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**THE CHOICE OF INDICATORS IN
THE LISBON ASSESSMENT
FRAMEWORK (LAF)**

**Part 4:
Macroeconomy and fiscal policy**

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* This study is part of a project sponsored by the Planning Bureau and funded by the Research Promotion Foundation (RPF) through the Economics Research Center (ERC). It aims to reach a better appreciation of the LAF methodology and, following a critical assessment, to propose improvements to this approach. Its application to Cyprus is scrutinised and several suggestions are offered and quantified.



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INTRODUCTION

This document contains a detailed description and analysis of all indicators included in the second part of the LIME Assessment Framework (LAF). LAF is a tool developed by the Lisbon Methodology (LIME) Working Group of the Economic Policy Committee (EPC) in order to evaluate the economic progress of all Member States and progress with their structural reforms, based on the Lisbon Strategy targets and guidelines.

The second part is an analysis of 282 indicators in 20 policy areas related to: (i) Labour market, (ii) Product and capital market regulations, (iii) Innovation and knowledge and (iv) Macroeconomy. Each policy area contains multiple indicators varying in number from eight to twenty-one, depending on the area. An aggregate score is calculated for each policy area both in levels and changes over time. In the calculations of the aggregate score, only a subset of indicators are included, called the “narrow list” indicators, while the remaining indicators are called the “wider list” indicators. Each narrow list indicator can get different aggregation weights as assigned by the LIME Working Group. All data and calculations are included in an automated Excel based application, called the “Maquette”.

In this note, we provide information for each indicator, such as definition, indicator source, data source, indicator type (performance/policy), time coverage, geographical coverage, data and score values for Cyprus, aggregation weights, reason excluded from narrow list, comments on data quality and score calculations, alternative data and score values in cases of inaccuracies and general comments on the appropriateness of each indicator for Cyprus. In addition, we provide suggestions for improvement such as alternative indicators for the narrow list, alternative aggregation weights, improved indicator definitions and more accurate data sources that could be used.

In addition to indicator specific information, we provide relevant information from the existing literature for Cyprus when available, and appendices with more information regarding regulations, institutions and relevant market conditions for each section.

“The Choice of Indicators in LAF” is divided into four parts, one for each section:

- *Part 1 relates to labour market policies and includes the following policy areas: Active labour market policies, making work-pay: interplay of tax and benefit system, labour taxation to stimulate labour demand, job protection and labour market segmentation/ dualisation, increasing working time, specific labour supply measures for women, specific labour supply measures for older workers, wage*

- bargaining and wage-setting policies, immigration and integration policies, labour market mismatch and labour mobility.*
- *Part 2 contains areas for product and capital market regulations: Competition policy framework, sector specific regulation, entrepreneurship and business environment, business dynamics – start-up conditions, financial markets and access to finance, market integration – openness to trade and investment.*
 - *Part 3 has to do with education and knowledge with three policy areas: R&D and innovation and ICT, education and lifelong learning.*
 - *Finally, part 4 relates to macroeconomic indicators with two policy areas: Orientation and sustainability of public finances and Macroeconomic background information.*

Part 1 uses data coming from the LAF Maquette updated up to May 2009. For parts 2, 3, and 4, a newer Maquette version is used; updated up to December 2009.

4 MACROECONOMY

4.1. Orientation and sustainability of public finances (Fiscal Policy)

“Europe’s ageing population poses serious risks to the long-term sustainability of the European Union economy in the form of an increased debt burden, lower potential output per capita, due to the reduction in the working age population, and difficulties in financing the pension, social insurance and health care systems. A substantial "sustainability gap" for the EU in aggregate is likely to emerge (As documented in the Commission's Sustainability Report). In order to accomplish a satisfactory pace of debt reduction budgetary consolidation is necessary resulting in the attainment of the MTO's by all Member States (MSs). In addition, fiscal restraint, effective financial supervision and promoting competitiveness are essential in order to contain external and internal imbalances. A cautious fiscal stance is one important way to keep external deficits within the range where sound external financing can be secured. Fiscal restraint can also limit the risk of surging domestic demand causing persistently higher inflation and the occurrence of macro-financial risks which could cause swings in real exchange rates and a protracted loss of competitiveness. Challenges to stabilisation should be addressed by macroeconomic measures as well as by implementing structural reforms in product and labor markets. Monetary policies can contribute by pursuing price stability and, without prejudice to this objective, by supporting other general economic policies with regard to growth and employment. Securing sound budgetary positions allow the full and symmetric play of the automatic budgetary stabilisers over the cycle with a view to stabilising output around a higher and sustainable growth trend.”

Sub-category I: Consolidation of public finances

4.1.1. General government gross debt (% GDP)

Description: General government debt as a percentage of GDP. General government debt refers to the consolidated stock of gross debt at end-year in nominal terms (as of December 31). Other accounts payable and financial derivatives (as defined in ESA 95 - European System of Accounts¹) are excluded from the definition. The general government sector comprises the subsectors of central government, state government, local government and social security funds. General government debt is broken down into currency and deposits (AF.2), securities other than shares (exc. financial derivatives) (AF.33), and loans (AF.4)².

GDP used as a denominator is the gross domestic product at current market prices. Debt is valued at nominal (face) value, and foreign currency debt is converted into national currency using end-year market exchange rates (though special rules apply to contracts). The national data for the general government sector are consolidated between the sub-sectors. Basic data are expressed in national currency, converted into euro using end-year exchange rates for the euro provided by the European Central Bank.

The gross debt ratio, being the accumulation of historical deficits, serves as an indicator on the budgetary pressures in the longer term as it has to be repaid or stabilised. A high current debt ratio risk increasing the premiums when financing the deficit and contribute to higher real interest rates.

(-) A low value is desirable

Indicator Source: Eurostat, STRIND³

Data source: AMECO (National Accounts)

¹ ESA Regulation: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1996R2223:20071230:EN:PDF>

² Government deficit and debt metadata (Eurostat):
http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/gov_dd_esms.htm

³ <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb090>

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	58,7	58,8	60,7	64,6	68,9	70,2	69,1	64,6	58,3	48,4	56,2*
EU15	67,1	63,1	62,2	61,5	63,0	63,3	64,2	62,9	60,4	63,9	

* The 2009 value is not included in the last update, but it is available by Eurostat

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 1: General government gross debt as a % of GDP

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	48,4	7	-1,1	6	+	+
EU15	63,9		-0,36			
St.dev.	20,9		1,30			

LAF Maquette, December 2009

Aggregation weight: 100% (narrow list indicator)

General comments

Government debt for Cyprus was significantly lower than the EU average in 2008 and the EU target of 60%. The score is evaluated as fairly good both in levels and changes. Note that for 2009 the government debt for Cyprus increased to 56,2% of GDP, but the relative performance of Cyprus does not change since an increase was observed for all MSs.

4.1.2. Distance of the structural balance from the SGP Medium Term Objective

Description: It measures the difference between the structural budget balance and the Medium-term Objective (MTO) in the Stability Growth Pact (SGP).

The structural budget balance is the Cyclically Adjusted Balance (CAB) net of one-off and other temporary measures. One-off items and temporary measures are government transactions having a transitory budgetary effect that does not lead to a sustained change in the budgetary position.

MTO is an indicator of the medium-term budgetary position that would include also room of manoeuvre for the automatic stabilisers to operate freely. According to the reformed Stability and Growth Pact, stability programmes and convergence programmes present a medium-term objective for the budgetary position. It is country-specific to take into account the diversity of economic and budgetary positions and developments as well as of fiscal risks to the sustainability of public finances, and is defined in structural terms.

