Public Finances in the Economic and Monetary Union
ISEG - School of Economics and Management

Exam, 31 January 2014 - **Duration: 2h**

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1. **The exam has two groups. The points for each question are mentioned alongside.**
2. **ALL the questions in group ONE need to be answered.**
3. **Choose ONLY 2 questions from group TWO.**
4. **Only non-graphical calculators are allowed. It is not possible to use any reading material. During the exam no clarifications can be made. It is not allowed the use of mobile phones or computers. Improper use will lead to cancellation of the exam.**

I

1. Assume the following process for the price level $p_t = \omega_0 + \omega_1 p_{t-1} + \omega_2 u_t + \omega_3 u_{t-1}$. In addition, money follows $m_t = m_{t-1} + \mu$, and money demand can be written as $m_{t-1} + \mu = \gamma + \alpha E_t p_{t+1} + (1-\alpha) p_t + u_t$ (u_t – white noise, $E_t u_t$=0). Determine the price level p_t, using the the method of indeterminate coefficients and discuss the results. [3.00]

2. In the context of the Unpleasant Monetarist Arithmetic explain succintly:

a) The link between government debt, money and prices. [1.50]
b) How can one link the Sargent and Wallace setup with the Leeper-Sims-Woodford analysis? [1.50]

3. The change in the debt-to-GDP ratio can be derived as $\Delta b_t = \dfrac{(r_t - y_t)}{(1+y_t)} b_{t-1} + (g_t - \rho_t) + sfa_t$

where: b_t – debt-to-GDP ratio; r_t – implicit nominal interest rate on government debt; ρ_t – total government revenue-to-GDP ratio; g_t – government primary spending-to-GDP ratio; y_t – nominal GDP growth rate; sfa_t – stock-flow adjustment (or debt-deficit adjustment). Based on the data for a given country (see table), calculate (and present your calculations):

a) The change in the debt-to-GDP ratio in 2014. [0.50]
b) The amount of each component contributing to the change in the debt-to-GDP ratio in 2014 (as a % of GDP). [1.50]
c) Is the change in the primary deficit in 2014 a spending related development? [1.00]

	2011	2012	2013	2014
Nominal GDP (EUR billions)	1053.16	1087.75	1047.83	1051.34
Long-term interest rate (%)	4.31	4.37	3.98	4.25
Short-term interest rate (%)	4.28	4.63	1.22	0.81
Primary spending (EUR billions)	396.2	433.55	466.24	459.53
Interest payments (EUR billions)	16.93	17.43	18.57	20.07
Total revenue (EUR billions)	433.21	402.08	367.66	381.43
Government debt (EUR billions)	381.4	435.82	563.88	641.8
Debt ratio (% of GDP)	36.21	40.07	53.81	61.05

4. Explain the calculation and the relevance of the cyclically adjusted budget balance, and of the automatic stabilisers. [3.00]

II

Answer ONLY 2 of the following 3 questions:

1. High fiscal imbalances call for large and sustained fiscal adjustment efforts in many countries.

a) Please explain how the fiscal adjustment effort can be measured. [1.00]
b) What are the major difficulties in quantifying the fiscal adjustment effort? [1.00]
c) How can the economic cycle contribute to fiscal consolidation? [1.00]
d) In addition to the budget deficit ratio, what factors do you take into account to assess changes in fiscal sustainability. How are these factors affected by consolidation efforts? [1.00]

2. Assume you received the figures below for growth and public finances as represented a country's fiscal notification and the Commission's forecast for the period 2014-2016.

a) Does the country breach the reference values for the deficit and debt? What can we say about the MTO? [1.00]
b) Which steps under the corrective arm of the SGP should now be undertaken? [1.00]
c) Would the deficit reduction path in the period 2014-2016 be in line with the Pact? [1.00]
d) Formulate two elements of a Council recommendation under the corrective arm that are in line with the Stability and Growth Pact. [1.00]

Recent budgetary figures and projections	2013	2014	2015	2016
Government budget balance ratio (% of GDP)	-5.3	-5.0	-5.9	-5.7
Cyclically adjusted budget balance (% of GDP)	-3.2	-3.2	-5.7	-5.9
Government debt (% of GDP)	115.1	116.9	118.5	117.6
Real GDP growth (% change)	-4.8	1.1	1.0	0.5

3. Explain succinctly:

a) The confront between the idea of the Fiscal Theory of the Price Level with the orthodox view of the determination of the pricel level. [1.50]
b) When can Ponzi games work. [1.00]
c) The hypothesis of expansionary fiscal consolidations. [1.50]