ICCE
INSTITUTE OF CERTIFIED CHARTERED ECONOMISTS

E5

INVESTMENT II

LEVEL II

SYLLABUS & EXAMS GUIDE

LEVEL II

E5 – INVESTMENT II

SYLLABUS & EXAMS GUIDE

OVERVIEW

This course which covers theoretical and practical applications of investments. Within this context, learners will be able to grasp an understanding of the investment industry and its vital role in the world.

This course further allows learners to review several approaches to the use and valuation of stocks, derivatives securities and bonds. learners are expected to be directed through a broad and critical evaluation of the various investment strategies and management techniques to maximize returns on portfolios, respective to the different economic environment.

This course further elaborates on analysis and evaluation of equity securities, influence of business cycle, trading strategies, mutual funds, risks and returns of investments.

The final section of this course discusses the asset pricing models, optimal risky portfolios, efficient markets as well as behavioural finance.

By the end of this course, you will be able to understand the theoretical foundations of investment decisions and portfolio theory, be able to form market expectations and build strategic asset allocation, select optimal investment strategy and last, understand the concept and importance of behavioural finance in the investment world.

LEARNING OBJECTIVES

On completion of this course, learners should be able to develop a range of skills which enables them to understand investment concepts and make appropriate use of those concepts to analyse specific questions.

- Demonstrate an in depth understanding of the course contents and requirements, including the investment process, portfolio management, stocks and securities and equities through readings and exercises
- Demonstrate an in-depth understanding of the basics of risk and return, such as return measurement, risk partitioning into systematic and unsystematic components, historical perspective on risk and return of major asset categories.
- Demonstrate familiarity with bond pricing, risk analysis and management strategies.
- Form market expectations and build strategic asset allocation
- Understand the concept behind optimal investment strategy and efficient markets
- Demonstrate an in-depth understanding of technical analysis attempts to tap into investor psychology and be able to differentiate between traditional finance and behavioural finance.
- Develop an understanding of the theoretical constructs of investments and portfolio analysis
- Develop practical applications of investments and portfolio analysis
- Develop the students' ability to research investment vehicles and the management of portfolios
- Involve themselves in the practice of investments and portfolio analysis

RECOMMENDED TEXTS

- **Investments – 10th edition,** by Bodie, Kane and Marcus published by McGraw Hill Education
- **Investments – 5th edition,** by Bodie, Kane and Marcus published by McGraw Hill Education
- **Essentials of Investments – 7th edition,** by Bodie, Kane and Marcus published by McGraw-Hill Irwin

READING TOPICS

Bond Prices and Yields

- [ ] Bond Characteristics
- [ ] Bond Pricing
- [ ] Bond Yields
- [ ] Bond Prices over Time
- [ ] Default Risk and Bond Pricing

The Term Structure of Interest Rates

- [ ] The Yield Curve
- [ ] The Yield Curve and Future Interest Rates
- [ ] Interest Rate Uncertainty and Forward Rates
- [ ] Theories of the Term Structure
- [ ] Interpreting the Term Structure
- [ ] Forward Rates as Forward Contracts
- [ ] End of Chapter Material

Managing Bond Portfolios

- [ ] Interest Rate Risk
- [ ] Convexity
- [ ] Passive Bond Management
- [ ] Active Bond Management

Macroeconomic and Industry Analysis

- [ ] The Global Economy
- [ ] The Domestic Macroeconomy
- [ ] Demand and Supply Shocks
- [ ] Federal Government Policy
- [ ] Business Cycles
- [ ] Industry Analysis

Equity Valuation Models

- Valuation by Comparables
- Intrinsic Value versus Market Price
- Dividend Discount Models
- Price–Earnings Ratio
- Free Cash Flow Valuation Approaches
- The Aggregate Stock Market

Financial Statement Analysis

- The Major Financial Statements
- Measuring Firm Performance
- Profitability Measures
- Ratio Analysis
- An Illustration of Financial Statement Analysis
- Comparability Problems
- Value Investing: The Graham Technique

Options Markets: Introduction

- The Option Contract
- Values of Options at Expiration
- Option Strategies
- The Put-Call Parity Relationship
- Option-Like Securities
- Financial Engineering
- Exotic Options

Option Valuation

- Option Valuation: Introduction
- Restrictions on Option Values
- Binomial Option Pricing
- Black-Scholes Option Valuation

Futures Markets

- The Futures Contract
- Trading Mechanics
- Futures Markets Strategies
- Futures Prices
- Futures Prices versus Expected Spot Prices

Futures, Swaps, & Risk Management

- Foreign Exchange Futures
- Stock-Index Futures
- Interest Rate Futures
- Swaps
- Commodity Futures Pricing

Portfolio Performance Evaluation

- The Conventional Theory of Performance Evaluation
- Performance Measurement for Hedge Funds
- Market Timing
- Style Analysis
- Performance Attribution Procedures

International Diversification

- Global Markets for Equities
- Risk Factors in International Investing
- International Investing: Risk, Return, and Benefits from Diversification
- Assessing the Potential of International Diversification
- International Investing and Performance Attribution

SAMPLE QUESTIONS

1. If you believe the economy is about to go into a recession, you might change your asset allocation by selling _____ and buying _____.
    A. growth stocks; long-term bonds
    B. long-term bonds; growth stocks
    C. defensive stocks; growth stocks
    D. defensive stocks; long-term bonds

2. You can earn abnormal returns on your investments via macro forecasting _____.
    A. if you can forecast the economy at all
    B. if you can forecast the economy as well as the average forecaster
    C. if you can forecast the economy better than the average forecaster
    D. only if you can forecast the economy with perfect accuracy

3. Which of the following industries would most analysts classify as mature?
    A. internet service providers
    B. biotechnology
    C. wireless communication
    D. auto manufacturing

4. Which one of the following stocks represents industries with below-average sensitivity to the state of the economy?
    A. financials
    B. technology
    C. food and beverage
    D. cyclicals

5. The market value of all final goods and services produced during a given time period is called _____.
    A. GDP
    B. industrial production
    C. capacity utilization
    D. factory orders

6. A big increase in government spending is an example of a _____.
    A. positive demand shock
    B. positive supply shock
    C. negative demand shock
    D. negative supply shock

7. Attempting to forecast future earnings and dividends is consistent with which of the following approaches to securities analysis?
    A. technical analysis
    B. fundamental analysis
    C. both technical analysis and fundamental analysis
    D. indexing

8. Which one of the following is probably the most direct and immediate way to stimulate or slow the economy, although it is not very useful for fine-tuning economic performance?
    A. fiscal policy
    B. monetary policy
    C. supply-side policy
    D. rising minimum wages

9. Which one of the following is a common term for the market consensus value of the required return on a stock?
    A. dividend payout ratio
    B. intrinsic value
    C. market capitalization rate
    D. plowback ratio

10. A stock has an intrinsic value of $15 and an actual stock price of $13.50. You know that this stock _____.
    A. has a Tobin's q value < 1
    B. will generate a positive alpha
    C. has an expected return less than its required return
    D. has a beta > 1

11. Bill, Jim, and Shelly are all interested in buying the same stock that pays dividends. Bill plans on holding the stock for 1 year. Jim plans on holding the stock for 3 years. Shelly plans on holding the stock until she retires in 10 years. Which one of the following statements is correct?
    A. Bill will be willing to pay the most for the stock because he will get his money back in 1 year when he sells.
    B. Jim should be willing to pay three times as much for the stock as Bill will pay because his expected holding period is three times as long as Bill's.
    C. Shelly should be willing to pay the most for the stock because she will hold it the longest and hence will get the most dividends.
    D. All three should be willing to pay the same amount for the stock regardless of their holding period.

12. A firm that has an ROE of 12% is considering cutting its

dividend payout. The stockholders of the firm desire a dividend yield of 4% and a capital gain yield of 9%. Given this information, which of the following statements is (are) correct?

I. All else equal, the firm's growth rate will accelerate after the payout change.
II. All else equal, the firm's stock price will go up after the payout change.
III. All else equal, the firm's P/E ratio will increase after the payout change.