It is an indicator of the room for fiscal stabilisation.

(+) A high value is desirable

Indicator Source: ECFIN⁴

Data source: N/A

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY					-8,1	-5,0	-3,1	-1,4	2,63	-0,21	
EU15											

LAF Maquette, December 2009

Time coverage: 2003-2008

Geographical coverage: 26MSs

⁴ More details on this indicator can be found at the ECFIN Public Finances in EMU 2010 Report, http://ec.europa.eu/economy_finance/publications/european_economy/2010/pdf/ee-2010-4_en.pdf

Indicator values for Cyprus:

LAF Maquette INDICATOR 2: Distance structural balance from SGP medium term objective

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	-0,2	12	1,6	30	++	++
EU15	-2,6		0,10			
St.dev.	1,9		0,41			

LAF Maquette, December 2009

Aggregation weight: 0% (wider list indicator)Reason excluded from narrow list: Redundancy- Correlated with CAB at more than 95%.General comments*The score both in levels and changes is evaluated as good.***4.1.3. Fiscal stance: change in structural budget balance**Description: It is defined as the change in the primary structural budget balance relative to the preceding period.

The primary structural budget balance is measured as the cyclically adjusted balance net of larger one-off items and interest payments. One-off items and temporary measures are government transactions having a transitory budgetary effect that does not lead to a sustained change in the budgetary position.

Clearly, the appropriateness of the size or sign of the stance must be assessed against the stability challenge at hand as well as consolidation concerns. When the change is positive (negative) the fiscal stance is said to be expansionary (restrictive). It is a measure of the effect of discretionary fiscal policy.

(+) A high value is desirable

Indicator Source: AMECO, ECFIN⁵Data source: N/A

⁵ More details on this indicator can be found at the ECFIN Public Finances in EMU 2010 Report, http://ec.europa.eu/economy_finance/publications/european_economy/2010/pdf/ee-2010-4_en.pdf

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY						3,06	1,85	1,77	4,01	-2,84	
EU15						0,09	0,33	0,61	0,07	-0,95	

LAF Maquette, December 2009

Time coverage: 2004-2008Geographical coverage: 27MSsIndicator values for Cyprus:

LAF Maquette INDICATOR 3: Fiscal stance

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	-2,8	-11	-1,5	-26	--	--
EU15	-0,9		-0,26			
St.dev.	1,8		0,46			

LAF Maquette, December 2009

Aggregation weight: 100% (wider list indicator)General comments: The score both in levels and changes is evaluated as poor.**4.1.4. Cyclically Adjusted Balance**

Description: The Cyclically Adjusted Balance (CAB) is the net borrowing/lending of the general government sector as a percentage of GDP adjusted with the estimated budgetary impact of the cycle (in principle a budgetary sensitivity to the cycle times the output gap). The CAB is obtained by subtracting the cyclical component from the actual budget balance. For more methodological details on the calculations see ECFIN Cyclical Adjustment of Budget Balances report⁶.

Policies to ensure a strong underlying budgetary position improve the capacity to meet the budgetary costs of ageing and challenges of financing the welfare state. The CAB indicates the underlying strength of the current budgetary position.

(+) A high value is desirable

⁶ ECFIN, Cyclical adjustment of budget balances, Spring 2010:
http://ec.europa.eu/economy_finance/db_indicators/gen_gov_data/adjustment/index_en.htm

Indicator Source: AMECO, ECFIN⁷

Data source: N/A

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	-4,3	-2,9	-3,2	-4,9	-6,3	-3,9	-2,3	-1,4	2,6	-0,2	-5,8*
EU15	-0,87	0,07	-1,84	-2,51	-2,77	-2,85	-2,47	-2,03	-1,96	-3,07	

*The 2009 value is not yet included in the Maquette. Based on the ECFIN Cyclical Adjustment of budget balances report spring 2010, the corresponding CAB value for 2009 is estimated to be -5,8% of GDP.

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 4: Cyclically Adjusted Balance as a % of GDP

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	-0,2	13	0,5	25	++	++
EU15	-3,1		-0,24			
St.dev.	2,3		0,28			

LAF Maquette, December 2009

Aggregation weight: 50% (narrow list indicator)

General comments

In terms of the CAB, Cyprus has a relatively good performance in levels and changes.

⁷ More details on this indicator can be found at the ECFIN Public Finances in EMU 2010 Report, http://ec.europa.eu/economy_finance/publications/european_economy/2010/pdf/ee-2010-4_en.pdf

4.1.5. Sustainability indicator: S2 component - the Initial Budgetary Position (IBP)

Description: Sustainability indicator: S2 component -The initial budgetary position. The initial budgetary position is the gap between the initial structural primary balance and the debt stabilizing primary surplus. IBP is one of the two components of the overall S2 sustainability indicator.

The S2 indicator shows the adjustment to the structural primary balance required to fulfil the infinite horizon inter-temporal budget constraint, including paying for any additional expenditure arising from ageing population. To make things more clear, the inter-temporal budget constraint is given by:

$$D_{t0} - \sum_{t=t0+1}^{\infty} \frac{PB_t}{(1+r)^{t-t0}} = 0 ,$$

where D is gross debt as a share of GDP, PB is the structural primary balance (i.e. receipts minus spending excluding debt interest payments) and r is the differential between the nominal interest rate and the nominal GDP growth rate.

The sustainability indicator S2 is broken down into different components to determine the extent to which the sustainability gaps can be attributed to (i) the relative position of the current primary budget balance compared to the primary balance that stabilises the debt as a share of GDP (Initial Budgetary Position -IBP) and/or to (ii) the increase in age related expenditure in the future (long-term changes in the primary balance –LTC).

(-) A low value is desirable

Indicator Source: European Commission Sustainability Report⁸

Data source: N/A

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY							0,2	-1,3	-4,41	0,52	
EU15											

LAF Maquette, December 2009

Time coverage: 2005-2008

⁸ Sustainability Report 2009, European Economy, 9/2009

Geographical coverage: 25MSs (27MSs for 2008)

Indicator values for Cyprus:

LAF Maquette INDICATOR 5: Sustainability Indicator S2 component- IBP

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	0,5	6	0,1	4	+	0
EU15	2,3		0,66			
St.dev.	3,3		1,25			

LAF Maquette, December 2009

Aggregation weight: 0% (wider list indicator)

Reason excluded from narrow list: Not mentioned

General comments:

Based on the sustainability indicator S2, the IBP for Cyprus is fairly good in levels and neutral in growth. In 2006 and 2007 the value of the gap was negative, which implied that the inter-temporal budget constraint was met. In 2008, there was a slightly positive gap, which implies that some adjustment is necessary in order to stabilize the debt ratio. This is, however, much lower than the EU15 average and as a result, Cyprus has a good relative performance.

4.1.6. Nominal long-term interest rate (average)

Description: The average nominal long-term interest rate includes the central government benchmark bond of 10 years in BE, DK, DE, ES, FR, IE, IT, NL, AT, PT, FI, SE and UK. It also includes the central government bonds, based on 12 month treasury bonds for EL and the central government OLUX bonds for 10 years, secondary market for LU.

Difference in the long-term interest rates indicates (partially) to what extent the long-term financial risks feed into the risk premiums. The higher the financial sustainability risks in an economy, the higher the risk premiums. However, clearly observed interest rates are an imperfect measure to this extent as a number of different risk premiums are involved.

