HOCHSCHULE PFORZHEIM

–   Faculty of Economics and Law   –

- Written Examination Example-

Department: Economics	
Subject: International Financial Markets	**Semester:**
	Date:
Examinant:	**Prof. Dr. Rainer Maurer**
Time:	**60 Minutes**
Auxiliary Means:	**Non-Programmable Calculator**

Notes:

(1) Please check the number of sheets and questions for completeness. You should find 5 questions and 5 sheets (inclusive this front page).

(2) Please use these sheets to answer the questions. If you need more space, use the back of the preceding page. Should these not be sufficient, use additional sheets and staple them at the end. Please take care for a correct numbering of all additional sheets.

(3) A correct answer yields the number of points noticed in the side column of each question. To pass the examination 50% of all available points have to reached (= 30 points).

(4) Please give complete and comprehensible answers. Illegible answers cannot be accepted.

(5) If you use charts, please take care for a complete labeling.

Name: _____

Matriculation-Number: _____

Result: _____

1. Explain the basic idea of the „live cycle hypothesis".	5

People tend to spread their consumption per period equally over their lifetime, because this increases their lifetime utility: Since the utility of an additional unit of consumption is typically decreasing (decreasing marginal utility of consumption), total lifetime utility is lower, when people consume all their income on one day compared to spreading the consumption of their income over more than one day. This kind of behaviour implies that in times where people have only a "low" income, they should finance their consumption with credits, while in times where people have a "high" income, they should make savings.

2. (a) Explain how the risk adjusted discount rate is defined by the Capital Asset Pricing Model. (b) What are the problems in calculating the risk adjusted discount rate this way?	10

(a) Following the CAPM the risk adjusted discount rate equals the market interest rate for a risk free return plus an asset specific risk premium, calculated by multiplying the "market price of risk" (measured as the difference between the return of the market portfolio and the return of the risk free asset divided by the variance of the return of the market portfolio) with the "units of risk" related to the asset (measured as the covariance of the asset return with the return of the market portfolio).

(b) The problem in calculating the risk adjusted discount rate this way is the lack of information on the future values of the "market price for risk" and the "units of risk" related to the asset. Because these values are not known in advance, they have to be estimated. Therefore the "risk adjusted discount rate" becomes an uncertain estimate too.

3. Explain the characteristics two asset must have to be "hedges".	5	

According to the principle of hedging, the risk of an investment can be lowered, if several assets are held in a portfolio instead of holding one asset only. A necessary condition for two assets to be hedges is that their returns are less than perfectly positive correlated. If two assets are perfectly negatively correlated, the return of one asset goes up when the return of the other asset goes down such that the variance of the portfolio return is zero. If two assets display a perfect positive correlation of their returns, there will be no hedging effect.

4. (a) How is the "fair value" of a stock defined? (b) What are the difficulties in calculating the "fair value" of a stock?	10	

   (a) Discounted cash flow of all future dividend payments.

   (b) All numbers used to calculate the fair value must be forecasted and are therefore uncertain estimates:

- *The theoretically correct discount rate equals the future percentage return of a risk free asset plus a risk premium that depends on the future market price for risk and the correlation between the asset return and the return of the market portfolio.*
- *The future dividend payments equal the future sales of the company minus future payments for costs to suppliers of goods and services and to labor minus future payment of interest on outside capital minus future payment of tax on profit minus future Retained Earnings.*

5. Explain how monetary policy affects the exchange rate between two countries via the "interest parity channel".	15

Increase of Domestic Money Supply
    => Decrease of Domestic Interest Rate
            => Increase of Demand for Foreign Currency on the Spot Market
                => Depreciation of the Domestic Currency
          => Increase of Credit Supply to Foreign Credit Market
                => Decrease of the Foreign Interest Rate
          => Increase of the Demand for Domestic Currency on the Forward Market
                => Appreciation of Domestic Forward Currency

At least one of these secondary effects must evolve in order to restore the equilibrium. The strength of each effect depends on the empirical size of the market parameters (= slopes of demand and supply curves).

6. Explain the basic "ingredients" of a financial market crisis based on the example of the World Economic Crisis of 1929.
 	
 ➤ *Initial Shock:*
      ▪ *Technological innovations: The emergence of new technologies (electrification of households, mass production of consumer durables, automotive engineering) caused expectations of increased profits.*
 	
 ➤ *Positive Feedback Mechanism:*
      ▪ *Increase of demand for stock by investments funds and private households led to an increase of stock market prices. Increase of prices led to expectations of further price increases (naïve expectations). Expectations of further price increases led then again to an increase in the demand for stock and so on.*
 	
 ➤ *Fuel Reservoir:*
      ▪ *Expansionary monetary policy in interaction with the credit expansion of commercial banks supplied cheap credits, which boosted the demand for stocks. Restructuring saving portfolios by private households provided additional means to buy stock.*
 	
 ➤ *Negative Shock:*
      ▪ *Gradual cooling-down of the American economy, probably caused by the more restrictive monetary policy of the Fed in the years 1927-29.*
	15