

FINAL %	
---------	--

# ECS301D

OCTOBER/NOVEMBER 2010  
OKTOBER/NOVEMBER 2010

## MONETARY ECONOMICS MONETêRE EKONOMIE

STUDENT NUMBER									

IDENTITY NUMBER											

**FOR USE BY EXAMINATION INVIGILATOR**

Question No	Marks		
	Examiners		
	1	2	3
<b>Total</b>			

Subject

Number of paper

Date of examination

Examination centre

**WARNING**

- 1 A candidate who without authorisation takes into the examination venue any book document or object which could assist him in the examination, and does not hand over such material to the invigilator before the official commencement of the examination, will be guilty of infringing the University's examination regulations and will be liable to punishment as determined by Council
- 2 Rough work may be done only on the examination question paper and must be labelled as such
- 3 No notes may be made on any part of the body such as the hands, or on any garment
- 4 This page/paper is the property of the University and under no circumstances may the candidate retain it or take it out of the examination venue

**NB PLEASE COMPLETE THE ATTENDANCE REGISTER ON THE BACK PAGE, TEAR OFF AND HAND TO THE INVIGILATOR**

# ECS301D

October/November 2010  
Oktober/November 2010

## MONETARY ECONOMICS (ECONOMICS 301) MONETERE EKONOMIE (EKONOMIE 301)

Duration 2 Hours  
Tydsduur 2 Uur

100 Marks  
100 Punte

### EXAMINERS / EKSAMINATORE

FIRST / EERSTE MR/MNR JC VERMEULEN  
SECOND / TWEEDE MRS/MEV LA LESHORO  
EXTERNAL / EKSTERNE DR SL MOLLENTZE

This paper consists of 34 pages including 5 pages for rough work (pp 30 to 34) plus the special front page

Hierdie vraestel bestaan uit 34 bladsye insluitende 5 bladsye vir rofwerk (pp 30 tot 34) plus die spesiale voorblad

This examination question paper remains the property of the University of South Africa and **may not be removed from the examination venue.**

Hierdie eksamenvraestel bly die eiendom van die Universiteit van Suid-Afrika en **mag nie uit die eksamenlokaal verwyder word nie.**

STUDENT NUMBER / STUDENTENOMMER

--	--	--	--	--	--	--	--	--	--

[TURN OVER]  
[BLAAI OM]

**Part 1: Definition and functions of money (15 Marks)**  
**Deel 1: Definisie en funksies van geld (15 Punte)**

Answer ALL questions in part 1 / Beantwoord ALLE vrae in deel 1

- 1 1 Explain the difference between nominal and real GDP [4]  
 Verduidelik die verskil tussen nominale en reele BBP
- 1 2 What is the difference between direct and indirect financing? [2]  
 Wat is die verskil tussen direkte en indirekte finansiering?
- 1 3 Financial intermediaries promote economic efficiency by performing a variety of services Explain how financial intermediaries [2]  
 (i) Lower transaction costs [2]  
 (ii) Reduce exposure to risk [2]  
 Finansiële tussengangers bevorder ekonomiese doeltreffendheid deur 'n verskeidenheid van dienste aan te bied Verduidelik hoe finansiële tussengangers  
 (i) Transaksiekostes verlaag  
 (ii) Blootstelling aan risiko verminder
- 1 4 Briefly distinguish between the money market and the capital market [2]  
 Onderskei kortliks tussen die geldmark en die kapitale mark.
- 1 5 How is the M1 money aggregate measured in South Africa? [3]  
 Hoe word die M1 geldvoorraad in Suid-Afrika gemeet?

**[TURN OVER]**  
**[BLAAI OM]**

**Part 2: Financial markets (20 Marks)**  
**Deel 2: Finansiële markte (20 Punte)**

Answer **ANY TWO** of the following three questions  
 Beantwoord **ENIGE TWEE** van die volgende drie vrae

- 2 1 Explain why the return on a bond will not necessarily be equal to the interest rate (yield to maturity) on that bond Use the relevant formulas applicable to a two-year coupon bond to substantiate your answer Also explain the possibility of a negative return on a bond [10]

Verduidelik waarom die opbrengs op 'n effek nie noodwendig gelyk is aan die rentekoers (opbrengskoers tot vervaldatum) van 'n effek nie Gebruik die toepaslike formules vir 'n twee-jaar koepon-effek om u antwoord te staaf Verduidelik ook die moontlikheid van 'n negatiewe opbrengs op 'n effek

- 2 2 Explain how Keynes's liquidity preference framework can be used to explain the effects of

- (i) an increase in income,
- (ii) a rise in the price level, and
- (iii) an increase in the money supply

on the interest rate Assume that all other economic variables remain constant Please draw graphs to illustrate your explanations for each one of (i), (ii) and (iii) [10]