(-) A low value is desirable

Indicator Source: AMECO

Data source: N/A

Data values for Cyprus (%):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	7,36	7,55	7,63	5,70	4,74	5,8	5,16	4,13	4,48	4,60	
EU15	4,73	5,42	5,00	4,92	4,23	4,27	3,60	3,93	4,45	4,31	

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 6: Nominal long-term interest rate (average).

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	4,6	-11	-0,3	30	-	++
EU15	4,3		-0,05			
St.dev.	0,2		0,03			

LAF Maquette, December 2009

Aggregation weight: 0% (wider list indicator)

Reason excluded from narrow list: Minimum statistical standards. Loose link to sustainability of public finance

General comments

The score in levels is evaluated as poor, while in growth is good.

4.1.7. Net lending (+) or net borrowing (-) of general government as a percentage of GDP at market prices (Public balance)

Description: Net lending (+), or net borrowing (-) of the general government as a percentage of GDP at market prices (ESA 95). It is the difference between the revenue and the expenditure of the general government sector in a specific year. The general government sector comprises the following subsectors: central government, state government, local government, and social security funds. GDP used as a denominator is the gross domestic product at current market prices. A positive balance indicates a surplus and a negative balance indicates a deficit.⁹

Large imbalances in the external position of the economy can indicate unsustainable macro economic policies. However, any value of the external position can not be analysed in isolation but should be read against the overall economic situation of the country (i.e. being in a catching up process, the level of the overall foreign debt etc). Nevertheless, in general, a positive external position would normally be seen as "better" than a "negative" position.

(+) A high value is desirable

Indicator Source: Eurostat ¹⁰, AMECO

Data source: National accounts

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	-4,3	-2,3	-2,2	-4,4	-6,5	-4,1	-2,4	-1,2	3,4	0,9	-6,1*
EU15	-0,9	0,8	-1,3	-2,4	-3,0	-2,8	-2,4	-1,3	-0,7	-2,2	

* The 2009 value is not included in the last update, but it is available by Eurostat

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 27MSs

⁹ Eurostat – Government deficit and debt metadata:

http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/gov_dd_esms.htm

¹⁰ In Eurostat website, this indicator is named as "public balance",

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsieb080&plugin=1>

Indicator values for Cyprus:

LAF Maquette INDICATOR 7: Net lending or net borrowing as a % of GDP

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	0,9	12	0,6	24	++	++
EU15	-2,2		-0,15			
St.dev.	2,5		0,31			

LAF Maquette, December 2009

Aggregation weight: 0% (wider list indicator)Reason excluded from narrow list: Not mentionedGeneral comments*Cyprus has good performance both in levels and changes.***4.1.8. Primary budget balance as percentage of GDP (general government net lending, excluding interest)**

Description: General government primary budget balance is the general government net lending or net borrowing (See indicator 4.1.7) excluding consolidated interest payments on government debt (ESA 1995, 4.41), as a percentage of GDP. The general government sector (sector S.13 in ESA 1995, 2.68) comprises central government, state government, local government, and social security funds. Data for the general government sector are consolidated between sub-sectors at the national level.¹¹ The ESA 95 (European System of Accounts) regulation may be referred to for more specific explanations on methodology.

(+) A high value is desirable

Indicator Source: Eurostat ¹², AMECOData source: National Accounts

¹¹ Eurostat – Government deficit and debt metadata:
http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/gov_dd_esms.htm

¹² <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=teina230&language=en>

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	-1,29	1,04	1,13	-1,24	-3,08	-0,78	1,10	2,06	6,41	3,72	-3,6*
EU15	2,98	4,49	2,25	0,83	0,03	0,03	0,38	1,38	2,03	0,60	

* The 2009 value is not included in the last update, but it is available by Eurostat

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 8: Primary budget balance as percentage of GDP

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	3,7	12	0,60	26	++	++
EU15	0,6		-0,26			
St.dev.	2,6		0,32			

LAF Maquette, December 2009

Aggregation weight: 50% (narrow list indicator)

General comments

Cyprus has good performance both in levels and changes.

Sub-category II: Sustainability

4.1.9. Sustainability indicator: S2 component - long-term changes in the primary balance (LTC)

Description: S2 component – long term changes (LTC) in the primary balance. LTC corresponds to the required adjustment to the structural primary balance required to finance the increase in public expenditure due to ageing, over an infinite horizon. LTC is one of the two components of the overall S2 sustainability indicator.

The S2 indicator shows the adjustment to the structural primary balance required to fulfil the infinite horizon inter-temporal budget constraint, including paying for any additional expenditure arising from ageing population. To make things more clear, the inter-temporal budget constraint is given by:

$$D_{t0} - \sum_{t=t0+1}^{\infty} \frac{PB_t}{(1+r)^{t-t0}} = 0 ,$$

where D is gross debt as a share of GDP, PB is the structural primary balance (i.e. receipts minus spending excluding debt interest payments) and r is the differential between the nominal interest rate and the nominal GDP growth rate.

The sustainability indicator S2 is broken down into different components to determine the extent to which the sustainability gaps can be attributed to (i) the relative position of the current primary budget balance compared to the primary balance that stabilises the debt as a share of GDP (Initial Budgetary Position - IBP) and/or to (ii) the increase in age related expenditure in the future (long-term changes in the primary balance –LTC).

The LTC component represents either the change required to pay for additional expenses or the size of a structural reform to social protection schemes to avoid the increase that would otherwise ensue.

(-) A low value is desirable

Indicator Source: European Commission - Sustainability Report¹³

Data source: N/A

¹³ Sustainability Report 2009, European Economy, 9/2009, p.14.

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY							8,31	8,31	8,46	8,28	
EU15											

LAF Maquette, December 2009

Time coverage: 2005-2009Geographical coverage: 25MSs (27MSs for 2008)Indicator values for Cyprus:

LAF Maquette INDICATOR 9: Sustainability indicator S2 component- Long term

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	8,3	-14	-0,01	5	--	+
EU15	4,3		0,33			
St.dev.	2,8		0,63			

LAF Maquette, December 2009

Aggregation weight: 100% (narrow list indicator)General comments

Cyprus has a poor performance in levels, relative to the EU15, while the performance is fairly good in changes. This indicates the urgency in addressing the demographic related sustainability issues in Cyprus. A structural reform on the social security scheme is perhaps necessary.

4.1.10. Projected change in the labour force between 2008 and 2060 (Budgetary projections: AWG baseline scenario Year: 2009)

Description: Projected change in the labour force (of the population 15-64) as a between 2008 and 2050 (Budgetary projections of the Ageing Working Group). It is the projected change in the number of people who are either in work or actively seeking work (that is, employed or unemployed) between 2008 and 2060.

(+) A high value is desirable

Indicator Source: Commission and Ageing Working Group

Data source: N/A

Data values for Cyprus (% change):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY										47,04	
EU15										-2,75	

LAF Maquette, December 2009

Time coverage: 2008

Geographical coverage: 25MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 10: Projected change in the labour force between 2008 and 2060

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	47,0	30	N/A	N/A	++	N/A
EU15	-2,7		N/A			
St.dev.	12,6		#DIV/0!			

LAF Maquette, December 2009

Aggregation weight: 100% (narrow list indicator)

General comments

The labour force in Cyprus is projected to increase by 47% from 2008 to 2060. This is the highest expected increase among all the EU countries, hence a good performance. It is not clear whether the performance for Cyprus is based on an extrapolation from the recent dramatic increases in the number of foreign workers. If so, it is not likely to speak to natural population increases for the local population.

