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Greece: An Updated Simulation for GDP and its components in 2013 and 2014

- This note offers an update to the forecast for real GDP growth in Greece in 2013 and 2014 in order to account for the latest revision of the MoU, as well as the spill-over from the Cyprus crisis; a quantification of trends in components of GDP is conducted, with economic rationale invoked for each, and total growth is extracted from there.

- Under the main scenario, which takes into account only the expected impact of measures announced so far, real growth is estimated at -4.2% for 2013 (from -3.8% projected previously) and at +0.4% for 2014. The forecast is preliminary as fiscal measures for 2013 and 2014 are under review. Furthermore, uncertainty to the growth outlook remains unusually high.

1. Introduction

This note attempts an update of the GDP growth outlook in order to incorporate the latest revisions to the Adjustment Programme of the Greek economy, as well as the impact from the Cyprus crisis. Decisions of the EU Summit of December 2012 have removed the risk of a Greek exit from the Euro with an EU initiative, to the extent that Greece adheres to the commitments it has assumed. However, risks have been transferred to the interior of the country. Despite the fact that the 2012 budget overshot its targets (a primary deficit of 1% vs a target of 1.5%), adjustment fatigue is being magnified. Cumulative recession since 2008 has exceeded 20% and unemployment at end 2012 was at 24.7%. Recession had its toll on tax revenue, which saw pressures in the first three months of 20123, especially vis a vis indirect taxes. These were more than counterbalanced by cuts in expenditure (including on public investment) above targets but this cannot be followed for long. The Greek economy is still experiencing a liquidity squeeze due to loss of access of Greek banks and businesses in international capital markets and the tight terms of access in Eurosystem financing. Hence, the reduction in the size of the pubic sector is not generating the crowding-in effect on the external sector that would be expected. Some alleviation to liquidity pressures is provided by containment of deposit outflows and gradual paying-off of government arrears. Business and consumer sentiment has somehow improved in recent months but still points towards further contraction. Positive developments are coming from the Current Account; at end 2012 a deficit of 2.9% of GDP was recorded (against 9.9% of GDP in 2011), overshooting expectations, helped by the sharp shrinkage of imports and the PSI, which reduced interest payments in public debt held by international investors. Improvement in the BoP will continue in 2013, albeit at a slower pace due to an expected slowdown in the country's main trading partners.

	2012 bn. Nominal	2012 %yoy growth, Real	Shares in 2012 GDP	2013 yoy growth, Real	2014 %yoy growth, Real
Private Consumption	142,756	-9.1%	73.7%	-7.7%	0.5%
Government Consumption	34,398	-4.2%	17.8%	-7.2%	-3.1%
Total Consumption	177,154	-8.1%	91.4%	-7.6%	-0.2%
GFCF	26,339	-17.6%	13.6%	-10.9%	1.5%
Domestic demand	203,493	-9.4%	105.0%	-8.0%	0.0%
Imports	62,053	-13.8%	32.0%	-9.2%	0.6%
Exports	52,309	-2.4%	27.0%	4.9%	2.1%
GDP	**193,748**	**-6.4%**		**-4.2%**	**+0.4%**
GDP deflator		-0.9%		-1.2%	-0.5%
Unemployment Rate(% of l. f.)		24.7%		26.5%	27%

2. Derivation of real GDP growth forecast for 2013 (-4.2%)

This exercise provides theoretically consistent economic rationale for anticipating and quantifying impacts of measures on each sector of the economy. The GDP growth forecast for 2013 and 2014, which we consider to be feasible, takes into account only measures that have been legislated or announced to be undertaken by the time of publishing and their impact on disposable income and the economic climate.

Evolution of GDP Components

(a) Private consumption (73.7% of GDP): Private consumption predominantly depends on disposable income. Real private consumption is estimated to have contracted in 2012 by 9.1%, while net nominal disposable income declined by 7.6%. Given that consumer prices (HICP, period average) recorded a 1.2% increase in 2012, real net disposable income declined by 8.8%. It seems that households and corporations do not run down on their savings anymore in order to finance their operations. In initial crisis years, consumers exhibited behavior consistent with a more general intertemporal smoothing of consumption.[1] This explanation was reflected in the dramatic decline of the elasticity of private consumption with respect to disposable income to 0.4 in 2009, -0.16 in 2010 and 0.5 in 2011 (against a 1.4 average in the years of rapid growth based on booming consumption, 2001-2008). It was only natural that in the first three years of recession, consumption deceleration would be more gradual in comparison to developments in disposable income. However, as households have now realized that disposable income reduction is permanent and not temporary, consumption aligns with developments in real incomes.

[1] This theory postulates that consumers try to achieve a more balanced level of consumption intertemporally in order to maximise their utility. Hence, when optimism about future incomes is prevalent, consumption increases faster than current income. On the contrary, when consumers experience income cuts which they perceive as temporary, they run down on their savings and cut consumption by less.

