

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY  
FACULTY OF COMMERCE  
DEPARTMENT OF FINANCE  
BACHELOR OF COMMERCE HONOURS DEGREE IN FINANCE AND FISCAL  
STUDIES  
PART II - 2<sup>nd</sup> SEMESTER FINAL EXAMINATION – AUGUST 2009  
RESEARCH METHODS IN FINANCE AND ECONOMICS [CFI 2205]  
TIME ALLOWED: 3 HOURS

**INSTRUCTIONS**

- 1 The paper contains two sections, A and B. Attempt two questions from each section.
- 2 Each question carries 25 marks.
- 3 Write legibly.

**SECTION A [ATTEMPT TWO QUESTIONS FROM THIS SECTION]**

**QUESTION ONE [25 MARKS]**

The world is facing a new challenge emanating from the unprecedented global financial crisis. Stock markets around the world have fallen, many large financial institutions have collapsed, global economies have weakened or even fallen into a deep recession, and governments in developed and developing countries have had to come up with rescue packages.

From a macroeconomic perspective, the crisis has thrown into questioning the standard models employed by academics, governments, central banks, and private sectors. The world's macro-economy, it seems, is radically more interconnected than we thought.

You have just been recruited by an international research institution and your first assignment is to carry out a study on "The Consequences of the Global Financial Crisis on the Zimbabwean Economy". You are required to draft the project proposal that you would use to carry out this study for approval by your supervisor. [25 marks]

**QUESTION TWO [25 MARKS]**

- (a) (i) What is the significance of conducting a review of related literature when carrying out academic research? [6 marks]
- (ii) Provide key guidelines that should be followed when conducting a literature review. [6 marks]
- (b) (i) Examine the meaning of the term "research paradigm" and explain its significance in academic research. [4 marks]
- (ii) Identify and give a brief description of the two basic types of research paradigms Under what circumstances would a mixed approach be suitable? [9 marks]

**QUESTION THREE [25 MARKS]**

- (a) Describe the guidelines to be followed in construction of a questionnaire. [10 marks]
- (b) Explain five advantages and five disadvantages of conducting telephone interviews as a method of data collection. [10 marks]
- (c) Explain the distinction between validity and reliability in research. [5 marks]

**SECTION B [ATTEMPT ANY TWO QUESTIONS]**

**QUESTION FOUR [25 MARKS]**

- (a) (i) What is meant by a hypothesis? [2 marks]
- (ii) What is the significance of hypothesis testing in research? [3 marks]
- (iii) Outline the procedure for testing a hypothesis. [6 marks]
  
- (b) A study was made of the number of business lunches that executives claim as deductible expenses per month. Forty executives in the insurance industry averaged 9.4 such deductions with a standard deviation of 3.3 in a given month, while 50 bank executives average 7.9 with a standard deviation of 2.9.

Test at the 5% level of significance whether the difference between the two sample means is significant.

z Limits

Significance Level	z limits
0.01	±2.58
0.05	±1.96
0.10	±1.645

[10 marks]

- (c) Distinguish between a type I error and a type II error in hypothesis tests. [4 marks]