4.1.11. Sustainability indicator: S2 (overall)

Description: The Sustainability indicator S2 shows the adjustment to the structural primary balance required to fulfil the infinite horizon inter-temporal budget constraint, including paying for any additional expenditure arising from ageing population. To make things more clear, the inter-temporal budget constraint is given by:

$$D_{t_0} - \sum_{t=t_0+1}^{\infty} \frac{PB_t}{(1+r)^{t-t_0}} = 0 ,$$

where D is gross debt as a share of GDP, PB is the structural primary balance (i.e. receipts minus spending excluding debt interest payments) and r is the differential between the nominal interest rate and the nominal GDP growth rate.

The sustainability indicator S2 is broken down into different components to determine the extent to which the sustainability gaps can be attributed to (i) the relative position of the current primary budget balance compared to the primary balance that stabilises the debt as a share of GDP (Initial Budgetary Position –IBP –See indicator 4.1.5) and/or to (ii) the increase in age related expenditure in the future (long-term changes in the primary balance –LTC –See indicator 4.1.9).

The S2 sustainability indicator provides an estimate of the gap between current policies and sustainable policies, which expresses the current level of debt plus the net present value of all future primary deficits as a flow measure i.e. as a perpetual annuity, constant as a share of GDP. The changes in the primary balance include the estimated changes in age related public expenditures (pension, health care etc) expressed as a constant change in the primary balance as a share of GDP. Overall, a positive value of S2 indicates that a budgetary improvement would close the gap, while a negative value indicates that a budgetary weakening would close the gap.

(-) A low value is desirable

Indicator Source: Commission - Sustainability Report

Data source:

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY							8,48	7,02	4,05	8,79	
EU15											

LAF Maquette, December 2009

Time coverage: 2005-2008Geographical coverage: 27MSsIndicator values for Cyprus:

LAF Maquette INDICATOR 11: Sustainability indicator: S2 overall

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	8,8	-4,8	0,1	6	-	+
EU15	6,6		0,99			
St.dev.	4,5		1,49			

LAF Maquette, December 2009

Aggregation weight: 0% (wider list indicator)Reason excluded from narrow list: Not mentionedGeneral comments

Cyprus has a fairly poor performance in levels and fairly good in growth. By looking at indicator 4.1.5, the sustainability gap for Cyprus is mainly attributed to the increasing age-related expenditure. This is perhaps an indication of the need for reforms in the Cyprus social security scheme.

4.1.12. Sustainability indicator: S1 (overall)

Description: Sustainability indicator S1 (overall). The sustainability S1 indicator shows the permanent budgetary adjustment (often presented as an increase in the tax burden) required to reach a target debt of 60% of GDP in 2060, including paying for any additional expenditure from now to the target date, arising from an ageing population.

The main difference with the S2 indicator is that here we study sustainability over a finite horizon (up to 2060), instead of an infinite horizon as in S2 and hence we need to impose a target debt to be reached. The choice of the debt target for the S1 indicator is in line with the debt threshold in the Treaty. The timescale has been chosen to be long enough to allow the impact of ageing to be analyzed in a meaningful way, while still remaining within the sights of current taxpayers and policy makers

The sustainability indicator S1 is also broken down into different components to determine the extent to which the sustainability gaps can be attributed to (i) the relative position of the current primary budget balance compared to the primary balance that stabilises the debt as a share of GDP (Initial Budgetary Position –IBP) or to (ii) the increase in age related expenditure up to 2060 (long-term changes in the primary balance –LTC) and/or (iii) the debt requirement (DR) by 2060 which is an additional adjustment needed to reach the target of 60% of GDP by 2060.

For countries with starting government gross debt above 60% of GDP the required adjustment to reach the target debt by 2060 (DR) term will increase the size of the indicator as the effort of debt reduction by 2060 needs to be considered. For countries with current debt of below 60%, the DR component will be negative and reduce the S1 indicator.

(-) A low value is desirable

Indicator Source: Commission - Sustainability Report

Data source: N/A

Data values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY							4,0	2,3	-0,9	4,6	
EU15											

LAF Maquette, December 2009

Time coverage: 2005-2008

Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 12: Sustainability indicator S1 overall

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	4,6	2	0,20	5	0	+
EU15	5,3		0,96			
St.dev,	3,8		1,49			

LAF Maquette, December 2009

Aggregation weight: 0% (wider list indicator)

Reason excluded from narrow list: Not mentioned

General comments

Cyprus has a neutral performance in levels and fairly good in changes. Comparing the S1 and the S2 indicators, we see that S1 is much below S2 due to the fact that, the current gross government debt for Cyprus is below 60% (Hence, the additional adjustment to reach the target is negative).

4.1.13. Sustainability indicator: Required Primary Balance (RPB)

Description: The Required Primary Balance (RPB) indicates the starting budgetary position, which, if attained, ensures the sustainability of public finances under no policy change assumptions. Unlike the S2 indicator, it is a level for the budgetary position, rather than a gap.

It is important to note that the RPB is not a static indicator. For a country that has reached its RPB (so with an S2 gap which is zero and which is projected to remain zero), the actual and required primary balance will progressively deteriorate given the increase in ageing-related expenditure, though sustainability is ensured. Where the actual (or planned for the medium term) budgetary balance is equal or more positive than the RPB, the public finances are sustainable. The opposite is true where the actual or planned budgetary balance is smaller or more negative than the RPB.

In practice, the RPB is often calculated as the projected average structural primary balance over several years. Here, it is the average of the first five years after the Commission Spring 2009 forecast horizon (2011–15).

(-) A low value is desirable

Indicator Source: European Commission - Sustainability Report

Data source: N/A

Data values for Cyprus:

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY								8,8	8,87	8,90	
EU15											

LAF Maquette, December 2009

Time coverage: 2006-2008

Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 13: Sustainability indicator RBP

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	8,9	-22	0,0	2	--	0
EU15	4,7		0,25			
St.dev,	1,9		0,92			

LAF Maquette, December 2009

Aggregation weight: 0% (wider list indicator)Reason excluded from narrow list: Not mentionedGeneral comments*The score in levels is evaluated as poor in levels and neutral in growth.***4.1.14. Projected old-age dependency ratio in 2025 (AWG projection 2009)**

Description: Projected old age dependency ratio in 2025. Dependency ratio: population aged 65 and over as a percentage of the population aged 15-64. This is a projection of the Ageing Working Group. Note: the change score is the change in the dependency ratio between 2003 and 2025.

(-) A low value is desirable

Indicator Source: Commission and Ageing Working GroupData source: N/AData values for Cyprus:

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY											24,93
EU15											

LAF Maquette, December 2009

Time coverage: 2009Geographical coverage: 27MS

Indicator values for Cyprus:

LAF Maquette INDICATOR 14: Projected old age dependency ratio in 2025

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	24,9	26	N/A	N/A	++	N/A
EU15	35,0		N/A			
St,dev,	3,9		#DIV/0!			

LAF Maquette, December 2009

Aggregation weight: 0% (wider list indicator)

Reason excluded from narrow list: Inputs from associated stakeholders: It is a demographic constraint more than a projection of public finances.

General comments

The score in levels is good for Cyprus.

4.1. A. Indicator Evaluation for policy area “Orientation and Sustainability of public finances”

In this section, we list all indicators included in the narrow and wider list, along with the relevant aggregation weight used in the Maquette for each of them. In the columns next to each indicator we summarize any problems observed that affect the reliability or the relevance of the indicator for this policy area, focusing on the case of Cyprus. The problems have already been analyzed in detail.

