 'A comparative anatomy of credit risk models', *Journal of Banking and Finance* 24 (1-2) 2000, pp.119–49.

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## Further reading

As alternatives, you may wish to look at the following texts that are standard for many undergraduate banking and finance courses. A full bibliography of the supplementary reading is provided below; we will indicate the relevant chapters in these other texts at the start of each chapter throughout the guide.

- Bain, A.D. *The Economics of the Financial Systems*. (Oxford: Blackwell Publishers Ltd, 1992) [ISBN 9780631181972] Chapter 4.
- Brealey, R.A. S.C. Myers and F. Allen *Principles of Corporate Finance*. (Boston, London: McGraw-Hill/Irwin, 2008) ninth edition [ISBN 9780073368696] Chapter 8.
- Buckle, M. and J. Thompson *The UK Financial System*. (Manchester: Manchester University Press, 2004) fourth edition [ISBN 9780719067723] Chapters 1, 2 and 17.
- Copeland, T.E., J.F. Weston and K. Shastri *Financial Theory and Corporate Policy*. (Boston, London: Pearson Addison Wesley, 2005) [ISBN 9780321223531] Chapters 2, 4, 5, 6 and 10.
- Elton, E.J., M.J., Gruber, S.J. Brown, and W.N. Goetzmann *Modern Portfolio Theory and Investment Analysis*. (New York: John Wiley & Sons, 2007) seventh edition [ISBN 9780470050828] Chapter 17, pp.59 and 61.
- Freixas, X. and J.C. Rochet *Microeconomics of Banking*. (Boston, Mass.: The MIT Press, 2008) [ISBN 9780262061933] Chapters 2, 8 and 9.
- Grinblatt, M. and S. Titman *Financial Markets and Corporate Strategy* (Boston, London: The McGraw-Hill/Irwin, 2002) second edition [ISBN 9780072294330] Chapters 4, 5, 6, 9 and 10.
- Heffernan, S. *Modern Banking in Theory and Practice*. (Chichester: John Wiley and Sons, 2005) [ISBN 9780471962090] Chapters 2, 3, 4 and 5.
- Luenberger, D.G. *Investment Science*. (New York: Oxford University Press, 1998) [ISBN 9780195108095] Chapters 6 and 7.
- Saunders, A. and M.M. Cornett *Financial Institutions Management: a Risk Management Approach*. (New York, McGraw-Hill/Irwin, 2007) sixth edition [ISBN 9780077211332] Chapters 2–6 and 8–12.
- Sinkey, J.F. *Commercial Bank Financial Management in the Financial-Services Industry*. (Upper Saddle River, NJ: Pearson Education Inc., 2002) [ISBN 9780130984241] Chapter 16.
- Smart, S.B., W.L. Megginson and L.J. Gitman *Corporate Finance*. (Mason, Ohio: South-Western/Thomson Learning, 2004) [ISBN 9780324269604] Chapters 4, 7 and 10.

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## References

For certain topics, we will also list journal articles or texts as supplementary references to the additional reading. It is not essential that you read this material, but it may be helpful if you wish to better understand some of the topics in this subject guide.

A full bibliography of the supplementary references is provided below:

- Akerlof, G. 'The Market for "Lemons": Quality, Uncertainty and the Market Mechanisms', *Quarterly Journal of Economics* 84(3) 1970, pp.488–500.

- Allen, F. and R. Karjalainen 'Using Genetic Algorithms to Find Technical Trading Rules', *Journal of Financial Economics* 51(2) 1999, pp.245–71.
- Altman, E.I. 'Managing the commercial lending process' in Aspinwall, R.C. and R.A. Eisenbeis *Handbook of Banking Strategy*. (New York: John Wiley and Sons, 1985) [ISBN 9780471893141] pp.473–510.
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- Bank of England *Financial Stability Report*, no. 21 (London, 2007).
- Basel Committee on Bank Supervision *Overview on the New Capital Accord*. (Bank for International Settlements, January 2001) p. 27.
- Benston G. and C. Smith 'A Transaction Costs Approach to the Theory of Financial Intermediation', *Journal of Finance* 31(2) 1976, pp.215–231.
- Bernard, V. and J. Thomas 'Post-earnings announcement drift: Delayed price response or risk premium?', *Journal of Accounting Research* 27(3) 1989 supplement, pp.1–36.
- Boyd, J.H. and M. Gertler 'Are Banks Dead? Or Are the Reports Greatly Exaggerated?' in *The Declining(?) Role of Banking*. (Chicago: Federal Reserve Bank of Chicago, 1994).
- Brock, W., J. Lakonishok and B. LeBaron 'Simple Technical Trading Rules and the Stochastic Properties of Stock Returns', *Journal of Finance* 47(5) 1992, pp.1731–764.
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- Diamond, D.W. 'Financial Intermediation and Delegated Monitoring', *Review of Economic Studies* 51(166) 1984, pp.393–414.
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- Dimson, E., Marsh, P. and M. Staunton 'Global evidence on the equity risk premium', *Journal of Applied Corporate Finance* 15(4) 2003, pp.27–38.
- Dow, S., 'Why the banking system should be regulated', *Economic Journal* 106 (436) 1996, pp.698–707.
- Dowd, K., 'The Case for Financial Laissez-Faire', *Economic Journal* 96(106) 1996, pp.679–87.
- Fama, E. 'Efficient Capital Markets: A Review of Theory and Empirical Work', *Journal of Finance* 25(2) 1970, pp.383–417.
- Fama, E. 'Banking in the theory of finance', *Journal of Monetary Economics* 6(1) 1980, pp.39–57.
- Fama, E. and K.R. French 'Permanent and Temporary Components of Stock Prices', *Journal of Political Economy* 96(2) 1988, pp.246–73.
- Fama, E. 'Efficient Capital Markets: II', *Journal of Finance* 46(5) 1991, pp.1575–618.