A. I only
B. I and II only
C. II and III only
D. I, II, and III

13. You want to earn a return of 10% on each of two stocks, A and B. Each of the stocks is expected to pay a dividend of $4 in the upcoming year. The expected growth rate of dividends is 6% for stock A and 5% for stock B. Using the constant-growth DDM, the intrinsic value of stock A _____.

A. will be higher than the intrinsic value of stock B
B. will be the same as the intrinsic value of stock B
C. will be less than the intrinsic value of stock B
D. The answer cannot be determined from the information given.

14. You are considering acquiring a common share of Sahali Shopping Center Corporation that you would like to hold for 1 year. You expect to receive both $1.25 in dividends and $35 from the sale of the share at the end of the year. The maximum price you would pay for a share today is _____ if you wanted to earn a 12% return.

A. $31.25
B. $32.37
C. $38.47
D. $41.32

15. Transportation stocks currently provide an expected rate of return of 15%. TTT, a large transportation company, will pay a year-end dividend of $3 per share. If the stock is selling at $60 per share, what must be the market's expectation of the constant-growth rate of TTT dividends?

A. 5%
B. 10%

C. 20%
D. none of these options

16. Depreciation expense is in what broad category of expenditures?
    A. operating expenses
    B. general and administrative expenses
    C. debt interest expense
    D. tax expenditures

17. Firm A acquires firm B when firm B has a book value of assets of $155 million and a book value of liabilities of $35 million. Firm A actually pays $175 million for firm B. This purchase would result in goodwill for firm A equal to _____.
    A. $175 million
    B. $155 million
    C. $120 million
    D. $55 million

18. One of the biggest impediments to a global capital market has been _____.
    A. volatile exchange rates
    B. the lack of common accounting standards
    C. lower disclosure standards in the United States than abroad
    D. the lack of transparent reporting standards across the EU

19. Which of the following is not one of the three key financial statements available to investors in publicly traded firms?
    A. income statement
    B. balance sheet
    C. statement of operating earnings
    D. statement of cash flows

20. In 2017 Huge-Packing repurchased shares of common stock worth $5,241 million and made dividend payments of $894 million. Other financing activities raised $196 million, and Huge-Packing's total cash flow from financing was –$6,077 million. How much did the long-term debt accounts of Huge-Packing change?
    A. increased $138 million
    B. decreased $138 million
    C. increased $836 million
    D. decreased $836 million

ANSWERS

1. A
2. C
3. D
4. C
5. A
6. A
7. B
8. A
9. C
10. B
11. D
12. A
13. A
14. B
15. B
16. A
17. D
18. B
19. C
20. B

ICCE
INSTITUTE OF CERTIFIED CHARTERED ECONOMISTS

E6

MICROECONOMICS II

LEVEL II

SYLLABUS & EXAMS GUIDE

LEVEL II

E6 - MICROECONOMICS II

SYLLABUS & EXAMS GUIDE

OVERVIEW

E6 - Microeconomics II approaches microeconomic analysis at an advanced level.

This course uses theories and empirical examples to understand the key features of significant changes happening in world economies.

It covers the main topics of microeconomics from consumer and producer behaviours, behaviour under uncertainty, environmental protection and the equilibrium in the presence of externalities/public goods and information asymmetry.

This course also deals with more recent advances in microeconomic theory such as the labor markets, financial markets, poverty and economic inequality.

The last section of this course aims to prepare students with adequate knowledge on international trades, globalization as well as
cooperative and non-cooperative game theory.

Prerequisites:

Proper understanding of Microeconomics I is necessary. Unlike Microeconomic I, this course makes use of more mathematical methods and logical derivations of key results. Therefore, adequate mathematical background, including thorough prior similarity with calculus, linear algebra, multivariate analysis and constrained optimization, methods of abstract notation, reasoning and proof making is required.

The goal of this paper is to prepare students to analyze problems in international development using the tools of modern microeconomic theory. Learners should be able to use the techniques of microeconomic analysis to develop an informed perspective of microeconomic theory and its application.

LEARNING OBJECTIVES

On completion of this course, learners should be able to develop a range of skills which enables them to understand economic concepts and make appropriate use of those concepts to analyse specific questions.

- Use microeconomic theory to set up individual and firm decision problems as constrained optimization problems
- Explain core/various concepts and models under each chapter conceptually, quantitatively and graphically in the field of microeconomics
- use economic reasonings to explain strategic choices of firms or individuals
- Have a structures and formal grasp of international trade and globalisation
- Perform graphical and quantitative treatment of theories
- Make relevant connections between theory and real world examples
- Increased interest to read economic and business related materials

RECOMMENDED TEXTS

- **Microeconomics, 2nd edition,** Paul R, Krugman, Robin Wells published by Worth Publishers
- **Microeconomics,** B. Douglas Bernheim and Michael D. Whinston, Published by McGraw-Hill/Irwin
- **Principles of Microeconomics,** S.A. Greenlaw, T. Taylor, Published by Openstax, 2014

READING TOPICS

Consumer Theory

- ▪ Preliminaries of Consumer's Choice
- ▪ Preference Ranking
- ▪ Utility Representation
- ▪ Utility Maximization Problem and Marshallian Demand
- ▪ Indirect Utility Function
- ▪ Expenditure Minimization Problem and Hicksian Demand
- ▪ Expenditure Function
- ▪ Duality
- ▪ Comparative Static Analysis of Demand

Producer Theory

- Production Sets and Production Function
- Cost Function and Cost Minimization Problem
- Short Run Cost Functions
- Long Run Cost Functions
- Factor Demand Functions

Decision Under Uncertainty

- Information, Risk, and Insurance
- The Problem of Imperfect Information and Asymmetric Information
- Insurance and Imperfect Information
- Objective and Subjective Uncertainty
- Expected Utility Hypothesis and von Neumann-Morgenstern Utility Function
- Allais Paradox
- Alternative Models of Choice under Uncertainty
- Attitude toward Risk
- Measure of Risk Aversion

Environmental Protection and Negative Externalities

- The Economics of Pollution
- Command-and-Control Regulation
- Market-Oriented Environmental Tools
- The Benefits and Costs of U.S. Environmental Laws
- International Environmental Issues
- The Trade-off between Economic Output and Environmental Protection

Positive Externalities and Public Goods

- Why the Private Sector Underinvests in Innovation
- How Governments Can Encourage Innovation
- Public Goods

Labor Markets and Income

- The Theory of Labor Markets
- Wages and Employment in an Imperfectly Competitive Labor Market
- Market Power on the Supply Side of Labor Markets: Unions
- Bilateral Monopoly
- Employment Discrimination
- Immigration

Poverty and Economic Inequality

- Drawing the Poverty Line
- The Poverty Trap
- The Safety Net
- Income Inequality: Measurement and Causes
- Government Policies to Reduce Income Inequality

Financial Markets

- How Businesses Raise Financial Capital
- How Households Supply Financial Capital

Public Economy

- Voter Participation and Costs of Elections

- Special Interest Politics
- Flaws in the Democratic System of Government

International Trade

- Absolute and Comparative Advantage
- What Happens When a Country Has an Absolute Advantage in All Goods
- Intra-industry Trade between Similar Economies
- The Benefits of Reducing Barriers to International Trade

Globalization and Protectionism

- Protectionism: An Indirect Subsidy from Consumers to Producers
- International Trade and Its Effects on Jobs, Wages, and Working Conditions
- Arguments in Support of Restricting Imports
- How Governments Enact Trade Policy: Globally, Regionally, and Nationally
- The Trade-offs of Trade Policy

Game Theory

- Strategic Decision Making
- Strategic Form Games
- Incomplete Information
- Extensive Form Games
- Game Trees: A Diagrammatic Representation
- An Informal Analysis of Take-Away
- Extensive Form Game Strategies
- Strategies and Payoffs
- Games of Perfect Information and Backward
- Induction Strategies
- Games of Imperfect Information and Subgame

SAMPLE QUESTIONS

1. If a California avocado stand operates in a perfectly competitive market, that stand's owner will be a price:
    A. maker
    B. taker
    C. discriminator
    D. maximize

2. If all firms in an industry are price takers:
    A. each firm can sell at the price it wants to charge, provided it is not too different from the prices other firms are charging.
    B. each firm takes the market price as given for its output level, recognizing that the price will change if it alters its output significantly
    C. an individual firm cannot alter the market price even if it doubles its output
    D. the market sets the price, and each firm can take it or leave it by setting a different price.