Table 4.1.1: Indicator Evaluation for policy area “Orientation and sustainability of public finances”

Indicator	Weight	No data available for Cyprus in the Maquette	Incorrect/inaccurate data for Cyprus	Not representative / useful indicator for Cyprus	Insufficient description/ unclear computation procedure	Inappropriate indicator for this policy area	Possible improvement for the indicator
Narrow List Indicators:							
1. General Government debt (% GDP)	0,2						
3. Fiscal stance: change in the structural budget balance	0,2						
4. Cyclically adjusted balance	0,1						
8. Primary budget balance (%GDP)	0,1						
9. Sustainability indicator S2- LTC	0,2						
10. Projected change in labour force between 2008 and 2060.	0,2				Methodology used not mentioned		
Wider List Indicators:							
2. Distance structural balance from SGP Medium term objective					More details on the calculations needed		
5. Sustainability indicator S2- IBP							
6. Nominal Long term interest rate							
7. Net lending general government							
11. Sustainability indicator: S2 overall							
12. Sustainability indicator: S1 overall							
13. Sustainability indicator : RPB							
14. Projected old-age dependency ratio in 2025					Methodology used not mentioned		

4.1. B. Aggregate Scores on “Orientation and Sustainability of public finances”

To calculate the aggregate score both in levels and changes, we calculate the weighted average of the indicators included in the narrow list given the aggregation weights specified.

Table 4.1.2: “Orientation and Sustainability of public finances” – Aggregate scores on levels

Indicators	General Government Gross Debt (% of GDP)	Fiscal stance: change in Structural budget balance	Cyclically Adjusted Balance	Primary budget balance as percentage of GDP (Net lending excluding interest, general government -	Sustainability indicator: S2 component - long-term changes in the primary balance (LTC)	Projected change in labour force between 2008 and 2050 (Budgetary projections: AWG baseline scenario Year: 2009)
Indicator type	performance	policy	policy	performance	performance	performance
Weights	0,2	0,2	0,1	0,1	0,2	0,2
CY	7,4	-10,8	12,6	11,9	-14,3	30,0
Weights2	0,22	0,22	0,11	0,11	0,22	0,11
CY*	7,4	-10,8	12,6	11,9	-14,3	30,0
EU15	63,9	-0,9	-3,1	0,6	4,3	-2,7
std-dev	20,9	1,8	2,3	2,6	2,8	12,6
Gap EU15-EU27	2,0	0,2	0,3	0,3	0,3	2,6
Gap EU15-Five best	-22,1	-1,5	-5,5	-3,3	-6,6	-18,8
Gap EU15-EU5	11,4	-0,5	-1,8	-1,1	-0,3	-3,1

LAF Maquette, December 2009

The aggregate score on levels is 4,9 and hence, performance in this area is evaluated as fairly good. The sub-aggregate score for consolidation of public finances is 3 while the sustainability sub-aggregate is 7,9.

Table 4.1.3: “Orientation and Sustainability of public finances” – Aggregate scores on levels

Indicators	Sub- aggregate I: Consolidation of public finances	Sub- aggregate II: Sustainability	Aggregate
CY	3,0	7,9	4,9
CY*	3,0	0,0	2,1

*Indicates scores based on alternative weight allocations

LAF Maquette, December 2009

Table 4.1.4: "Orientation and Sustainability of public finances" – Aggregate scores on growth

Indicators	General Government Gross Debt (% of GDP)	Fiscal stance: change in Structural budget balance	Cyclically Adjusted Balance	Primary budget balance as percentage of GDP (Net lending excluding interest, general government -)	Sustainability indicator: S2 component - long-term changes in the primary balance (LTC)	Projected change in Labour force between 2008 and 2050 (Budgetary projections: AWG baseline scenario Year: 2009)
Indicator type	performance	policy	policy	performance	performance	performance
Weights	0,2	0,2	0,1	0,1	0,2	0,2
CY	6,04	-26,23	25,10	25,77	5,38	N/A
EU15	-0,4	-0,3	-0,2	-0,3	0,3	
std-dev	1,3	0,5	0,3	0,3	0,6	
Gap EU15-EU27	-0,2	0,0	0,0	0,0	0,0	
Gap EU15-Five best	-1,4	-0,3	-0,5	-0,5	-0,8	
Gap EU15-EU5	0,4	0,0	-0,2	0,0	0,1	

LAF Maquette, December 2009

In terms of growth, the aggregate score is 3, as shown in Table 4.1.3 below. The sub-aggregate score for consolidation of public finances is 1,7 while for sustainability is 5,4. Note, however, that sub-aggregate score II is only the score for indicator 9 (Sustainability S2 Long term).

Table 4.1.3: "Orientation and Sustainability of public finances" – Aggregate scores on growth

Indicators	Sub-aggregate I: Consolidation of public finances	Sub-aggregate II: Sustainability	Aggregate
CY	1,7	5,4	3,0

LAF Maquette, December 2009

The sustainability sub-aggregate score it is not very representative for Cyprus, since it fails to show the necessity of social security system reforms, as indicated by many indicators in this policy area. The projected change in the labour force it is perhaps misleading and should be reconsidered, or given less weigh in the narrow list. More indicators could be included, e.g. the Required Primary Balance. Moreover, projections on expenditure might be more direct measures that take into account the increase in the labour force, as well. It would be perhaps more informative if we split the sustainability indicators based on the sources of the expenditure, as shown in Appendix Table A2. The sustainability report 2009 of the Commission evaluates Cyprus as high risk with regards

with the long term sustainability of public finances. This should be reflected in LAF as well; hence a change in the choice of indicators and weights for this policy area is suggested. Please see Sustainability 2009 assessment for Cyprus in Appendix D.

4.1. C. General evaluation of the policy area

Large and persistent budget deficits have generated considerable concern. It is widely believed that they reduce growth and they could lead to a crisis, if they go on for too long or become too large. Hence, macroeconomic and fiscal measures are important and necessary to be included in a framework like LAF.

Looking at the budget measures, Cyprus seems to perform above the EU15 average in general, though we observe an important deterioration in 2009, which is not reflected yet in the last LAF update. The gross debt ratio, which reflects the accumulation of past debts, was 48% of GDP in 2008 (indicator 4.1.1), while in 2009 this number increased to 56%. Despite this sharp worsening, Cyprus still performs above the EU15 average and below the target of 60% of GDP. Net lending as a percentage of GDP (or actual public balance- indicator 4.1.7) was 0,9% of GDP in 2008, while -6,1% in 2009. If we exclude interest payments, these numbers become 3,72% for 2008 and -3,6% in 2009 respectively (Primary balance- indicator 4.1.8). As indicated by these numbers, there was a surplus for Cyprus in 2008, even when interest payments are included. In 2009, however, both indicators show a deficit in public balances. Taking into account the effects of the business cycle, the cyclically adjusted balance (CAB- indicator 4.1.4), was -0,2% in 2008¹⁴ and - 5,8% for 2009 (See also Appendix Table A1, point 9). Cyprus shows an expansionary fiscal position for 2008 since the primary structural budget balance (CAB net of one-off items) has increased significantly in 2008 relative to 2007 (a change of -2,84 % GDP - see indicator 4.1.3). This continued to hold in 2009 as well, with a change of -5,4% in GDP. [The difference between the structural budget balance with the medium-term objective for Cyprus budgetary position according to the Stability Growth Pact is -0,21% of GDP (Indicator 4.1.2).]

