Level 6 Advanced Diploma in Finance (531) 151 Credits

Unit: Finance Theory **Exam Paper No.:** 4	**Guided Learning Hours:** 300 **Number of Credits:** 30
Prerequisites: Knowledge of Finance.	**Corequisites:** A pass or higher in Diploma in Finance or equivalence.
Aim: The unit is a rigorous introduction to the modern theory of finance. As such, it involves problem solving that draws heavily on the related disciplines of economics, mathematics, probability and statistics. This unit focuses on the foundations of the dominant paradigms of modern finance theory: choice under uncertainty, mean-variance investment criteria and the theory of arbitrage. Topics covered include market efficiency, asset pricing, portfolio selection, utility theory, arbitrage and pricing, equilibrium models and complete markets, inter-temporal models, continuous time finance, contingent claim pricing, and the term structure of interest rates. The goal of this unit is to focus on the development of the ideas behind the needed formulas and results, so that learners will be able to think independently about when a formula or result will apply to a given situation. By understanding how a mathematical result works, learners will be less likely to misapply a formula or result, and more likely to be able to pursue and develop a needed modification in a situation where the standard formula or result does not apply.	
Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Lecture notes and tutor extra reading recommendations.
Special Requirements: The unit requires a combination of lectures, demonstrations and discussions.	
Intended Learning Outcomes: 1 The managerial significance of finance techniques, monetary decisions that business enterprises make, the tools and analysis used to make these decisions.	**Assessment Criteria:** 1.1 Describe finance tools and theories 1.2 Outline how finance can help non-finance professionals in their jobs 1.3 Analyse the close relationship between accounting and finance 1.4 Describe how finance is implemented in Information Systems 1.5 Describe the importance of financial knowledge to Managers 1.6 Demonstrate the use of finance in Marketing 1.7 Explain why Operation Managers need to know finance
2 Management discussion and analysis on Statement of Financial Position; Statement of Comprehensive Income; Statement of Changes in Equity and Statement of cash flows.	2.1 Calculate and compare book value vs market value 2.2 Calculate corporation taxes 2.3 Describe tax liability, average tax and marginal tax rate 2.4 Analyse the effect of debt *vs* equity financing 2.5 Design a cash flow statement 2.6 Describe statement of retained earnings
3 The risk and profitability of a firm (business, sub-business or project) through analysis of reported financial information.	3.1 Calculate and interpret liquidity ratios 3.2 Calculate and interpret asset management ratios 3.3 Calculate and interpret debt ratios 3.4 Calculate and interpret profitability ratios 3.5 Calculate and interpret market value ratios 3.6 Describe the accounting financial ratios and be able to compare them with Accounting Statements 3.7 Describe the use and application of Dupont Analysis 3.8 Demonstrate calculation of sustainable growth rates 3.9 Analyse how financial statements to gauge the health of a business

4 Time Value of Money (TVM) as an important concept in financial management and use it to compare investment alternatives.	4.1 Describe how to create a cash flowtime line 4.2 Compute the future value of money 4.3 Describe how compound interest increases wealth 4.4 Outline the calculation of the present value of a payment made in the future 4.5 Compute the rate of return realised on selling an investment 4.6 Evaluate and describe how solve problems involving loans, mortgages, leases, savings, and annuities
5 How annuities can be structured to provide fixed periodic payments to the annuitant or variable payments.	5.1 Compute the future value of level cash flows 5.2 Discount multiple cash flows to the present 5.3 Compute the present value of an annuity 5.4 Describe how to configure values for beginning-of-period of end-of-period 5.5 Compare and contrast annual percentage rate vs effective annual rate 5.6 Calculate the interest rate of annuity payments 5.7 Calculate the number of payments and schedules on a loan
6 How bonds are issued by public authorities, credit institutions, companies and supranational institutions in the primary markets and the process of issuing bonds.	6.1 Describe a bond and the different types 6.2 Describe a bond's current time to maturity, semi annual interest payment and bond price 6.3 Describe how to interpret bond quotes 6.4 Compute bond prices using present value concepts 6.5 Compare and contrast bond prices vs interest rates 6.6 Calculate the bond's current yield and yield to maturity
7 Understand buying and selling of business shares and how companies listed on the FTSE 100 provide goods and/or services.	7.1 Explain the rights and returns, that come with common shares ownership 7.2 Describe how stock exchange works 7.3 Analyse the stock market and be able to differentiate information each index provides 7.4 Describe share trading terminology 7.5 Compute share values using dividend discount and constant growth models 7.6 Calculate the share value of a company's variable growth rate 7.7 Describe the Price-Earnings (P/E) ratio model
8 Understand how financial markets facilitate both general markets (where many commodities are traded) and specialised markets (where only one commodity is traded).	8.1 Calculate real interest rates 8.2 Calculate yield curves 8.3 Calculate forward rates 8.4 Analyse the different types of financial institutions
9. Understand the relationship between risk and return in modern portfolio theory including the types of risk.	9.1 Evaluate computation of returns 9.2 Measure and evaluate the total risk of an investment 9.3 Outline the implementations of risk/return relationship 9.4 Compute a portfolio's return 9.5 Compute forward-looking expected return and risk