3. If drivers decide to make phone calls without considering the costs imposed on others, the:
    A. number of phone calls made while driving will be more than the socially optimal quantity.
    B. number of phone calls made while driving will be fewer than the socially optimal quantity
    C. marginal social cost curve will lie below the marginal cost of production curve.
    D. marginal social benefit curve will lie below the marginal social cost curve.

4. An externality is said to exist when:
    A. individuals impose costs or benefits on others but have no incentive to take these costs and benefits into account
    B. individuals impose costs or benefits on others, and the market provides incentives to take these costs and benefits into account.
    C. individual actions are affected by external forces like the loss of U.S. jobs because of competition from abroad.
    D. individual actions are affected by government policies (such as taxes) that are externally imposed on the market.

5. A coal-powered electrical generator that discharges smoke into the air and causes uncompensated costs and discomfort to residents of a town has a(n):
    A. quasi-public good
    B. external cost
    C. external benefit
    D. specific tax

6. According to many economists, the government should:
    A. reduce the level of carbon emissions as far as possible
    B. use policies to achieve the optimal level of carbon-emissions reduction in the least costly way.
    C. set policy to achieve the efficient level of pollution by reducing the costs of pollution, which will always increase the benefits to society.
    D. reduce carbon emissions whenever the marginal cost exceeds a predetermined level set by the courts

7. Many economists believe that there are more efficient ways to deal with pollution than with environmental standards because these standards do NOT:
    A. reduce pollution enough
    B. allow reductions in pollution to be achieved at minimum cost.
    C. specify the behavior that needs to be changed
    D. target behaviors in a way that can be enforced

8. Automobile emissions generate pollution, have health costs for pedestrians, and cause discomfort to residents of a city. In this case:
    A. too little of society's resources are being used to operate automobiles
    B. the externality can be internalized by imposing a specific tax on drivers.
    C. there is an external benefit to society from operating automobiles
    D. the externality can be internalized by granting a specific subsidy to drivers

9. Licenses that are exchangeable and that enable the holder to pollute up to a specified amount during a given period are called:
    A. emissions taxes
    B. environmental standards
    C. tradable emissions permits
    D. Pigouvian taxes

10. Tradable pollution permits are a:
    A. tax system for internalizing pollution costs to the market
    B. subsidy system for charging consumers for the use of common property resources
    C. system of voluntary negotiations between polluters and damaged parties
    D. system of exchangeable licenses that enable the holder to pollute up to a specified amount during a given period

11. Assume that the federal government determines the total level of pollutants that can be discharged by city industries. A city is able to buy and sell the rights to this total discharge level with other cities. This example illustrates a(n):
    A. emissions tax
    B. Pigouvian tax
    C. tradable emissions permit
    D. environmental standard

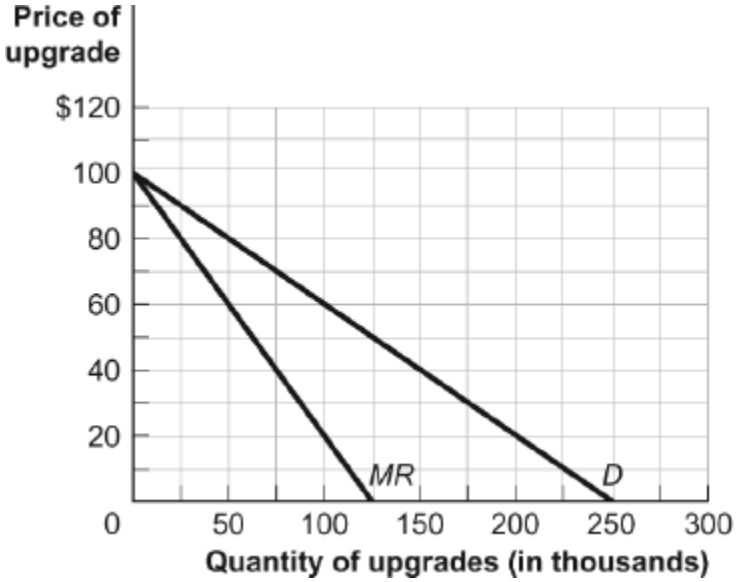
12. The marginal cost of producing an artificially scarce good is usually equal to:
    A. zero
    B. the marginal benefit if consumer surplus equals zero
    C. the average total cost
    D. its price.

Table: Marginal Benefit, Cost, and Consumer Surplus

Consumer	Individual Marginal Benefit
Adriana	$2
Bhagesh	15
Chizuko	1
Denzel	10
Emma	5
Frank	4

13. **(Table: Marginal Benefit, Cost, and Consumer Surplus)** Use Table: Marginal Benefit, Cost, and Consumer Surplus. The table shows six consumers' willingness to pay for one iTunes download. If the marginal social cost is constant at $0, then the efficient price is _____ and consumer surplus is _____
    A. $0; $37
    B. $1; $36
    C. $4; $33
    D. $5; $32

Figure: Demand and Marginal Revenue



14. **(Figure: Demand and Marginal Revenue)** Use Figure: Demand and Marginal Revenue. The figure refers to a software upgrade. The producer incurred fixed costs of $10 million to produce the upgrade; the marginal cost of allowing consumers to download the upgrade is zero. To maximize profit, the producer will set a price of _____ and produce _____ upgrades
    A. $100; 125,000
    B. $100; 250,000
    C. $50; 125,000
    D. $0; 250,000

15. **(Figure: Demand and Marginal Revenue)** Use Figure: Demand and Marginal Revenue. The figure refers to a software upgrade. The producer incurred fixed costs of $10 million to produce the upgrade; the marginal cost of allowing consumers to download the upgrade is zero. What is the efficient price of the upgrade?
    A. $0
    B. $50
    C. $75
    D. $100

16. Pharmaceutical companies typically face very high fixed costs when developing new drugs. The marginal cost of producing a drug after development is very low. When these companies set price and output to maximize profit,

patients pay a _____ price for _____ amounts of the drug than are socially optimal.

A. lower; lower
B. higher; higher
C. lower; higher
D. higher; lower

17. A market produces too much of a good when the price of the good is

A. greater than the marginal social cost of providing it.
B. equal to the marginal social cost of providing it
C. less than the marginal social cost of providing it
D. equal to 1

18. When goods are rival in consumption and excludable, perfectly competitive markets:

A. will consistently produce more than the efficient quantity of the good
B. will produce an efficient quantity of the good
C. will consistently produce less than the efficient quantity of the good
D. will find that consumers are unwilling to purchase the good.

19. Encouragement of voluntary contributions to the provision of public goods:

A. will always lead to the socially optimal provision of public goods
B. may lead to the provision of public goods
C. will result in too much of the public good being provided
D. is required to provide private goods

20. There are six households in a rural community. Each household earns $40,000 per year. Suppose that a new resident builds a mansion in the community and that the income in the new household is $4 million per year. After the new resident arrives, the median household income has _____, and the mean household income has _____.

A. increased; increased
B. not changed; increased
C. increased; not changed
D. not changed; not changed

ANSWERS

1. B
2. C
3. A
4. A
5. B
6. B
7. B
8. B
9. C
10. D
11. C
12. A
13. A
14. C
15. A
16. D
17. C
18. B
19. B
20. B

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E7

MACROECONOMICS II

LEVEL II

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LEVEL II

E7 – MACROECONOMICS II

SYLLABUS & EXAMS GUIDE

OVERVIEW

E7- Macroeconomics II" is the extension of the course "E3- Macroeconomic I" completed in Level I.

The aim of "Macroeconomics II" is to expand knowledge of the principles of a national economy operating. It focuses on features of an open economy, and consists of the topics covered by the course in the light of linkages between a national economy and other countries.

This course examines a wide range of essential concepts of a national economy that are a national income, the principles of the open economy, the monetary system, government budget and debt, aggregate demand, the principles of the labor market and aggregate supply, unemployment and inflation, economic growth, economic fluctuations and business cycles.