In terms of sustainability, the adjustment to the structural budget balance that is required to reach the target debt of 60% by 2060 (finite horizon budget constraint) is 4,6% of GDP (Indicator 4.1.12), despite the fact that Cyprus current government debt is below 60%. This is because of the large adjustment needed to cover age-related expenditure by 2060. Alternatively, the adjustment required to fulfill the infinite horizon budget constraint

¹⁴ In the ECFIN CABB report Autumn 2009, the CAB value for 2008 is -0,2%. This value is the same as LAF Indicator 4.1.4. In the Spring 2010 ECFIN update, this value for 2008 is corrected to -0,4%. The updated results are not yet included in LAF Maquette and are presented in Table A1 in the Appendix.

is 8,79% of GDP for 2008 (Indicator 4.1.11). This can be broken down to the adjustment due to the initial budgetary position, which is 0,52% GDP (Indicator 4.1.5) and the long-term adjustment due to the increase in age-related expenditure, which is 8,28% (Indicator 4.1.9). This long-term component is almost double the EU15 average and indicates that Cyprus needs to urgently address the increasing age-related expenditure. A structural reform on the social securities and pension schemes is perhaps necessary.

APPENDIX D: Supplementary information

Sustainability Report 2009: Assessment for Cyprus (p.114)

“12.1. OVERVIEW OF THE RESULTS

The sustainability analysis shows that on the basis of the current budgetary position of 2009, based on the 2009 commissions services' spring forecast, and the projected increases in age related expenditure, Cyprus has a sustainability gap (S2) of 8.8% of GDP, which is significantly above the EU average (6.5% of GDP). This means that to put public finances on a sustainable path, Cyprus should improve its structural primary balance in a durable manner by 8.8% of GDP. In principle, this adjustment could take place via both an increase in revenues and cuts in expenditure. Additionally, the social protection system (in particular public pensions) would have to be reformed to decelerate the projected increase in age-related expenditure¹⁵.

The Cypriot sustainability gap is compounded by the initial budgetary position, i.e. the required adjustment to stabilise the debt ratio is slightly positive (0.5% of GDP), below the EU average (3.3% of GDP). In parallel, the required adjustment given the long-term cost of ageing (8.3% of GDP) is clearly above the EU average (3.2% of GDP). The long-term cost of ageing is mainly driven by an increase in pension expenditure (by 10.8 p.p. in 2060 relative to 2010).

In the 2006 Sustainability Report, the S2 gap was 8.5% of GDP. The difference between that report and the current results (0.3 p.p.) stems mainly from the deterioration of the initial budgetary position (0.4 p.p.), while the component of the long-term cost of ageing has actually decreased (-1.7 p.p.). The extension of the projection period from 2050 (in the 2006 report) to 2060 increases the sustainability gap by 1.6 p.p.

The Cypriot government debt in 2009, the base year of the analysis, stood at 47.5% of GDP and is forecast to increase to around 47% of GDP in 2010. The structural primary balance is forecast to decrease slightly from 0.2% in 2009 to 0.1% in 2010. Currently, Cypriot debt is both below the EU average and the 60% ceiling set by the Maastricht criteria.

12.2. OVERALL ASSESSMENT

Cyprus appears to be at high risk with regard to the long-term sustainability of public finances. The long-term budgetary impact of ageing is well above the EU average, mainly as a result of a relatively high increase in pension expenditure as a share of GDP over the coming decades. The budgetary position in 2009 compounds slightly the budgetary impact of population ageing on the sustainability gap.

Improving primary surpluses over the medium term and especially a further reform of the pension system aimed at curbing the substantial increase in age-related expenditures would contribute to reducing risks to the long-term sustainability of public finances. Reforms should however be pursued in a manner that do not amplify the fallouts of the current economic and financial crisis.”

¹⁵ In February 2009 the Cypriot government adopted a pension reform which places the burden on contribution increases but does not address the large increases in pension expenditures. The effects of the reform were not reflected in the 2009 Ageing report pension projections.

Table A1 (Table 8 in ECFIN Cyclical Adjustment of Budget Balances, spring 2010):

Cyclical adjustment of general government revenue, expenditure and budget balances –Based on production function approach (Cyprus)

TOTAL REVENUE	1995	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1. Actual data														
- Ratio, as % of GDP	32,3	32,5	34,7	35,9	35,8	38,5	38,7	41,2	42,2	45,5	43,5	40,3	41,2	41,3
- Change in ratio from previous year		-0,1	2,2	1,3	-0,1	2,7	0,2	2,4	1,1	3,3	-2,0	-3,2	0,8	0,2
2. Cyclical component														
- As % of GDP		0,0	0,6	0,9	0,5	-0,2	-0,2	-0,2	0,1	0,9	1,3	-0,3	-0,8	-0,6
- Change in ratio from previous year		0,4	0,5	0,4	-0,5	-0,7	0,0	0,0	0,3	0,8	0,4	-1,6	-0,6	0,2
3. Cyclically adjusted data														
- Ratio, as % of GDP		32,4	34,1	35,35	35,4	38,7	38,9	41,4	42,2	44,6	42,2	40,6	42,42	41,9
- Change in ratio from previous year		-0,6	1,7	0,9	0,4	3,3	0,2	2,4	0,8	2,5	-2,4	-1,6	1,4	-0,1
TOTAL EXPENDITURE														
4. Actual data														
- Ratio, as % of GDP	33,1	36,8	37,0	38,2	40,2	45,0	42,8	43,6	43,4	42,2	42,6	46,4	48,3	49,0
- Change in ratio from previous year		0,1	0,2	1,2	2,1	4,8	-2,2	0,0	-0,1	-1,3	0,4	3,8	1,9	0,7
5. Cyclical component														
- As % of GDP		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
- Change from previous year		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
6. Cyclically adjusted data														
- Ratio, as % of GDP		36,8	37,0	38,2	40,2	45,0	42,8	43,6	43,4	42,2	42,6	46,4	48,3	49,0
- Change in ratio from previous year		0,1	0,2	1,2	2,1	4,8	-2,2	0,0	-0,1	-1,3	0,4	3,8	1,9	0,7
NET LENDING (+) OR NET BORROWING (-)														
7. Actual balance														
- As % of GDP	-0,8	-4,3	-2,3	-2,2	-4,4	-6,5	-4,1	-2,4	-1,2	3,4	0,9	-6,1	-7,1	-7,7
- Change from previous year		-0,2	2,0	0,1	-2,2	-2,1	2,4	1,7	1,2	4,6	-2,5	-7,0	-1,1	-0,6
8. Cyclical component														
- As % of GDP		0,0	0,6	1,0	0,5	-0,2	-0,2	-0,2	0,1	0,9	1,3	-0,3	-0,8	-0,6
- Change from previous year		0,4	0,6	0,4	-0,5	-0,7	0,0	0,0	0,3	0,8	0,4	-1,6	-0,6	0,2
9. Cyclically adjusted balance (Indicator 4.1.4 in LAF)														
- As % of GDP		-4,3	-2,9	-3,2	-4,9	-6,3	-3,9	-2,2	-1,3	2,5	-0,4	-5,8	-6,3	-7,1
- Change from previous year		-0,6	1,5	-0,3	-1,7	-1,4	2,4	1,7	0,9	3,7	-2,9	-5,4	-0,5	-0,8
10. Cyclically adjusted balance														
- As % of potential GDP		-4,4	-2,9	-3,3	-4,9	-6,3	-3,8	-2,2	-1,3	2,5	-0,4	-5,8	-6,1	-7,0