	9.6 Explain risk premiums 9.7 Describe how to apply the Capital Asset Pricing Model (CAPM) 9.8 Explain how to measure market risk 9.9 Outline the composition of the expected return of an asset and its relation to standard deviation
10 Understand how to calculate a company's Cost of Capital, the weighted-average, after-tax cost of a corporation's long-term debt, preferred stock, and the stockholders' equity associated with opportunity cost of an investment.	10.1 Define cost of capital 10.2 Describe and contrast capital, cost of capital, and return on capital 10.3 Describe how to calculate a firm's cost of equity 10.4 Use the Weighted-Average Cost of Capital (WACC) 10.5 Analyse cost of equity, preferred shares and debt 10.6 Calculate WACC projections 10.7 Calculate the flotation-adjusted cost of equity
11 The Capital Budgeting decision rules presented by (i) Payback Period (ii) Net Present Value (NPV) (iii) Internal Rate of Return (IRR).	11.1 Describe how to calculate depreciation tax 11.2 Analyse replacement and cost cutting problems 11.3 Calculate Equivalent Annual Cost (EAC) 11.4 Calculate and use Net Present Value (NPV) method 11.5 Calculate and use payback and discounted payback 11.6 Calculate and use Internal Rate of Return (IRR) and Modified Internal Rate of Return (MIRR) 11.7 Outline problems associated with IRR that MIRR can and cannot correct 11.8 Analyse the conflicts between NPV and IRR 11.9 Compute and describe use the Profitability Indexes (PI)
12 The structure of a firm's long-term (capital) financing and the degree that asset purchases are financed with debt.	12.1 Analyse the impact of increasing leverage on expected return and volatility 12.2 Describe the impact of leverage on shareholders expected return 12.3 Analyse the effects of exceeding the firm's leverage 12.4 Describe how to calculate the break-even EBIT 12.5 Describe the factors which affect a firm's payout policies 12.6 Compare and contrast stock split *vs* stock dividend 12.7 Demonstrate how to calculate the cost of issuing shares 12.8 Outline the objectives of a good working capital policy 12.9 Analyse how net working capital serves the firm 12.10 Calculate a firm's operation and cash cycles 12.11 Explain how to use the Baumol and Miller-Orr models 12.12 Analyse currency exchange risks 12.13 Illustrate the motives for mergers and acquisitions

	12.14 Calculate of creditor and shareholder order of payout in bankruptcy 12.15 Calculate Allaman's Z-Score
Methods of Evaluation: A 3-hour written examination paper with five essay questions, each carrying 20 marks. Candidates are required to answer all questions. Candidates also undertake project/coursework in Finance Theory with a weighting of 100%.	

Recommended Learning Resources: Finance Theory

Text Books	• Finance Theory by Robert A. Jarrow. ISBN-10: 0133148653 • Intermediate Financial Theory (Academic Press Advanced Finance) by John B. Donaldson Jean-Pierre Danthine.
Study Manuals	BCE produced study packs
CD ROM	Power-point slides
Software	None