Learners will know what factors influence the dynamics of aggregate demand and supply; know the relationship between the national economy and the rest of the world; understand the sources of macroeconomic instability, to know the mechanisms of economic growth and business cycles, and to understand the principles of economic agent behaviour.

It provides a critical overview and in-depth analysis of macroeconomic theories and methods, focusing on a variety of issues that are at the centre of the contemporary debates on macroeconomic policies. These include mainstream and heterodox macroeconomic modelling approaches, shadow banking and financialization, distribution and growth, the macroeconomics of climate change, fiscal and monetary policies for climate mitigation, financial globalisation, crises and the role of gender in macroeconomics.

LEARNING OBJECTIVES

- A critical understanding of the historical, social and international context of contemporary macroeconomic theories and their policy prescriptions;
- An ability to analyse the assumptions, methodological underpinnings and implications of macroeconomic models;
- A thorough understanding of the role of global finance in macroeconomic performance;
- An ability to analyse the implications of climate change, inequality and gender for macroeconomic theories and policies;
- An in-depth understanding of the current macroeconomic policy debates.
- Demonstrate understanding how relationships with other countries affect a national economy performing and to evaluate effects of economic policies. Learners should be able to analyze determinants of the exchange rate and interest rates, changing in output and prices, factors of the economic growth, and models of consumer behaviour and investments.
- Learners will obtain better understanding regarding relationship between the dynamics of macroeconomic indicator in different countries, effects of economic policy on macroeconomic sustainability, and changing in economic actors' behaviours.

RECOMMENDED TEXTS

- **Macroeconomics**, **4th Edition,** Paul Krugman, Robin Wells, Published by Worth Publishers, 2015

- **Foundations of Modern Macroeconomics 2nd Edition**, Ben J. Heijdra, Published by Oxford University Press, 2009

- **Advanced Macroeconomics, 4th Edition,** David Romer, Published by McGraw-Hill, 2012

READING TOPICS

Money, Banking & the Federal Reserve System

- ☐ What is money?
- ☐ Commodity and fiat monies:
  - The barter system
- ☐ Money as a medium of exchange:
  - Money supply defined:
  - M1 and M2
- ☐ Gold and the money supply:
  - Why was the gold standard adopted (1873) and why was it later eliminated (1971)?
- ☐ Monetary role of banks:
  - Establishment of bank reserves
  - The T-account (assets and liabilities)
- ☐ Bank regulation:
  - the FDIC deposit insurance
  - capital requirements
  - the discount window at the Fed.

International Trade

- ☐ The history of trade agreements: From GATT to NAFTA and beyond
- ☐ Trade deficits and trade surpluses
- ☐ Importance of trade to the U.S. economy; U.S. trade in international context
- ☐ Comparative advantage and trade:
  - Terms of trade between nations
  - Currency exchange rates: how are they determined?
- ☐ The World Trade Organization: What is its role?
- ☐ The movement from trade protection toward free trade among nations since the 1940's
- ☐ The dimensions of globalization; trade, foreign direct investment, foreign portfolio investment, immigration; The debate about trade policies and globalization

Consumption & Investments

- ☐ The Multiplier: An Informal Introduction

- Consumer Spending
  - Current Disposable Income and Consumer Spending
  - Shifts of the Aggregate Consumption Function
- Investment Spending
  - The Interest Rate and Investment Spending
  - Expected Future Real GDP, Production Capacity, and Investment Spending
  - Inventories and Unplanned Investment Spending
- The Income–Expenditure Model
  - Planned Aggregate Spending and Real GDP
  - Income–Expenditure Equilibrium
  - The Multiplier Process and Inventory Adjustment

Aggregate Demand & Aggregate Supply

- Aggregate Demand
  - Why Is the Aggregate Demand Curve Downward Sloping?
  - The Aggregate Demand Curve and the Income–Expenditure Model
  - Shifts of the Aggregate Demand Curve
  - Government Policies and Aggregate Demand
- Aggregate Supply
  - The Short-Run Aggregate Supply Curve
  - Shifts of the Short-Run Aggregate Supply Curve
  - The Long-Run Aggregate Supply Curve
  - From the Short Run to the Long Run
- The AD–AS Model 368
  - Short-Run Macroeconomic Equilibrium
  - Shifts of Aggregate Demand: Short-Run Effects
  - Shifts of the SRAS Curve
  - Supply Shocks of the Twenty-first Century
  - Long-Run Macroeconomic Equilibrium

Economic growth

- Economic growth: introduction
  - Stylized facts about economic growth.
  - Extensive and intensive economic growth
  - Economic growth indicators.
- The Solow growth model
  - Assumptions and the dynamics of the model
  - The impact of a change in the saving rate.
  - The golden rule level of capital.
  - Absolute and conditional convergence.
  - The Solow residual.
- Human capital augmented Solow model.
  - Assumptions and the dynamics of the model.
  - The steady state of the economy
- Endogenous growth.

- The AK model.
- The steady state of the economy and conditional convergence in the AK model.
- The R&D model.
- Economic growth in an open economy.

Inflation, Disinflation, & Deflation

- Money and Inflation
  - The Classical Model of Money and Prices
  - The Inflation Tax
  - The Logic of Hyperinflation
- Moderate Inflation and Disinflation
  - The Output Gap and the Unemployment Rate
  - Okun's Law
  - The Short-Run Phillips Curve
  - Inflation Expectations and the Short-Run Phillips Curve
- Inflation and Unemployment in the Long Run
  - The Long-Run Phillips Curve
  - The Natural Rate of Unemployment, Revisited
  - The Costs of Disinflation
  - Disinflation Around the World
- Deflation
  - Debt Deflation
  - Effects of Expected Deflation

Crises and Consequences

- Banking: Benefits and Dangers
  - The Trade-off Between Rate of Return and Liquidity
  - The Purpose of Banking
  - Shadow Banks and the Re-emergence of Bank Runs
  - The Day the Lights Went Out at Lehman
- Banking Crises and Financial Panics
  - The Logic of Banking Crises
  - Historical Banking Crises: The Age of Panics
  - Modern Banking Crises Around the World
- The Consequences of Banking Crises
  - Banking Crises, Recessions, and Recovery
  - Why Are Banking-Crisis Recessions So Bad?
  - Governments Step In
  - Banks and the Great Depression
- The 2008 Crisis and Its Aftermath
  - Severe Crisis, Slow Recovery
  - Aftershocks in Europe
  - The Stimulus–Austerity Debate
  - The Lesson of the Post-Crisis Slump

- Regulation in the Wake of the Crisis

Macroeconomics: Events and Ideas

- Classical Macroeconomics
  - Money and the Price Level
  - The Business Cycle
- The Great Depression and the Keynesian Revolution
  - Keynes's Theory
  - The Politics of Keynes
  - Policy to Fight Recession
- Challenges to Keynesian Economics
  - The Revival of Monetary Policy
  - Monetarism
  - Limits to Macroeconomic Policy: Inflation and the Natural Rate of Unemployment
  - The Political Business Cycle
- Rational Expectations, Real Business Cycles, and New Classical Macroeconomics

Open-Economy Macroeconomics

- Capital Flows and the Balance of Payments
  - Balance of Payments Accounts
  - Modeling the Financial Account
  - Underlying Determinants of International Capital Flows
  - Two-Way Capital Flows
- The Role of the Exchange Rate
  - Understanding Exchange Rates
  - The Equilibrium Exchange Rate
  - Inflation and Real Exchange Rates
  - Purchasing Power Parity
- Exchange Rate Policy
  - Exchange Rate Regimes
  - How Can an Exchange Rate Be Held Fixed?
  - The Exchange Rate Regime Dilemma
- Exchange Rates and Macroeconomic Policy
  - Devaluation and Revaluation of Fixed Exchange Rates
  - Monetary Policy Under Floating Exchange Rates
  - International Business Cycles

SAMPLE QUESTIONS

1. Compared to a closed economy, an open economy is one that
    A. allows the exchange rate to float
    B. fixes the exchange rate.
    C. trades with other countries
    D. does not trade with other countries

2. The Mundell–Fleming model assumes that
    A. prices are flexible, whereas the *IS–LM* model assumes that prices are fixed
    B. prices are fixed, whereas the *IS–LM* model assumes that prices are flexible
    C. as in the IS–LM model, prices are fixed
    D. as in the *IS–LM* model, prices are flexible

3. If short-run equilibrium in the Mundell–Fleming model is represented by a graph with Y along the horizontal axis and the exchange rate along the vertical axis, then the *IS** curve:
    A. slopes downward and to the right because the higher the exchange rate, the lower the level of net exports and, therefore, of short-run equilibrium income in the goods market
    B. is vertical because there is only one investment level that is consistent with the world interest rate
    C. is vertical because the exchange rate does not enter into the *IS** equation
    D. slopes downward and to the right because the higher the exchange rate, the higher the level of net exports and, therefore, of short-run equilibrium income in the goods market.

