

Syllabus Course 1: Global financial markets and assets

Do you need help in getting your foot in the investing world? This first course in the **Investment and Portfolio Management Specialization** aims at helping you become an informed practitioner of investments by providing you with the key concepts and the language you need in managing money.

In the first module, we start with a brief review of elementary tools in finance. The next two modules are aimed at giving you an overview of financial markets: what role do financial markets and financial asset serve in a well-functioning economy? You will learn about the wide range of financial instruments available in major asset classes, their specific features and cash flows, and finally, you will learn how to value these securities. In the last module, we look at in detail how financial markets *actually* work, focusing on how and where securities are traded; we will consider how dealer markets, electronic markets, and specialist markets all differ from each other. You will learn about dark pools, algorithmic trading, buying on margin and short selling. You will also learn about the major players (participants) in financial markets, such as the different types of institutional investors, the role of a central bank, or a credit rating agency.

This course is designed for a wide audience. Whether you are a novice in the area of investments, or whether you are managing your own funds, or if you are aspiring to work in asset management in the future, this course will provide you with the key concepts, the terminology – the lingo – and the institutional familiarity you need in managing money in the current, post-crisis financial environment. After this first course, you will be able to list the different financial instruments available to an investor, compare global financial markets, explain the differences between equity, debt, and derivative instruments, and define traditional and alternative asset classes. At the end of this course, you will be well on your way to becoming an informed practitioner of investments.

Module 1: Review of elementary tools in finance

Module 2: Financial system & financial assets: Fixed income securities

Module 3: Financial system & financial assets: Equity securities and derivatives

Module 4: The organization of financial markets and securities trading

Syllabus: Global financial markets and assets

Module 1: Introduction & Review of Elementary Finance Tools

Content overview

This module introduces the ***Investment and Portfolio Management Specialization***, which is made up of four courses. This module discusses how the first course, ***Global Financial Markets and Assets***, is organized. It outlines the different stages of the investment management process, which guides the focus of the Specialization. It also reviews basic finance concepts and tools such as time value of money, computing returns, discounting and compounding.

Learning outcomes

- Familiarize with the organization of the class
- Meet the professor and your peers
- Explain the investment management process
- Review elementary concepts in finance
- Compute present value or future value of a single cash flow
- Compute present value or future value of a stream of cash flows
- Define an annuity or perpetuity
- Apply time value of money tools to solve basic mortgage, loan or retirement problems

Learning activities

- Watch all the video lectures
- Complete polls, assessments, and readings
- Engage in professional interaction: Discussion forum, Facebook
- Make use of additional learning resources

Module content

Welcome and Introduction

1. Lecture: Introduction and welcome to class
2. Lecture: What is the investment management process?

Readings

- Grading policy
- How to use discussion forums

- Meet & Greet: Get to know your classmates
- Discussion: Poll: What is your motivation for taking this course?

Review of Elementary Finance Tools (Part 1): Time value of money

1. Lecture: Back to basics (Part 1.1): What is time value of money?
2. Lecture: Back to basics (Part 1.2): Finding the future value of a cash flow
3. Lecture: Back to basics (Part 1.3): Finding the present value of a cash flow

Reading: Lecture handouts – Review of Elementary Finance Tools Part 1

Practice Quiz: Review of Elementary Finance Tools Part 1

Review of Elementary Finance Tools (Part 2): Valuing streams of cash flows

1. Lecture: Back to basics (Part 2.1): What are annuities?
2. Lecture: Back to basics (Part 2.2): Annuities example: Retirement problem
3. Lecture: Back to basics (Part 2.3): Finding the present value of annuities
4. Lecture: Back to basics (Part 2.4): Annuities example: Loan problem

Reading: Lecture handouts – Review of Elementary Finance Tools Part 2

Practice Quiz: Review of Elementary Finance Tools Part 2

Review of Elementary Finance Tools (Part 3): Effective interest rates compounding periods

1. Lecture: Back to basics (Part 3.1): Computing the effective annual rate
2. Lecture: Back to basics (Part 3.2): Computing effective rates over any period
3. Lecture: Back to basics (Part 3.3): Examples, examples, and more examples
4. Lecture: Back to basics (Part 3.4): Computing the continuously compounded rate

Reading: Lecture handouts – Review of Elementary Finance Tools Part 3

Practice Quiz: Review of Elementary Finance Tools Part 3

Review of Elementary Finance Tools (Part 4): Perpetuities, growing perpetuities and growing annuities

1. Lecture: Back to basics (Part 4.1): Valuing perpetuities and growing perpetuities
2. Lecture: Back to basics (Part 4.2): Valuing growing annuities

Reading: Lecture handouts – Review of Elementary Finance Tools Part 4

Practice Quiz: Review of Elementary Finance Tools Part 4

Summary

1. Using elementary finance tools – Summary

End of Module Graded Quiz: Review of Elementary Finance Tools Part

Additional learning resources

- Listen to an industry expert: Bloomberg's Masters in Business Series Interview with Vanguard CEO Bill McNabb

Module 2: Financial system & financial assets: fixed income securities

Content overview

In this and the next two modules, we cover the key institutional features of financial markets and instruments. We ask the following questions: Why do financial markets exist? What role do they play? What are financial assets and how are they different than real assets? How does it all come together? Basically, this is where I hope you will get to see the big picture of the entire financial system and how it comes together.

Module 2 focuses on fixed income securities. We'll get started with a review of basics of bond valuation. You will learn about short-term money market instruments, U.S. Treasury securities as well as corporate bonds. After module 2, you will be able to describe fixed income securities, be familiar with their institutional features, and identify their cash flows. Finally, you will learn how to value fixed income securities such as Treasury bills, zero-coupon or coupon-bonds and compute yields.