Verduidelik hoe Keynes se likiditeitsvoorkeur-raamwerk gebruik kan word om die effek van

- (i) 'n toename in inkome,
- (ii) 'n styging in die prysvlak, en
- (iii) 'n toename in die geldvoorraad

op die rentekoers te verduidelik Aanvaar dat alle ander ekonomiese veranderlikes konstant bly Teken ook grafieke om elkeen van jou verduidelikings van (i), (ii) en (iii) te illustreer

- 2 3 Explain the difference between the risk structure of interest rates and the term structure of interest rates Then draw a normal yield curve and list the three empirical facts generally observed about the yield curve [10]

Verduidelik die verskil tussen die risikostruktuur van rentekoerse en die termynstruktuur van rentekoerse. Trek ook 'n normale opbrengskromme (*yield curve*) en lys die drie empiriese eienskappe tipies van 'n opbrengskromme

**[TURN OVER]**  
**[BLAAI OM]**

**Part 3: Financial institutions (15 Marks)**  
**Deel 3: Finansiële instellings (15 Punte)**

Answer question 3 1 / Beantwoord vraag 3 1

- 3 1 Explain how asymmetric information can explain why marketable securities (debt and equity) are not the primary source of financing for businesses [5]

Verduidelik hoekom asimmetriese inligting kan verklaar waarom bemarkbare sekuriteite (skuld- en ekwiteitsinstrumente) nie die primêre bron van finansiering vir besighede is nie

Answer **ANY TWO** of the following three questions  
 Beantwoord **ENIGE TWEE** van die volgende drie vrae

- 3 2 How does the presence of adverse selection in credit markets explain the importance of collateral and net worth in debt contracts? [5]

Hoe verklaar die teenwoordigheid van ongunstige seleksie in kredietmarkte die belangrikheid van kollateraal en netto waarde in skuldkontrakte?

- 3 3 Briefly explain the meaning of "off-balance sheet activities" and discuss two types of off-balance sheet activities [5]

Verduidelik kortliks wat "buite-balansstaat aktiwiteite" is en bespreek twee tipes buite-balansstaat aktiwiteite

- 3 4 Explain the meaning of interest rate risk and discuss two ways in which banks may deal with this problem. [5]

Verduidelik wat rentekoersrisiko is, en bespreek twee maniere waarmee banke rentekoersrisiko kan hanteer

**[TURN OVER]**  
**[BLAAI OM]**

**Part 4: Central banking and the conduct of monetary policy (25 Marks)**  
**Deel 4: Sentrale bankwese en monetêre beleidsvoering (25 Punte)**

Answer **EITHER** question 4 1 or 4 2 / Beantwoord **ÓF** vraag 4 1 óf vraag 4.2

4 1 Derive the money multiplier equation

$$M = \frac{1+c}{r+e+c}(MB)$$

Also explain what the variables  $r$ ,  $e$  and  $c$  represent What will be the effect of an increase in  $r$  on the multiplier? [10]

Lei die geldvermenigvuldiger vergelyking af

$$M = \frac{1+c}{r+e+c}(MB)$$

Verduidelik ook wat die veranderlikes  $r$ ,  $e$  en  $c$  voorstel Wat sal die effek van 'n toename in  $r$  op die vermenigvuldiger wees?

or / of

4 2 Discuss the advantages and disadvantages of inflation targeting [10]

Bespreek die voordele en nadele van inflasie-tekening

Answer **EITHER** question 4 3 or 4 4 / Beantwoord **ÓF** vraag 4 3 of vraag 4 4

4 3 Explain why the price stability goal in South Africa is desirable, despite other pressing and potentially conflicting economic problems What is the role of the nominal anchor? Also explain the nature of the time-inconsistency problem [15]

Verduidelik waarom die doel van prysstabiliteit in Suid-Afrika steeds toepaslik is (ten spyte van die voorkoms van ander ernstige ekonomiese probleme) Verduidelik ook die aard van die tyd-inkonsekwensie probleem

or / of

4 4 List and briefly explain five of the main functions of the South African Reserve Bank [15]

Lys en verduidelik kortliks vyf van die Suid-Afrikaanse Reserwebank se belangrikste funksies

**[TURN OVER]**  
**[BLAAI OM]**

**Part 5: International Finance**  
**Deel 5: Internasionale Finansies**

**NO QUESTIONS**  
**GEEN VRAE**

**Part 6: Monetary theory (25 Marks)**  
**Deel 6: Monetêre teorie (25 Punte)**

Answer **EITHER** question 6 1 or question 6 2 / Beantwoord **OF** vraag 6 1 of vraag 6 2