4. Under a floating system, the exchange rate:
    A. fluctuates in response to changing economic conditions
    B. is maintained at a predetermined level by the central bank
    C. is changed at regular intervals by the central bank
    D. fluctuates in response to changes in the price of gold

5. In a small open economy with a floating exchange rate, if the government adopts an expansionary fiscal policy, in the new short-run equilibrium:
    A. income and the exchange rate will both rise.
    B. the exchange rate will rise, but income will remain unchanged
    C. income will rise, but the exchange rate will remain unchanged
    D. both income and the interest rate will rise

6. In a small open economy with a floating exchange rate, a rise in government spending in the new short-run

equilibrium:

A. chokes off investment but not by as much as the new government spending
B. chokes off an amount of investment just equal to the new government spending
C. attracts foreign capital, thus raising the exchange rate and reducing net exports, but not by as much as the new government spending
D. attracts foreign capital, thus raising the exchange rate and reducing net exports by an amount just equal to the new government spending

7. Some economists argue that monetary union will not work as well in Europe as it does in the United States for *all* of the following reasons *except*:
   A. labor is not as mobile in Europe as it is in the United States
   B. there is no strong central government that can use fiscal policy in Europe as there is in the United States
   C. there is no common language in Europe as there is in the United States
   D. there is no European central bank as there is in the United States

8. The "impossible trinity" refers to the idea that it is impossible for a country to simultaneously have:
   A. low inflation, low unemployment, and a rapid rate of GDP growth
   B. free capital flows, a fixed exchange rate, and an independent monetary policy
   C. high interest rates, a budget deficit, and a trade deficit
   D. an expansionary fiscal policy, a contractionary monetary policy, and a flexible exchange rate

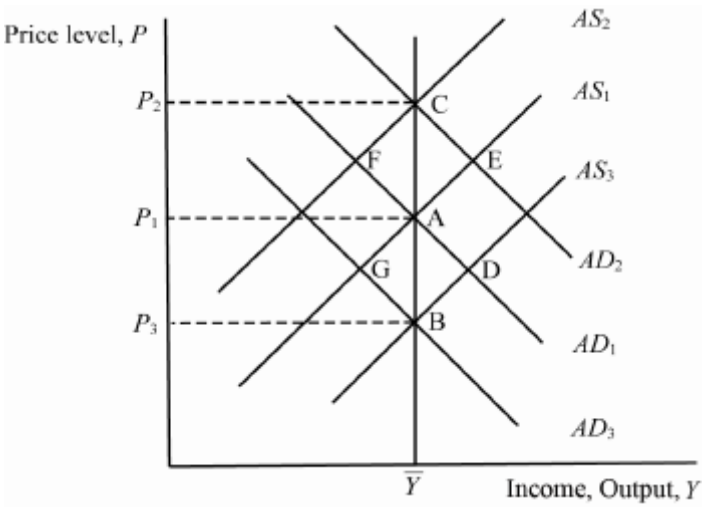
9. If a country chooses to have free capital flows and to conduct an independent monetary policy, then it must
   A. live with exchange-rate volatility
   B. restrict its citizens from participating in world financial markets
   C. give up the use of monetary policy for purposes of domestic stabilization
   D. have a fixed exchange rate

10. Some firms do not instantly adjust the prices they charge in response to changes in demand for *all* of the following reasons *except*:
    A. it is costly to alter prices
    B. they do not want to annoy their frequent customers
    C. prices do not adjust when there is perfect competition

D. some prices are set by long-term contracts between firms and customers

11. According to the sticky-price model
    A. all firms announce their prices in advance
    B. all firms set their prices in accord with observed prices and output
    C. some firms set their prices according to the aggregate supply equation
    D. some firms announce their prices in advance, and some firms

12. According to the imperfect-information model, when the price level falls but the producer did not expect it to fall, the producer
    A. increases production.
    B. does not change production
    C. decreases production.
    D. hires more workers



13. Starting from long-run equilibrium at A with output equal to and the price level equal to P_1, if there is an unexpected monetary contraction that shifts aggregate demand from AD_1 to AD_3, then the short-run nonneutrality of money is represented by the movement from:
    A. A to B
    B. A to G
    C. A to C
    D. A to D

14. According to the Phillips curve, other things being equal, inflation depends positively on:
    A. expected inflation
    B. the unemployment rate.

C. the rate of technological change
D. the quantities of capital and labor

15. The sacrifice ratio measures the:
    A. number of percentage points of the money supply that must be reduced to reduce inflation by 1 percentage point.
    B. extra taxes that must be paid to balance the budget
    C. number of months of real gross domestic product (GDP) that must be forgone to reduce the inflation rate by 1 percentage point
    D. percentage of a year's real gross domestic product (GDP) that must be forgone to reduce inflation by 1 percentage point.

16. The rational-expectations point of view, in the most extreme case, holds that if policymakers are credibly committed to reducing inflation, and rational people understand that commitment and quickly lower their inflation expectations, then the sacrifice ratio will be approximately
    A. 5
    B. 2.8
    C. 1
    D. 0

17. The hypothesis that hysteresis may play an important role in macroeconomics implies, among other things, that:
    A. the history of economic thought is important to macroeconomics
    B. workers get hysterical during long depressions
    C. hysteresis lowers the sacrifice ratio
    D. the natural rate of unemployment may increase if unemployment is high for a long period of time

18. According to the natural-rate hypothesis, fluctuations in aggregate demand affect output in:
    A. both the short run and the long run
    B. only in the short run.
    C. only in the long run
    D. in neither the short run nor the long run

19. *Each* of the following conditions will tend to reduce the sacrifice ratio *except* when:
    A. workers and firms set wages and prices based on rational expectations
    B. policymakers make credible commitments to policy changes

C. announcements of policy changes are made before workers and firms have formed expectations
D. the concept of *hysteresis* accurately describes the impact of history on the natural rate of unemployment

20. The lag between the time that the money supply is increased and the time that investment expenditures increase is an example of a:
A. fiscal inside lag
B. fiscal outside lag
C. monetary inside lag
D. monetary outside lag

ANSWERS

1. C	11. D
2. C	12. C
3. A	13. B
4. A	14. A
5. B	15. D
6. D	16. D
7. D	17. D
8. B	18. B
9. A	19. D
10. C	20. D

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E8

ECONOMETRICS I

LEVEL II

SYLLABUS & EXAMS GUIDE

LEVEL II

E8 – ECONOMETRICS I

SYLLABUS & EXAMS GUIDE

OVERVIEW

What is Econometrics?

Econometrics is concerned with the tasks of developing and applying quantitative or statistical methods to the study and elucidation of economic principles.

Econometrics combines economic theory with statistics to analyze and test economic relationships.

Theoretical econometrics considers questions about the statistical properties of estimators and tests, while applied econometrics is concerned with the application of econometric methods to assess economic theories.

More into it

Imagine that you are hired by your state government to evaluate the effectiveness of a publicly funded job training program. Suppose this program teaches workers various ways to use computers in the manufacturing process.

The 20-week program offers courses during nonworking hours. Any hourly manufacturing worker may participate, and enrolment in all or part of the program is voluntary. You are to determine what, if any, effect the training program has on each worker's subsequent hourly wage.