	1995	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
11. GDP AT 2000 MARKET PRICES														
- Annual														
percentage change	9,9	4,8	5	4	2,1	1,9	4,2	3,9	4,1	5,1	3,6	-1,7	-0,4	1,3
12. POTENTIAL GDP AT 2000 MARKET PRICES														
- Annual														
percentage change		3,4	3,4	3,3	3,4	3,7	4,3	3,9	3,3	2,9	2,6	2,2	1,1	0,7
13. GAP BETWEEN ACTUAL AND POTENTIAL GDP AT 2000 PRICES														
- As % of potential														
GDP		0,1	1,7	2,4	1,2	-0,5	-0,6	-0,6	0,2	2,4	3,4	-0,7	-2,1	-1,6

Source: ECFIN, *Cyclical Adjustment of Budget Balances, Spring 2010*,

http://ec.europa.eu/economy_finance/db_indicators/gen_gov_data/documents/2010/ccab_spring_en.pdf

Table A2 (Table II.1.2 in Sustainability Report 2009): Increase in age-related expenditure, 2010-2060, % of GDP

	Pension Spending		Healthcare		Long-term care		Unemployment benefits and education		Total	
	2010	2010-2060	2010	2010-2060	2010	2010-2060	2010	2010-2060	2010	2010-2060
BE	10.3	4.5	7.7	1.1	1.5	1.3	7.3	-0.3	26.8	6.6
BG	9.1	2.2	4.8	0.6	0.2	0.2	3.0	0.2	17.1	3.2
CZ	7.1	4.0	6.4	2.0	0.2	0.4	3.3	0.0	17.0	6.3
DK	9.4	-0.2	6.0	0.9	1.8	1.5	8.0	0.1	25.2	2.2
DE	10.2	2.5	7.6	1.6	1.0	1.4	4.6	-0.4	23.3	5.1
EE	6.4	-1.6	5.1	1.1	0.1	0.1	3.2	0.3	14.8	-0.1
IE	5.5	5.9	5.9	1.7	0.9	1.3	5.3	-0.2	17.5	8.7
EL	11.6	12.5	5.1	1.3	1.5	2.1	3.8	0.1	21.9	16.0
ES	8.9	6.2	5.6	1.6	0.7	0.7	4.8	-0.2	20.0	8.3
FR	13.5	0.6	8.2	1.1	1.5	0.7	5.8	-0.2	29.0	2.2
IT	14.0	-0.4	5.9	1.0	1.7	1.2	4.3	-0.2	26.0	1.6
CY	6.9	10.8	2.8	0.6	0.0	0.0	5.8	-0.6	15.5	10.7
LV	5.1	0.0	3.5	0.5	0.4	0.5	3.3	0.3	12.3	1.3
LT	6.5	4.9	4.6	1.0	0.5	0.6	3.5	-0.4	15.1	6.0
LU	8.6	15.3	5.9	1.1	1.4	2.0	4.0	-0.3	19.9	18.2
HU	11.3	2.6	5.8	1.3	0.3	0.4	4.5	-0.3	21.8	4.0
MT	8.3	5.1	4.9	3.1	1.0	1.6	5.0	-0.7	19.2	9.2
NL	6.5	4.0	4.9	0.9	3.5	4.6	5.6	-0.2	20.5	9.4
AT	12.7	1.0	6.6	1.4	1.3	1.2	5.2	-0.2	25.7	3.3
PL	10.8	-2.1	4.1	0.8	0.4	0.7	3.8	-0.6	19.1	-1.1
PT	11.9	1.5	7.3	1.8	0.1	0.1	5.6	-0.4	24.9	2.9
RO	8.4	7.4	3.6	1.3	0.0	0.0	2.7	-0.2	14.7	8.5
SI	10.1	8.5	6.8	1.7	1.2	1.7	5.1	0.7	23.1	12.7
SK	6.6	3.6	5.2	2.1	0.2	0.4	2.9	-0.6	14.9	5.5
FI	10.7	2.6	5.6	0.8	1.9	2.5	6.4	0.0	24.7	5.9
SE	9.6	-0.2	7.3	0.7	3.5	2.2	6.6	0.0	27.1	2.7
UK	6.7	2.5	7.6	1.8	0.8	0.5	4.0	0.0	19.2	4.8
EU-27	10.2	2.3	6.8	1.4	1.3	1.1	4.9	-0.2	23.2	4.6
EA	11.2	2.7	6.8	1.3	1.4	1.3	5.0	-0.2	24.5	5.1

Source: Commission services, EPC.

Table A3 (Table VII.12.1 in Sustainability Report 2009): Sustainability assessment -Summary Table (Cyprus)

Underlying assumptions	2007	2010	2015	2020	2025	2030	2040	2050	2060	Change 2007-2060
Population	0.8	0.8	0.9	1	1	1.1	1.2	1.3	1.3	0.5
Working age population (15-64) % of total	69.8	70.3	69.3	67.5	66.1	65.4	64.9	61.7	58.8	-10.9
old age dependency ratio (65+/15-64)	17.6	18	19.9	22.3	24.9	27.4	30.8	37.7	44.5	26.8
Participation rate (16-64)	72.9	74.6	76.9	78.5	78.6	78.4	78	78	78	5.1
Participation rate of older workers (55-64)	57.6	58.9	61.1	62.7	63.1	64.6	66.6	65.4	65.1	7.4
Unemployment rate (15-64)	4	5.9	3.4	3.4	3.4	3.4	3.4	3.4	3.4	-0.6
Real potential GDP growth rate	2.9	2.4	3.8	3.9	3.2	2.9	2.3	1.8	1.8	-1.1
Expenditure projections										
Pensions	6.3	6.9	7.8	8.9	9.8	10.8	12.8	15.5	17.7	11.4
Benefit ratio	53.7	57.6	59.1	60	58.2	57.4	59.2	58.4	56.5	2.9
Health care	2.7	2.8	2.8	2.9	2.9	3	3.1	3.2	3.3	0.6
Long-term care	0	0	0	0	0	0	0	0	0	0
Education	6.1	5.6	4.9	4.8	4.9	5	4.8	4.7	5	-1.2
Unemployment benefits	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	-0.1
Total age-related expenditure	15.4	15.5	15.8	16.8	17.9	19.1	21	23.7	26.2	10.8

	2008	2009	2010	2020	2025	2030	2040	2050	2060
Structural primary balance	2.9	0.2	0.1						
Public debt	49.1	47.5	47.9	42.6	51.6	67.8	119.2	204.4	335.5

Cost of ageing	Change in age-related expenditure 2010-2060 (%points)						
	Net age-related expenditure	Pension taxation	Gross age-related expenditure	Pensions	Health care	Long-term care	Unempl. And education
Baseline scenario	10.7	0	10.7	10.8	0.6	0	-0.1
Crisis scenario (lost decade)	10.6	0	10.6	10.4	0.5	0	-0.1

Sustainability indicators	S1				S2				
	(End year 2060)	IBP	DR	LTC	S2	IBP	LTC	Cost of delay	RPB
Baseline scenario	4.6	0.2	-0.3	4.7	8.8	0.5	8.3	0.4	8.9
Crisis scenario (lost decade)	4.6	0.3	-0.3	4.6	8.7	0.5	8.2	0.4	8.4

Source: Commission services.

4.2. Macroeconomic background information

This policy area is just complementary to the area “Orientation and sustainability of public finances” and it is not included in the Case Study Report.

4.2.1. Harmonized Indices of Consumer Prices (HICP)

Description: This indicator is the difference between the ECB target of 2% and HICP (annual average rate). A positive difference relative to the ECB target of 2% means a good performance.