- Goddard, J.A., P. Molyneux and J.O.S. Wilson *European Banking. Efficiency, Technology and Growth*. (Chichester: John Wiley & Sons, 2001) [ISBN 9780471494492] pp.109–20.
- Gordy, M.B. 'A comparative anatomy of credit risk models', *Journal of Banking and Finance* 24(1–2) 2000, pp.119–49
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- Gurley, J.G. and E.S. Shaw *Money in a Theory of Finance*. (Washington D.C., Brookings Institute, 1960) [ISBN 9780815733225].
- Hackethal, A. and Schmidt, R.H. 'Financing Patterns: Measurement Concepts and Empirical Results', Frankfurt Department of Finance Working Paper no. 125 (2004), p.30.
- Haugen, R. and J. Lakonishok *The Incredible January Effect*. (Dow Jones-Irwin, Homewood, Illinois, 1988) [ISBN 9781556238710].
- Jacquier, E., Kane, A. and A.J. Marcus 'Geometric or Arithmetic Means: A Reconsideration', *Financial Analysts Journal* 59(6) 2003, 46–53.
- Jegadeesh, N. and S. Titman 'Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency', *Journal of Finance* 48(1) 1993, pp.65–91.
- Jensen, M.C. 'The performance of Mutual Funds in the Period 1945–64', *Journal of Finance* 23(2) 1968, pp.389–416.
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Trueman, B., M.H. Wong and X.J. Zhang 'The Eyeballs Have it: Searching for the Value in Internet Stocks', Working Paper, (University of California, April 2000).

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## **The structure of the subject guide**

Part I of the subject guide focuses on financial systems, Part II addresses the key principles of banking, and Part III investigates the principles of finance. The content of the subject guide is as follows.

### **Part I: Financial systems**

- Chapter 2 serves as grounding to financial systems by investigating the functions and structure of financial systems. It thus focuses on each of the three main entities that compose financial systems (financial intermediaries, securities and financial markets).
- Chapter 3 presents a discussion of the features of bank-based systems against market-based systems in different countries around the world.

### **Part II: Principles of banking**

- Chapter 4 focuses specifically on the nature and process of financial intermediation by presenting a discussion of the key theories of financial intermediation (transformation of assets, uncertainty, reduction in transaction costs, reduction of problems arising out of asymmetric information).
- Chapter 5 provides an investigation of the theoretical and practical aspects of regulation of banks, such as arguments for or against regulation, traditional regulation mechanisms and alternatives to traditional regulation.
- Chapter 6 presents discussion of the key risks in banking (credit risk, interest rate risk, market risk) and the main methods of risk management in banks (such as screening, monitoring, duration gap analysis, value-at-risk).

### **Part III: Principles of finance**

- Chapter 7 outlines the concept and techniques of capital budgeting and securities valuation. It focuses first on the valuation of real investment projects using the Net Present Value (NPV), and provides a comparison of NPV with alternative techniques. Then it moves to the models used for the valuation of bonds and stocks.
- Chapter 8 discusses the basics of risk and return of securities and mean-variance portfolio theory. It goes on to derive and discuss the equilibrium asset pricing models (Capital Asset Pricing Model and Arbitrage Pricing Model).
- Chapter 9 focuses on the efficiency of financial markets by providing a theoretical derivation of the concepts of weak, semi-strong, and strong efficiency. It then moves to the discussion of the empirical evidence in favour and against market efficiency.

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## How to use this subject guide

This subject guide is written for students studying Principles of banking and finance. The aim is to help you to interpret the syllabus. It tells you what you are expected to know for each area of the syllabus and suggests the reading which will help you understand the material. It must be emphasised that this guide is intended to supplement the essential textbooks, **not** replace them.

A different chapter is devoted to each major section of the syllabus and the chapter order of this guide follows the order of the topics as they appear in the syllabus.