- 6 1 Briefly explain the two types of empirical evidence in economics that may be evaluated, that is, structural model evidence and reduced-form evidence in the case of the two variables money stock (M) and income (Y) Also explain the advantages and disadvantages of both types of evidence

[10]

Verduidelik kortliks die twee soorte empiriese bewyse in ekonomie wat geëvalueer kan word, naamlik die struktuurmodelbewyse en die gereduseerde vormbewyse in die geval van twee veranderlikes, te wete die geldvoorraad (M) en inkomste (Y) Verduidelik ook die voordele en nadele van elke soort bewys

or / of

- 6 2 Explain why the ISLM model may be regarded as unrealistic Focus particularly on the interpretation of endogenous and exogenous variables within the ISLM model and on how the money supply is determined in South Africa Which additional assumption regarding the LM curve would improve the relevance of the ISLM model for monetary policy in South Africa?

[10]

Verduidelik waarom die ISLM-model as onrealisties beskou kan word Fokus in die besonder op die onderskeid tussen endogene en eksogene veranderlikes in die ISLM-model, asook op die wyse waarop die geldvoorraad in Suid-Afrika bepaal word Watter addisionele aanname rakende die LM-kromme kan die toepaslikheid van die ISLM-model vir monetêre beleid in Suid-Afrika verbeter?

**[TURN OVER]**  
**[BLAAI OM]**

Answer EITHER question 6 3 or question 6 4 / Beantwoord OF vraag 6 3 óf vraag 6 4

6 3 Comment on the statement "Inflation is essentially a symptom of conflict over income distribution, which cannot be settled by relative price/wage movements" Then discuss the following three factors which make an economy more inflation prone

- (i) Regular significant price increases
- (ii) Large and powerful business, government and labour
- (iii) Highly elastic money stock

[15]

Lewer kommentaar oor die volgende stelling "Inflation is essentially a symptom of conflict over income distribution, which cannot be settled by relative price/wage movements" Bespreek vervolgens die volgende drie faktore wat veroorsaak dat 'n ekonomie vatbaar is vir inflasie:

- (i) Gereelde en beduidende prysstygings
- (ii) Groot en magtige besighede, regerings en arbeidsektor
- (iii) 'n Hoogs-elastiese geldvoorraad

6 4 Explain the following two counter-inflationary policy measures

- (i) Price controls
- (ii) Tight monetary policy

In your answer, discuss the advantages and disadvantages of both of these policy measures

[15]

Gee 'n kort bespreking van die volgende twee beleidsmaatreëls om inflasie teen te werk

- (i) Prysbeheer
- (ii) 'n Streng monetêre beleid

In u antwoord bespreek die voor- en nadele van beide die beleidsmaatreëls

\* \* \* \* \*

[TURN OVER]  
[BLAAI OM]



**Part 1: Definition and functions of money (15 Marks)**  
**Deel 1: Definisie en funksies van geld (15 Punte)**

Answer ALL questions in part 1 / Beantwoord ALLE vrae in deel 1.

1 1 Explain the difference between nominal and real GDP.

[4]

Verduidelik die verskil tussen nominale en reele BBP

---

---

---

---

---

---

---

---

---

---

1 2 What is the difference between direct and indirect financing?

[2]

Wat is die verskil tussen direkte en indirekte finansiering?

---

---

---

---

---

---

---

---

[TURN OVER]  
[BLAAI OM]

1.3 Financial intermediaries promote economic efficiency by performing a variety of services Explain how financial intermediaries

- (i) Lower transaction costs [2]
- (ii) Reduce exposure to risk [2]

Finansiële tussengangers bevorder ekonomiese doeltreffendheid deur 'n verskeidenheid van dienste aan te bied Verduidelik hoe finansiële tussengangers:

- (i) Transaksiekostes verlaag
- (ii) Blootstelling aan risiko verminder

---

---

---

---

---

---

---

---

---

---

1 4 Briefly distinguish between the money market and the capital market [2]

Onderskei kortliks tussen die geldmark en die kapitale mark.

---

---

---

---

---

---

---

---

---

---

[TURN OVER]  
[BLAAI OM]

1 5 How is the M1 money aggregate measured in South Africa?

[3]

Hoe word die M1 geldvoorraad in Suid-Afrika gemeet?