Now, suppose you work for an investment bank. You are to study the returns on different investment strategies involving short-term U.S. treasury bills to decide whether they comply with implied economic theories.

The task of answering such questions may seem daunting at first. At this point, you may only have a vague idea of the kind of data

you would need to collect. By the end of this introductory econometrics course, you should know how to use econometric methods to formally evaluate a job training program or to test a simple economic theory.

Econometrics is based upon the development of statistical methods for estimating economic relationships, testing economic theories, and evaluating and implementing government and business policy.

The most common application of econometrics is the forecasting of such important macroeconomic variables as interest rates, inflation rates, and gross domestic product (GDP).

Whereas forecasts of economic indicators are highly visible and often widely published, econometric methods can be used in economic areas that have nothing to do with macroeconomic forecasting.

For example, you will study the effects of political campaign expenditures on voting outcomes. We will consider the effect of school spending on student performance in the field of education. In addition, we will learn how to use econometric methods for forecasting economic time series.

Econometrics has evolved as a separate discipline from mathematical statistics because the former focuses on the problems inherent in collecting and analyzing nonexperimental economic data.

Nonexperimental data are not accumulated through controlled experiments on individuals, firms, or segments of the economy. (Nonexperimental data are sometimes called observational data, or retrospective data, to emphasize the fact that the researcher is a passive collector of the data.)

Experimental data are often collected in laboratory environments in the natural sciences, but they are much more difficult to obtain in the social sciences.

Although some social experiments can be devised, it is often impossible, prohibitively expensive, or morally repugnant to conduct the kinds of controlled experiments that would be needed to address economic issues.

Naturally, econometricians have borrowed from mathematical statisticians whenever possible. The method of multiple regression analysis is the mainstay in both fields, but its focus and interpretation can differ markedly.

In addition, economists have devised new techniques to deal with the complexities of economic data and to test the predictions of economic theories.

What is special in econometrics?

- There are some special features of economic data that distinguish econometrics from other branches of statistics.
- Economic data are generally observational, rather than being derived from controlled experiments.
- Consequently, the field of econometrics has developed methods for identification and estimation that allow researchers to make causal inferences in the absence of controlled experiments.
- A large body of econometrics focuses on time-series data, but econometrics also fully covers cross-sectional and panel data.

Why study Econometrics?

- Econometrics provides a set of analytical tools that are useful to economics learners as well as learners in other areas.
- Econometric methods are used to analyze practical business and planning problems, ranging from federal government taxation plans to small business sales campaigns.
- Studying econometrics fills a gap between being "a learner" and being "a practitioner".
- Quantitative analytical skills are highly valued in the workplace: knowledge of econometric or quantitative methods will improve job prospects.

LEARNING OBJECTIVES

- Provide the tools needed to read about with understanding and to do empirical research in economics
- Understand the main principles of econometric modeling
- Common pitfalls and protocols
- Gain substantial hands-on practical experience
- Exercises with real-world data
- Emphasis on applied rather than theoretical econometrics
- Ambitious in theory and proofs, given the constraints

RECOMMENDED TEXTS

- **Introductory Econometrics; A modern approach**, **6th Edition,** Jeffrey M. Wooldridge, Published by CENGAGE, 2016

- **Introduction to Econometrics, 3rd Edition,** James H. Stock, Mark W. Watson, Published by Pearson, 2015

- **An Introduction to Econometric Theory, 1st Edition**, James Davidson, Published by Wiley, 2018

READING TOPICS

The Nature of Econometrics and Economic Data

- [ ] What Is Econometrics?
- [ ] Steps in Empirical Economic Analysis
- [ ] The Structure of Economic Data
- [ ] Causality and the Notion of Ceteris Paribus in Econometric Analysis

The Simple Regression Model

- [ ] Definition of the Simple Regression Model
- [ ] Deriving the Ordinary Least Squares Estimates
- [ ] Properties of OLS on Any Sample of Data
- [ ] Units of Measurement and Functional Form
- [ ] Expected Values and Variances of the OLS Estimators
- [ ] Regression through the Origin and Regression on a Constant

Multiple Regression Analysis: Estimation

- [ ] Motivation for Multiple Regression
- [ ] Mechanics and Interpretation of Ordinary Least Squares
- [ ] The Expected Value of the OLS Estimators
- [ ] The Variance of the OLS Estimators Efficiency of OLS: The Gauss-Markov Theorem
- [ ] Some Comments on the Language of Multiple Regression Analysis

Multiple Regression Analysis: Inference Sampling Distributions of the OLS Estimators

- [ ] Testing Hypotheses about a Single Population Parameter
- [ ] Confidence Intervals
- [ ] Testing Hypotheses about a Single Linear Combination of the Parameters
- [ ] Testing Multiple Linear Restrictions:
- [ ] Reporting Regression Results

Multiple Regression Analysis: OLS Asymptotics

- Consistency
- Asymptotic Normality and Large Sample Inference
- Asymptotic Efficiency of OLS

Multiple Regression Analysis: Further Issues

- Effects of Data Scaling on OLS Statistics
- More on Functional Form
- More on Goodness-of-Fit and Selection of Regressors
- Prediction and Residual Analysis

Multiple Regression Analysis with Qualitative Information: Binary (or Dummy) Variables

- Describing Qualitative Information
- A Single Dummy Independent Variable
- Using Dummy Variables for Multiple Categories
- Interactions Involving Dummy Variables
- A Binary Dependent Variable: The Linear Probability Model
- More on Policy Analysis and Program Evaluation
- Interpreting Regression Results with Discrete Dependent Variables

Heteroskedasticity

- Consequences of Heteroskedasticity for OLS
- Heteroskedasticity-Robust Inference after OLS Estimation
- Testing for Heteroskedasticity
- Weighted Least Squares Estimation

More on Specification and Data Issues

- Functional Form Misspecification
- Using Proxy Variables for Unobserved Explanatory Variables
- Models with Random Slopes
- Properties of OLS under Measurement Error
- Missing Data, Non-random Samples, and Outlying Observations

SAMPLE QUESTIONS

1. Econometrics is the branch of economics that _____.
    A. studies the behavior of individual economic agents in making economic decisions
    B. develops and uses statistical methods for estimating economic relationships
    C. deals with the performance, structure, behavior, and decision-making of an economy as a whole
    D. applies mathematical methods to represent economic theories and solve economic problems

2. Which of the following is true of experimental data?
    A. Experimental data are collected in laboratory environments in the natural sciences
    B. Experimental data cannot be collected in a controlled environment
    C. Experimental data is sometimes called observational data
    D. Experimental data is sometimes called retrospective data

3. The term '*u*' in an econometric model is usually referred to as the _____.
    A. error term
    B. parameter
    C. hypothesis
    D. dependent variable

4. The parameters of an econometric model _____.
    A. include all unobserved factors affecting the variable being studied
    B. describe the strength of the relationship between the variable under study and the factors affecting it
    C. refer to the explanatory variables included in the model
    D. refer to the predictions that can be made using the model

5. Which of the following is the first step in empirical economic analysis?
    A. Collection of data
    B. Statement of hypotheses
    C. Specification of an econometric model
    D. Testing of hypotheses

6. A data set that consists of a sample of individuals, households, firms, cities, states, countries, or a variety of other units, taken at a given point in time, is called a(n) _____.
    A. cross-sectional data set
    B. longitudinal data set
    C. time series data set

D. experimental data set

7. Data on the income of law graduates collected at different times during the same year is _____.
   A. panel data
   B. experimental data
   C. time series data
   D. cross-sectional data

8. Which of the following is true of time series data?
   A. The time series data is easier to analyze than cross-sectional data
   B. The time series data are independent across time
   C. The chronological ordering of observations in a time series conveys potentially important information.
   D. A time series data set consists of observations on a variable or several variables at a given time

9. Which of the following is a difference between panel and pooled cross-sectional data?
   A. A panel data set consists of data on different cross-sectional units over a given period of time while a pooled data set consists of data on the same cross-sectional units over a given period of time
   B. A panel data set consists of data on the same cross-sectional units over a given period of time while a pooled data set consists of data on different cross-sectional units over a given period of time
   C. A panel data consists of data on a single variable measured at a given point in time while a pooled data set consists of data on the same cross-sectional units over a given period of time
   D. A panel data set consists of data on a single variable measured at a given point in time while a pooled data set consists of data on more than one variable at a given point in time

10. In the equation $y = \beta_0 + \beta_1 x + u, \beta_0$ is the _____.
   A. dependent variable
   B. independent variable
   C. slope parameter
   D. intercept parameter

11. In the equation $c = \beta_0 + \beta_1 i + u$, c denotes consumption and i denotes income. What is the residual for the 5th observation if c_5=\$500 and $\hat{c}_5$=\$475?