**QUESTION FIVE [25 MARKS]**

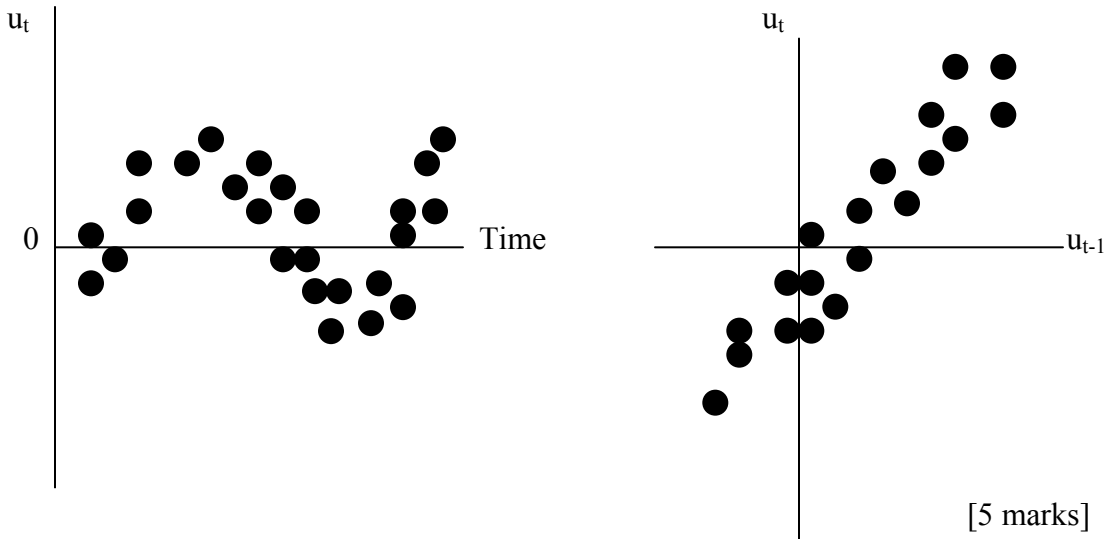
- (a) An academic suggests to you that the returns on common stock differ based on a company's market capitalization, its historical earnings growth, the stock's current yield and whether or not the company's employees are unionized. You are skeptical that there are any attributes other than market exposure as measured by beta that explain differences in returns across a sample of securities.

Nonetheless, you decide to test whether or not these other attributes account for the differences in returns. You select the ZSE stocks as you sample, and regress their returns each month for the past five years against the company's market

capitalization at the beginning of each month, the company's growth in earnings throughout the previous 12 month, the prior years dividend divided by the stock price at the beginning of each month, and a dummy variable that has a value of 1 if employees are unionized and 0 if not.

- (i) The average R-squared from the regression is **.15** and it varies very little from month to month. Discuss the significance of this result. [5 marks]
- (ii) You note that all of the coefficients of the attributes have t-statistics greater than 2 in most of the months in which the regressions were run. Discuss the significance of these attributes in terms of explaining differences in common stock returns. [5 marks]

(b) By inspection of the figure below what would be your understanding of the characteristics of the data?



[5 marks]

- (c) Discuss the meaning and significance of conducting event studies in the field of finance. Outline the basic steps in an event study. [10 marks]

**QUESTION SIX [25 MARKS]**

- (a) Explain the difference between the characteristics of macroeconomic and financial data that necessitate the need to use different econometric tools. [6 marks]
- (b) Distinguish between time-series and cross-sectional data using examples in each case. [8 marks]
- (c) The following table gives the Gross Domestic Product (GDP) for a certain country from 1998 to 2008:

Year	GDP (millions)
1998	2 255
1999	2 650
2000	3 224
2001	4 049
2002	4 657
2003	5 432
2004	4 649
2005	6 227
2006	6 957
2007	7 271
2008	8 295

- (i) Find the straight line trend  $y = a + bx$ , for this data if  $\sum x = 0$ . [8 marks]
- (ii) Use this equation to predict the GDP for 2009 [3 marks]

**QUESTION SEVEN [25 MARKS]**

- (a) Distinguish between probability and non-probability sampling techniques. Under what circumstances is it appropriate to use cluster sampling as opposed to systematic sampling in conducting a study? Use the following random numbers to select a sample of five counters that are listed on the ZSE.

251 784 867 932 077  
462 862 985 155 068  
753 194 233 432 690  
483 446 296 787 585  
762 088 830 209 125

[14 marks]

- (b) Discuss how the notion of chaos theory is used to explain financial and economic data. [5 marks]
- (c) Provide a checklist of questions you would ask yourself when choosing a suitable statistical package for presentation and analysis of data. [6 marks]