Learning outcomes

- Explain the roles of financial markets
- Distinguish between real and financial assets
- Define and explain money market instruments, zero-coupon and coupon-bonds and features
- Identify the cash flows associated with fixed-income securities
- Define and explain bond market features
- List the different types of Treasury securities and explain pricing and quoting conventions
- List and define other long-term debt instruments such as corporate bonds, mortgage-backed securities, sovereign debt
- Find the value of a zero-coupon or coupon-bonds

Learning activities

- Watch all the video lectures
- Complete polls, assessments, and readings
- Engage in professional interaction: Discussion forum, Facebook
- Make use of additional learning resources

Module content

Introduction

1. Lecture: Introduction – the role of financial markets as a time machine
2. Lecture: A primer on financial assets

Reading: Lecture handouts – A primer on financial assets

Practice Quiz: A primer on financial assets

Basics of bond valuation

1. Lecture: Basics of bond valuation (Part 1)
2. Lecture: Basics of bond valuation (Part 1)

Readings:

- A note on bond valuation
- Lecture handouts – basics of bond valuation

Practice Quiz: Basics of bond valuation

Fixed income securities: Money market instruments

1. Lecture: Money market instruments
2. Lecture: Calculating U.S. Treasury bill prices

Readings:

- Lecture handouts: Fixed income securities – Money market instruments
- Federal Reserve Bank's open market operations (optional)
- Discussion: Watching the Fed for a rate hike

Practice Quiz: Money market instruments

Fixed income securities: Long-term debt instruments

1. Lecture: U.S. Treasury securities
2. Lecture: Other long-term debt instruments

Readings:

- Lecture handouts: Fixed income securities – Long-term debt instruments

Practice Quiz: Long-term debt instruments

Summary

1. Summing up fixed income securities

End of Module Graded Quiz: Financial assets – fixed income securities

Module 3: Financial system & financial assets: equity securities and derivatives

Content overview

In Module 3, we continue our overview of financial markets and instruments. We next focus on two other major asset classes: equity securities and derivative instruments. You will learn about how equity differs from fixed income securities, the cash flows associated with stock and preferred stock and how to find the value of a share. You will also learn about option strategies. After completing module 3, you will be able to describe all major asset classes, including derivative instruments such as options, forwards and futures. You will be able to explain how these differ from each other and their payoffs.

Learning outcomes

- Distinguish between equities and fixed income securities
- Define and explain the features of equity securities
- Identify the cash flows associated with equity securities
- Explain dividend discount model
- Find the value of a share of common stock or preferred stock
- Define and list different types of derivative securities
- Explain option payoffs
- Distinguish between a forward and futures contract
- Explain forward and futures payoffs
- Identify traditional and alternative asset classes

Learning activities

- Watch all the video lectures
- Complete polls, assessments, and readings
- Engage in professional interaction: Discussion forum, Facebook
- Make use of additional learning resources

Module content

Equity securities

1. Lecture: Equity securities
2. Lecture: Basics of equity valuation

Readings:

- A note on equity valuation
- Lecture handouts – Equity securities

Practice Quiz: Equity securities*Derivative securities*

1. Lecture: Derivative securities – Overview
2. Lecture: Derivative securities – Options
3. Lecture: Derivative securities – Futures and forward contracts

Readings:

- A note on option payoffs
- An illustration of a foreign currency forward contract
- Lecture handouts – Derivative securities

Practice Quiz: Derivative securities*Summary*

1. Lecture: Traditional vs. alternative asset classes
2. Lecture: Summing equities and derivatives

Readings:

- Global Alternatives Survey (optional)

End of Module Graded Quiz: Financial assets – equities and derivatives

Module 4: Organization of financial markets and securities trading

Content overview

In this module, we discuss how financial markets actually work. We will talk about different trading venues and the mechanics of securities trading. I will emphasize a lot of terminology and the latest trends in securities trading to familiarize you with the institutional workings of financial markets. After this module, you will be able to compare different trading venues, trading mechanisms, and be able to explain different types of orders, including transactions like margin buying and short-selling; you will be familiar with the language and terminology you need in order to become an informed practitioner of investments.

Learning outcomes

- Explain the roles of corporations, households, government, and financial intermediaries in the financial system
- Explain price discovery process
- Define different type of orders
- Distinguish between dealer vs. auction markets; different trading platforms
- Explain margin buying and short-selling transactions
- Understand the current trading environment such as algorithmic or high frequency trading, dark pools etc.

Learning activities

- Watch all the video lectures
- Complete polls, assessments, and readings
- Engage in professional interaction: Discussion forum, Facebook
- Make use of additional learning resources

Module content

Introduction

1. Lecture: An overview – Market structure: where rubber meets the road

Organization of financial markets

1. Lecture: Major players in financial markets
2. Lecture: Primary and secondary markets

Readings:

- “Roaring ahead: ETFs have overtaken funds as an investment vehicle “(optional)
- “ETFs Report: A market driven by ‘speculators’ “ (optional)
- Lecture handouts – Organization of financial markets

Practice Quiz: Organization of financial markets

How securities are traded? Trading mechanics

1. Lecture: Types of order
2. Lecture: Margin transactions
3. Lecture: Short sales

Readings:

- A note on short sales and margin transactions
- “Market declines: What is accomplished by banning short-selling?” (optional)
- “What caused the flash crash?” (optional)
- Lecture handouts – Trading mechanics

Practice Quiz: Trading mechanics

Summary

1. Lecture: Summary

End of Module Graded Quiz: Organization of financial markets and securities trading