   A. \$975
   B. \$300

C. $25
D. $50

12. If *xi* and *yi* are positively correlated in the sample then the estimated slope is _____.
    A. less than zero
    B. greater than zero
    C. equal to zero
    D. equal to one

13. Which of the following is a statistic that can be used to test hypotheses about a single population parameter?
    A. *F* statistic
    B. *t* statistic
    C. χ^2 statistic
    D. Durbin Watson statistic

14. Consider the equation, $y = \alpha + \beta 1x1 + \beta 2x2 + u$. A null hypothesis, H0: $\beta 2 = 0$ states that:
    A. x_2 has no effect on the expected value of $\beta 2$
    B. x_2 has no effect on the expected value of y.
    C. β_2 has no effect on the expected value of y.
    D. y has no effect on the expected value of x_2

15. Which of the following statements is true of confidence intervals?
    A. Confidence intervals in a CLM are also referred to as point estimates.
    B. Confidence intervals in a CLM provide a range of likely values for the population parameter
    C. Confidence intervals in a CLM do not depend on the degrees of freedom of a distribution
    D. Confidence intervals in a CLM can be truly estimated when Heteroskedasticity is present

16. Which of the following statements is true of hypothesis testing?
    A. The *t* test can be used to test multiple linear restrictions
    B. A test of single restriction is also referred to as a joint hypotheses test
    C. A restricted model will always have fewer parameters than its unrestricted model.
    D. OLS estimates maximize the sum of squared residuals

17. Which of the following correctly identifies a reason why some authors prefer to report the standard errors rather than the t statistic?
    A. Having standard errors makes it easier to compute confidence intervals
    B. Standard errors are always positive
    C. The *F* statistic can be reported just by looking at the standard errors
    D. Standard errors can be used directly to test multiple linear regressions.

18. Which of the following is true of heteroskedasticity?
    A. Heteroskedasticty causes inconsistency in the Ordinary Least Squares estimators
    B. Population R^2 is affected by the presence of heteroskedasticty
    C. The Ordinary Least Square estimators are not the best linear unbiased estimators if heteroskedasticity is present
    D. It is not possible to obtain *F* statistics that are robust to heteroskedasticity of an unknown form.

19. Which of the following tests is used to compare the Ordinary Least Squares (OLS) estimates and the Weighted Least Squares (WLS) estimates?
    A. The White test
    B. The Hausman test
    C. The Durbin-Watson test
    D. The Breusch-Godfrey test

20. A change in the unit of measurement of the dependent variable in a model does not lead to a change in:
    A. the standard error of the regression
    B. the sum of squared residuals of the regression
    C. the goodness-of-fit of the regression
    D. the confidence intervals of the regression

ANSWERS

1. B
2. A
3. A
4. A
5. C
6. A
7. D
8. C
9. B
10. D
11. C
12. B
13. B
14. B
15. B
16. C
17. A
18. C
19. B
20. C

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E9

CORPORATE FINANCE

LEVEL II

SYLLABUS & EXAMS GUIDE

LEVEL II

E9 – CORPORATE FINANCE

SYLLABUS & EXAMS GUIDE

OVERVIEW

Most companies are in the business of making money. But what happens to that money once it's earned — who makes the decisions on how to manage it, maximizing its potential while minimizing any risk?

Corporate finance is the specific area of finance dealing with the financial decisions corporations make, and the tools and analysis used to make the decisions. Finance makes sure the company has the money it needs in order to operate. They are able to show external and internal parties financial data through financial statements, prepared by accountants, which are used to make decisions about the firm's financial condition, and to advise others about possible losses and profits.

Finance analyzes the health and growth of a company, manages the company's cash, and deals with banks. Most mid to large size companies will have a CFO (Chief Financial Officer) who oversees the finance department, which normally consists of a controller, managerial accountant and/or general ledger accountant.

Corporate finance deals with the capital structure of a corporation, including its funding and the actions that management takes to increase the value of the company. Corporate finance also includes the tools and analysis utilized to prioritize and distribute financial resources.
The ultimate purpose of corporate finance is to maximize the value of a business through planning and implementation of resources, while balancing risk and profitability.

E9 – Corporate Finance develops theoretical framework for understanding and analysing major financial problems of modern company in market environment. The paper covers basic models of valuation of corporate capital, including pricing models for primary financial assets, real assets valuation and investment projects analysis, capital structure and various types of corporate capital employed, derivative assets and contingent claims on assets. It provides necessary knowledge in evaluating different management decisions and its influence on corporate performance and value.

LEARNING OBJECTIVES

- The main objective of the course is to provide the conceptual background for corporate financial analysis from the point of corporate value creation.

- The paper develops theoretical framework for learners to understand and analyze major financial problems of modern firm in the market environment.

- The course covers basic models of corporate capital valuation, including pricing models for primary financial assets, real assets valuation and investment projects analysis, capital structure, derivative assets and contingent claims on assets.

- Developing skills in analyzing corporate behavior in capital markets and the relationship of agent and principal in raising funds, allocating capital, distributing returns.

- It provides necessary knowledge in evaluating different management decisions and their influence on corporate performance and value.

- Give learners the capacity to understand the theory and apply, in real world situations, the techniques that have been developed in corporate finance.

RECOMMENDED TEXTS

- **Corporate Finance, 11th edition**, Stephen A. Ross, Randolph W. Westerfield, Jeffrey Jaffe, Bradford D. Jordan, Published by McGraw-Hill Education, 2016

- **Corporate Finance; An introduction**, Ivo Welch, Published by Pearson, 2009

- **Corporate Finance; Theory and Practice**, Pierre Vernimmen, Published by John Wiley & Sons Ltd, 2005

READING TOPICS

Introduction to Corporate Finance

- What Is Corporate Finance?
- The Balance Sheet Model of the Firm
- The Financial Manager
- The Corporate Firm
- The Importance of Cash Flows
- The Goal of Financial Management
- The Agency Problem and Control of the Corporation
- Regulation

Financial Statements and Cash Flow

- The Balance Sheet
- The Income Statement
- Taxes
- Net Working Capital
- Cash Flow of the Firm
- The Accounting Statement of Cash Flows
- Cash Flow Management

Financial Statements Analysis & Financial Models

- Financial Statements Analysis
- Ratio Analysis
- The DuPont Identity
- Financial Models
- External Financing and Growth
- Some Caveats Regarding Financial
- Planning Models

Discounted Cash Flow Valuation

- Valuation: The One-Period Case
- The Multi-Period Case
- Compounding Periods
- Simplifications

- Loan Amortization

Net Present Value and Other Investment Rules

- Why Use Net Present Value?
- The Payback Period Method
- The Discounted Payback Period Method
- The Internal Rate of Return
- Problems with the IRR Approach
- The Profitability Index
- The Practice of Capital Budgeting

Making Capital Investment Decisions

- Capital Budgeting
- The Baldwin Company: An Example
- Alternative Definitions of Operating Cash Flow
- Some Special Cases of Discounted
- Cash Flow Analysis
- Inflation and Capital Budgeting

Interest Rates and Bond Valuation

- Bonds and Bond Valuation
- Government and Corporate Bonds
- Bond Markets
- Inflation and Interest Rates
- Determinants of Bond Yields

Stock Valuation

- The Present Value of Common Stocks
- Estimates of Parameters in the Dividend Discount Model
- Comparables
- Valuing Stocks Using Free Cash Flows
- The Stock Markets

Return and Risk: The Capital Asset Pricing Model (CAPM)

- Individual Securities
- Expected Return, Variance, and Covariance
- The Return and Risk for Portfolios
- The Efficient Set for Two Assets