Harmonised Indices of Consumer Prices are harmonized inflation figures required under Article 121 of the Treaty of Amsterdam (109j of the Treaty on European Union). They are designed for international comparison of consumer price inflation. HICPs are compiled on the basis of a legislated methodology, binding for all Member States (MSs). The focus is on quality and comparability among the indices of different countries as well as on their relative movements. The HICPs are Laspeyres-type indices¹⁶.

(+) A high value is desirable.

Indicator Source: Eurostat, STRIND¹⁷

Data source: AMECO

Data values for Cyprus (index):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	0,9	-2,9	0	-0,8	-2	0,1	0	-0,2	-0,2	-2,4	
EU15											

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 27MSs

¹⁶ The Laspeyres index is a popular formula for calculating price indexes and is computed as

$$P_L = \frac{\sum(p_{c,t_n} \cdot q_{c,t_0})}{\sum(p_{c,t_0} \cdot q_{c,t_0})}$$

where P is the change in price level, t_0 is the base period (usually the first year), and t_n the period for which the index is computed. The Laspeyres index uses base period (period 0) quantities.

¹⁷ <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb060>

Indicator values for Cyprus:

LAF Maquette INDICATOR 1: Harmonised Indices of Consumer Prices

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	-2,4	-20	-0,4	-19		
EU15	-1,3		-0,23			
St.dev.	0,5		0,07			

LAF Maquette, December 2009

4.2.2. Real Effective Exchange Rate (unit labour costs)

Description: The Real Effective Exchange Rate (REER) is calculated by dividing the home country's nominal effective exchange rate by an index of the ratio of average foreign unit labour costs to home unit labour costs.

The REER aims to assess a country's (or currency area's) price or cost competitiveness relative to its principal competitors in international markets. It corresponds to the NEER deflated by selected relative price or cost deflators (here the nominal unit labour cost).

(-) A low value is desirable

Indicator Source: ECFIN

Data source: N/A

Data values for Cyprus (index):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	100,0	97,2	97,6	101,4	113,2	114,3	114,7	114,2	112,4	114,4	
EU15											

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 26MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 2: Real effective exchange rate

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	0,1	1	16,8	-8		
EU15	0,4		8,00			
St.dev.	2,8		10,75			

*LAF Maquette, December 2009***4.2.3. Average of absolute value of output gap 1999-2008**

Description: It is the average of the absolute value of output gap for the years 1999-2008. Output gap is the difference between actual output and estimated potential output at any particular point in time. It is a simple way to capture the volatility of the cycle. In general, successful stabilisation policies should contribute to smooth the cycle and reduce the size of output gaps.

(-) A low value is desirable

Indicator Source: N/A

Data source: AMECO

Data values for Cyprus:

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY										0,94	
EU15											

LAF Maquette, December 2009

Time coverage: 2008

Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 3: Average of absolute value of output gap 1999-2008

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	0,9	-1	N/A	N/A	0	N/A
EU15	0,9		N/A			
St.dev.	0,3		#DIV/0!			

LAF Maquette, December 2009

4.2.4. Real long term interest rate

Description: Nominal long term interest rate minus the GDP deflator. Nominal long term interest rate include the central government benchmark bond of 10 years in BE, DK, DE, ES, FR, IE, IT, NL, AT, PT, FI, SE and UK. It also includes the central government bonds, based on 12 month treasury bonds for EL and the central government OLUX bonds for 10 years, secondary market for LU.

(-) A low value is desirable

Indicator Source: N/A

Data source: AMECO

Data values for Cyprus (%):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	4,9	3,6	4,1	4,5	-0,3	2,5	2,7	1,1	-0,1	-0,2	
EU15	3,5	4,0	2,6	2,2	1,9	2,3	1,6	1,8	1,9	1,9	

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 26MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 4: Real long term interest rate

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	-0,2	30	-0,57	30		
EU15	1,9		-0,18			
St.dev.	0,7		0,13			

LAF Maquette, December 2009

4.2.5. Business investment - Gross fixed capital formation by the private sector as a percentage of GDP

Description: This indicator is defined as total gross fixed capital formation (GFCF) expressed as a percentage of GDP, for the private sector.

GFCF consists of resident producers' acquisitions, less disposals, of fixed tangible or intangible assets, such as buildings, machinery and equipment, vehicles, or software. It also includes certain additions to the value of non-produced assets realised by productive activity, such as improvements to land (e.g. the construction of dikes, the clearance of forests or the draining of marshes). GFCF (P.51) is a part of Gross Capital Formation (ESA 1995, 3.100), the other parts being changes in inventories (P.52) and acquisitions less disposals of valuables (P.53).

The ratio gives the share of GDP that is used by the private sector for investment (rather than being used for e.g. consumption).

The private sector consists of non-financial corporations, financial corporations, households and non-profit organisations serving households, i.e. all sectors of a national economy except general government.

(+) A high value is desirable

Indicator Source: STRIND¹⁸

Data source: National Accounts

¹⁸ <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsier140>

Data values for Cyprus (% of GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	15,2	14	13,8	15	14,2	14,9	16,1	17,6	18,5	20,3	
EU15	17,90	18,20	17,70	17,20	17,00	17,20	17,70	18,20	18,60	18,40	

LAF Maquette, December 2009

Time coverage: 1999-2008Geographical coverage: 27MSsIndicator values for Cyprus:

LAF Maquette INDICATOR 5: Business investment

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	20,3	6	0,6	19		
EU15	18,4		0,06			
St.dev.	3,0		0,27			

LAF Maquette, December 2009

4.2.6. Trade deficit

Description: Net exports of goods and services at current prices (national accounts) in % of GDP at market prices.

(+) A high value is desirable

Indicator Source: EurostatData source: National accountsData values for Cyprus (% GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	1,74	0,84	2,07	-1,56	-1,24	-2,46	-2,57	-3,75	-6,25	-11,49	
EU15	1,15	0,48	1,02	1,80	1,51	1,45	0,89	0,66	0,95	0,75	

LAF Maquette, December 2009

Time coverage: 1999-2008Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 6: Trade deficit

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	-11,5	-23	-1,5	-30		
EU15	0,7		-0,04			
St.dev.	5,4		0,43			

*LAF Maquette, December 2009***4.2.7. Balance on current transactions with the rest of the world in % of GDP at market prices.**

Description: Balance on current transactions with the rest of the world in % of GDP at market prices. The difference between the nation's total exports of goods, services, factor income revenues and current transfers and its total imports of them

(+) A high value is desirable

Indicator Source: N/A

Data source: National Accounts

Data values for Cyprus (% of GDP):

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CY	-2,2	-4,9	-4,1	-3,7	-2,2	-5,0	-5,9	-7,0	-11,7	-17,7	
EU15	0,1	-0,6	-0,1	0,5	0,3	0,7	0,0	0,0	0,1	-0,5	

LAF Maquette, December 2009

Time coverage: 1999-2008

Geographical coverage: 27MSs

Indicator values for Cyprus:

LAF Maquette INDICATOR 7: Balance on current transactions with the rest of the world in % of GDP at market prices.

	Level		Growth-change		Qualification	
	Rate	Score on level	Change	Total score on growth rate	Level	Growth rate
CY	-17,7	-30	-1,7	-27		
EU15	-0,5		-0,06			
St.dev.	5,8		0,61			

LAF Maquette, December 2009

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LAF Maquette database can be downloaded at the link below:
http://ec.europa.eu/economy_finance/db_indicators/laf/index_en.htm