---

---

---

---

---

---

---

**Part 2: Financial markets (20 Marks)**

**Deel 2: Finansiële markte (20 Punte)**

Answer **ANY TWO** of the following three questions

Beantwoord **ENIGE TWEE** van die volgende drie vrae

2.1 Explain why the return on a bond will not necessarily be equal to the interest rate (yield to maturity) on that bond Use the relevant formulas applicable to a two-year coupon bond to substantiate your answer Also explain the possibility of a negative return on a bond

[10]

Verduidelik waarom die opbrengs op 'n effek nie noodwendig gelyk is aan die rentekoers (opbrengskoers tot vervaldatum) van 'n effek nie Gebruik die toepaslike formules vir 'n twee-jaar koepon-effek om u antwoord te ondersteun Verduidelik ook die moontlikheid van 'n negatiewe opbrengs op 'n effek

---

---

---

---

---

---

---

---

---

---

**[TURN OVER]**  
**[BLAAI OM]**





- 2 3 Explain the difference between the risk structure of interest rates and the term structure of interest rates. Then draw a normal yield curve and list the three empirical facts generally observed about the yield curve.

[10]

Verduidelik die verskil tussen die risikostruktuur van rentekoerse en die termynstruktuur van rentekoerse. Trek ook 'n normale opbrengskromme (*yield curve*) en lys die drie empiriese eienskappe tipies van 'n opbrengskromme.

[TURN OVER]  
[BLAAI OM]

**Part 3: Financial institutions (15 Marks)**  
**Deel 3: Finansiële instellings (15 Punte)**

Answer question 3 1 / Beantwoord vraag 3 1

- 3 1 Explain how asymmetric information can explain why marketable securities (debt and equity) are not the primary source of financing for businesses [5]

Verduidelik hoekom asimmetniese inligting kan verklaar waarom bemarkbare sekuriteite (skuld- en ekwiteitsinstrumente) nie die primêre bron van finansiering vir besighede is nie

[TURN OVER]  
[BLAAI OM]





3 4 Explain the meaning of interest rate risk and discuss two ways in which banks may deal with this problem

[5]

Verduidelik wat rentekoersrisiko is, en bespreek twee maniere waarmee banke rentekoersrisiko kan hanteer

[TURN OVER]  
[BLAAI OM]

**Part 4: Central banking and the conduct of monetary policy (25 Marks)**  
**Deel 4: Sentrale bankwese en monetêre beleidsvoering (25 Punte)**

Answer EITHER question 4 1 or 4 2 / Beantwoord ÓF vraag 4 1 óf vraag 4 2

4 1 Derive the money multiplier equation

$$M = \frac{1+c}{r+e+c}(MB)$$

Also explain what the variables  $r$ ,  $e$  and  $c$  represent. What will be the effect of an increase in  $r$  on the multiplier? [10]

Lei die geldvermenigvuldiger vergelyking af

$$M = \frac{1+c}{r+e+c}(MB)$$

Verduidelik ook wat die veranderlikes  $r$ ,  $e$  en  $c$  voorstel. Wat sal die effek van 'n toename in  $r$  op die vermenigvuldiger wees?[TURN OVER]  
[BLAAI OM]











**Part 5: International Finance**  
**Deel 5: Internasionale Finansies**

**NO QUESTIONS**  
**GEEN VRAE**

**Part 6: Monetary theory (25 Marks)**  
**Deel 6: Monetêre teorie (25 Punte)**

Answer **EITHER** question 6 1 or question 6 2 / Beantwoord **OF** vraag 6 1 of vraag 6 2

6 1 Briefly explain the two types of empirical evidence in economics that may be evaluated, that is, structural model evidence and reduced-form evidence in the case of the two variables money stock (M) and income (Y) Also explain the advantages and disadvantages of both types of evidence

[10]

Verduidelik kortliks die twee soorte empiriese bewyse in ekonomie wat gevalueer kan word, naamlik die struktuurmodelbewyse en die gereduseerdevormbewyse in die geval van twee veranderlikes, te wete die geldvoorraad (M) en inkomste (Y) Verduidelik ook die voordele en nadele van elke soort bewys







Answer EITHER question 6 3 or question 6 4 / Beantwoord ÓF vraag 6 3 óf vraag 6 4

6 3 Comment on the statement "Inflation is essentially a symptom of conflict over income distribution, which cannot be settled by relative price/wage movements" Then discuss the following three factors which make an economy more inflation prone

- (i) Regular significant price increases
- (ii) Large and powerful business, government and labour
- (iii) Highly elastic money stock

[15]

Lewer kommentaar oor die volgende stelling "Inflation is essentially a symptom of conflict over income distribution, which cannot be settled by relative price/wage movements" Bespreek dan ook die volgende drie faktore wat veroorsaak dat 'n ekonomie vatbaar is vir inflasie

- (i) Gereelde en beduidende prysstygings
- (ii) Groot en magtige besighede, regerings en arbeid
- (iii) 'n Hoogs-elastiese geldvoorraad

[TURN OVER]  
[BLAAI OM]

