- The Efficient Set for Many Securities
- Diversification
- Riskless Borrowing and Lending
- Market Equilibrium
- Relationship between Risk and Expected Return (CAPM)

An Alternative View of Risk and Return: The Arbitrage Pricing Theory

- Systematic Risk and Betas
- Portfolios and Factor Models
- Betas, Arbitrage, and Expected Returns
- The Capital Asset Pricing Model and the Arbitrage Pricing Theory
- Empirical Approaches to Asset Pricing

Efficient Capital Markets and Behavioral Challenges

- Can Financing Decisions Create Value?
- A Description of Efficient Capital Markets
- The Different Types of Efficiency
- The Behavioral Challenge to Market Efficiency
- Empirical Challenges to Market Efficiency
- Reviewing the Differences
- Implications for Corporate Finance

Long-Term Financing: An Introduction

- Some Features of Common and Preferred Stocks
- Corporate Long-Term Debt
- Some Different Types of Bonds
- Bank Loans
- International Bonds
- Patterns of Financing
- Recent Trends in Capital Structure

Raising Capital

- Early-Stage Financing and Venture Capital
- The Public Issue
- Alternative Issue Methods
- The Cash Offer
- Dilution
- Shelf Registration

- Issuing Long-Term Debt

Mergers, Acquisitions, and Divestitures

- The Basic Forms of Acquisitions
- Synergy
- Sources of Synergy
- Two Financial Side Effects of Acquisitions
- A Cost to Stockholders from Reduction in Risk

Financial Distress

- What Is Financial Distress?
- What Happens in Financial Distress?
- Bankruptcy Liquidation and Reorganization
- Private Workout or Bankruptcy: Which Is Best?
- Prepackaged Bankruptcy
- Predicting Corporate Bankruptcy:
- The Z-Score Model

SAMPLE QUESTIONS

1. You are comparing two investment options, each of which will provide $15,000 of total income. Option A pays five annual payments starting with $5,000 the first year followed by four annual payments of $2,500 each. Option B pays five annual payments of $3,000 each. Which one of the following statements is correct given these two investment options?

    A. Both options are of equal value today
    B. Given a positive rate of return, Option A is worth more today than Option B
    C. Option B has a higher present value than Option A given a positive rate of return
    D. Option B has a lower present value than Option A given a zero rate of return

2. Given a stated interest rate, which form of compounding will yield the highest effective rate of interest?
    A. annual compounding
    B. monthly compounding
    C. daily compounding
    D. continuous compounding

3. The understanding of the work and cash to be contributed to a partnership by each member of that partnership is formalized in the:
    A. indemnity clause
    B. indenture contract
    C. statement of purpose
    D. partnership agreement

4. A business created as a distinct legal entity is called a:
    A. corporation
    B. sole proprietorship
    C. general partnership
    D. limited partnership

5. Which one of the following statements concerning liquidity is correct?
    A. If you can sell an asset next year at a price equal to its actual value, the asset is highly liquid.
    B. Trademarks and patents are highly liquid.
    C. The less liquidity a firm has, the lower the probability the firm will encounter financial difficulties.
    D. Balance sheet accounts are listed in order of decreasing liquidity.

6. A firm starts its year with a positive net working capital. During the year, the firm acquires more short-term debt than it does short-term assets. This means that:
   A. the ending net working capital will be negative.
   B. both accounts receivable and inventory decreased during the year.
   C. the beginning current assets were less than the beginning current liabilities.
   D. the ending net working capital can be positive, negative, or equal to zero.

7. Which one of these will increase the book value of the stockholders' equity in a profitable, non-dividend paying firm? Assume no shares of stock are repurchased or sold.
   A. a decrease in the book value of inventory
   B. an increase in earnings per share
   C. an increase in the market value of the firm's buildings
   D. an increase in the market value of the firm's long-term debt

8. According to generally accepted accounting principles (GAAP), revenue is recognized as income when:

   A. a contract is signed to perform a service or deliver a good.
   B. the transaction is complete and the goods or services are delivered.
   C. payment is requested.
   D. income taxes are paid on the revenue earned.

9. Cash flow to stockholders is defined as:

   A. cash dividends paid.
   B. repurchases of equity less new equity sold minus cash dividends paid.
   C. cash flow from financing less cash flow to creditors.
   D. cash dividends paid plus repurchases of equity minus new equity financing.

10. Awnings Incorporated has beginning net fixed assets of $234,100 and ending net fixed assets of $243,600. Assets valued at $42,500 were sold during the year. Depreciation was $62,500. What is the amount of net capital spending?

    A. $42,500

    B. $9,500
    C. $72,000

D. $53,000
E. $29,500

11. The financial ratio that measures the accounting profit per dollar of book equity is referred to as the:
    A. profit margin
    B. price-earnings ratio
    C. return on equity
    D. equity turnover

12. Which one of the following statements is correct concerning ratio analysis?
    A. A single ratio is often computed differently by different individuals
    B. Ratios do not address the problem of size differences among firms
    C. Only a very limited number of ratios can be used for analytical purposes
    D. Each ratio has a specific formula that is used consistently by all analysts

13. A supplier, who requires payment within ten days, should be most concerned with which one of the following ratios when granting credit?
    A. Current
    B. cash
    C. debt-equity
    D. total debt

14. If stockholders want to know how much profit the firm is making on their entire investment in that firm, the stockholders should refer to the:
    A. profit margin
    B. return on assets
    C. return on equity
    D. equity multiplier

15. You are the beneficiary of a life insurance policy. The insurance company offers two options for receiving the proceeds: a lump sum of $50,000 today or payments of $550 a month for ten years. If you can earn 6 percent, compounded monthly, which option should you take and why?
    A. You should accept the lump sum because the payments are only worth $49,540.40 today
    B. You should accept the payments because they are worth $51,523.74 today

C. You should accept the $50,000 because the payments are only worth $49,757.69 today
D. You should accept the payments because they are worth $53,737.08 today

16. Home Systems has sales of $312,800, cost of goods sold of $218,400, inventory of $46,300, and accounts receivable of $62,700. How many days, on average, does it take the firm to both sell its inventory and collect payment on the sale?

A. 142.10
B. 96.37
C. 178.21
D. 150.54

17. Ted purchased an annuity today that will pay $1,000 a month for five years. He received his first monthly payment today. Allison purchased an annuity today that will pay $1,000 a month for five years. She will receive her first payment one month from today. Which one of the following statements is correct concerning these two annuities?
A. Both annuities are of equal value today
B. Allison's annuity is an annuity due
C. Ted's annuity has a higher present value than Allison's
D. Allison's annuity has a higher present value than Ted's

18. If the risk of an investment project differs from the overall firm's risk then the:
A. market rate of return should be used as the project's discount rate
B. project's discount rate must be adjusted based on the risks of the project's cash flows
C. project's discount rate must be adjusted based on the sources of project financing
D. average rate used for all prior projects should be used as the new project's discount rate

19. Companies will generally have a:
A. low beta if their sales are directly related to the market cycle
B. high beta if their sales are highly dependent on the market cycle
C. high beta if their sales are highly variable but unrelated to the market cycle
D. high beta if sales are independent of the market cycle

20. Sensitivity analysis is primarily designed to determine the:

A. range of possible outcomes given expected ranges for every variable.
B. degree to which the net present value reacts to changes in a single variable
C. net present value given the best and the worst possible expected situations
D. degree to which a project relies on financial leverage

ANSWERS

1. B
2. D
3. D
4. A
5. D
6. D
7. B
8. B
9. D
10. C
11. C
12. A
13. B
14. C
15. A
16. D
17. C
18. B
19. B
20. B

EXAMINATION GUIDE

EXAMS GUIDE

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- FI Sense
- The Economist
- Bloomberg Business week
- Harvard Business Review
- Sloan Management Review

JOURNALS

- The Economic Journal
- Quarterly Journal of Economics
- Journal of Financial Economics
- Journal of International Economics
- American Economic Review
- The Review of Economic Studies
- The Journal of Finance
- Journal of Political Economy
- Journal of Accounting and Economics
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