You need to appreciate that different topics are not self-contained. There is a degree of overlap between the topics and you are guided in this through cross-referencing between different chapters in the guide. However, in terms of studying this guide, the chapters are designed as self-contained units of study, but for examination purposes you need to have an understanding of the subject as a whole.

We suggest that for each topic in the syllabus, you first read through the whole of the chapter in this guide to get an overview of the material to be covered. Then reread the chapter and follow up the suggestions for reading in the essential reading or further reading. After this you should work through the activities.

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## Structure of each chapter

At the beginning of each chapter, you will find a list of aims and learning objectives. These tell you what you can expect to learn from that chapter of the subject guide and the relevant reading. You need to pay close attention to the learning outcomes and use them to check that you have fully understood the topics.

You will then find the essential reading, further reading, and references. The list of essential reading indicates what you need to read as a minimum in order to cover the syllabus. Once you have read a chapter, check that you have covered all the essential reading.

Each chapter contains 'Activities' which apply what you have just learnt in a practical way. Activities are heterogeneous: they include the analysis of institutional web site material, numerical exercises and further readings on the texts. It is very important that you do these activities. For numerical activities (marked with an asterisk\*) we provide answers in Appendix 1 at the end of guide.

Through the whole guide, there are a lot of key terms, all detailed in the 'Key terms' section at the end of each chapter. Compile your own glossary with full definitions and comments on each of these terms, and use it for revision.

At the end of each chapter, look out for sample examination questions, similar to those asked in the final examination. We recommend that you try these sample examination questions during your revision.

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## Examination

**Important:** the information and advice given in the following section are based on the examination structure used at the time the guide was written. Please note that subject guides may be used for several years. Because of this we strongly advise you to always check both the current *Regulations* for

relevant information about the examination, and the current *Examiners' reports* where you should be advised of any forthcoming changes. You should also carefully check the rubric/instructions on the paper you actually sit and follow those instructions.

The **Principles of banking and finance** examination papers is three hours in duration. You will be asked to answer **four** questions from a choice of **eight**. The examination paper is in two sections. You will be required to answer one question from section A, one from section B and two further questions from either section. The Examiners ensure that all the topics covered in the syllabus are examined.

You have to answer four questions, giving you 45 minutes to spend on each question. You should attempt all parts or aspects of a question. Pay attention to the breakdown of marks associated with the different parts of each question. Some questions may contain both numerical and essay-based parts. Examples of these types of questions (or question part) are provided at the end of each chapter of this subject guide.

- For essay-based questions, remember to plan your answer: list the main issue you want to discuss and the order of the discussion.
- Begin the essay-based question with an introduction stating the aims of the essay, and conclude with a summary bringing together the main issues investigated in the essay.
- Please use material only when relevant to the question. Answers including a large amount of irrelevant material are likely to be marked down.
- Answers that simply repeat the subject guide material in a relevant way may be given a pass at best.
- Answers with a clear structure, a good understanding of the material, and originality in the approach are likely to achieve a good mark.

A Sample examination paper is provided in Appendix 2 to this guide.

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## Syllabus

### Part I: Financial systems

1. *Introduction to financial systems*: Role of financial systems (role of households, government and firms in terms of savings and investments). Financial intermediaries, securities and markets. Taxonomy of financial institutions. Nature of financial claims (debt versus equity, bonds and notes, fixed and floating interest rates, common and preferred stocks). Structure of financial markets (direct and indirect finance, dealers and brokers, banks, mutual funds, pension funds and insurance companies).
2. *Comparative financial systems*: Bank-based systems against market-based systems. Legal aspects.

### Part II: Financial intermediaries

3. *Role of financial intermediation*: Nature and process of financial intermediation. Theories of financial intermediation (transformation of assets, uncertainty, reduction in transaction costs, reduction of problems arising out of asymmetric information). Implications of financial intermediation (Hirshleifer model, effect on economic development).

4. *Regulation of banks*: Regulation of banks (free banking, arguments for and against regulation, traditional regulation mechanisms, alternatives to traditional regulation).
5. *Risk management in banking*: Market risks: liquidity risk, interest rate risk, foreign exchange risk. Credit risk: screening and monitoring, credit rationing, collateral.

### **Part III: Principles of finance**

6. *Financial securities*: Risk and return; Portfolio analysis: mean-variance portfolio theory. The portfolio selection process: the correlation of securities returns (single-index model and multi-index models). Asset pricing models: capital asset pricing models (CAPM) and arbitrage pricing model (APT).
7. *Capital budgeting*: Pricing of bonds and stocks. Net pricing value. Project appraisal.
8. *Financial markets*: Transmission of information; Efficient markets. Theory and empirical evidence. Concepts of weak, semi-strong and strong efficiency. Concepts of excess return. Micro-structures.

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## Notes