The updated Medium-Term Fiscal Strategy Framework (MTFS, February 2013) projects measures worth ca €9.539bn or ca 5ppts of GDP for 2013, from which €7.4bn will come from the expenditure side and ca €2.15bn from the revenue side.

These extra fiscal and structural measures are expected to further dampen economic activity in the short term. However, commitment to achieving the targets is a precondition, not only for the continuation of official lending, but also for a successful bid to EU partners and the IMF for further debt relief.

At end 2012, net nominal disposable income stood at €149.8bn. We estimate that fiscal measures will incur a reduction of net nominal disposable income by €8.5bn or by -5.7% in 2013.[2]

Net nominal disposable income is also affected by nominal wages in the private sector. AMECO projects a nominal decrease of compensation per employee by -7.2% and of nominal ULCs by -6.2% in 2013. Factors advocating for further pressure on wages include decreasing demand, increasing unemployment and the new labour market legislation, which introduces greater flexibility in the bargaining process. On the other hand, sectoral agreements do not directly depend on national agreement about the minimum wage. Furthermore, flexibility of the labour market law may help some part of the grey economy to migrate back to the official economy. All in, we consider the EC projection realistic. Considering that about 60% of the working labour force is employed in the private sector and that labour has a share of 60% in the GDP, this results in a €5bn or -3.3% decrease in net nominal disposable income.

By contrast, the EC projection for unemployment (a decline to 21.9% of the labour force in 2013) is not realistic. While reductions in wages and the more flexible labour market law may help in containing the unemployment rate, continuing recession works the other way, its effect being reinforced by uncertainty and the liquidity squeeze. We project a year average unemployment rate of 26.5% of the labour force, i.e. ca 95,000 more persons unemployed compared to 2012. Assuming that the per person loss in disposable incomes is approximately equal to the difference between the per capita net income and the –reduced- unemployment benefit, increase of unemployment will reduce total net nominal disposable income by ca €1.1bn or by 0.7%.

Profits on capital are projected by AMECO to increase by 2.5% after increasing by 3.7% in 2012. Reductions in wages should give a boost to profitability. In addition, disinvestment has been more aggressive in previous years than reduction in production, hence resulting in relatively more intensive use of capital[3] (which also provides the motive for conducting investment). Finally, productivity-enhancing reforms start to kick-in, albeit only gradually. However, considering that capacity utilisation remains low and that profitability will be adversely affected by reduced disposable incomes (wage cuts, unemployment rise), we maintain the AMECO forecast. Considering a 40% share of capital in the GDP, this means a ca €1.9bn or 1.3% increase in nominal disposable income.

Finally, the spill-over from the Cyprus crisis has to be accounted for. After the sale of branches of Cypriot banks in Greece, solvency and deposits are ensured and no impact on disposable incomes is expected from this channel. Impact on confidence is also limited, as reflected in the relative stability of the Greek GGB spread after the eruption of the Cyprus crisis. Hence, spill-overs via the financial channel are limited to the haircut of Greek deposits in Cyprus. Although this has no impact on disposable incomes, there is a wealth effect on consumption. We estimate that about €1.5bn of Greek deposits may have been lost in Bank of Cyprus and Laiki Bank. ECB estimates that the average wealth effect coefficient is 6-16%.[4] To be conservative, we use a coefficient of 20%. Hence, we pencil a 0.3% extra reduction on consumption. The impact from the trade channel will be analysed in the part concerned with exports.

In total, net nominal disposable income is projected to decrease by 8.7%. In order to translate this into a decrease in real disposable income, we need an estimate about consumer prices. The MoU assumes a HICP change (period average) of -0.8%. Although rigidities in products markets remain, the pass through of wage cuts on prices is being accelerated. Hence, our estimate is for a HICP change of -1%. Consequently, real disposable incomes should be reduced by -7.7%.

Finally, we have to deduce to which extent the fall of real disposable income will affect private consumption. According to the aforementioned analysis of no intertemporal consumption smoothing and a lower *permanent* income, we assume an income elasticity of consumption of unity. Hence, real private consumption (accounting also for the Cyprus effect) will contract in 2012 by -7.7% (against an IMF's projection of -6.5%).

(b) Government consumption: (17.8% of GDP): given the budget outcomes of the first months of 2013, we maintain the IMF projection of a -7.2% change.

Final consumption (91.4% of GDP): -7.6% change.

[2] In order to calculate the impact measures could cumulatively have on net nominal disposable income, we accounted for: i) the fact that not all measures affect disposable incomes, at least not equiproportionately, ii) degree of implementation varies across measures, and iii) the fact that households and corporations partly finance tax payments by drawing from savings.

[3] This should be even more the case when the economy starts to recover.
[4] See ECB WP No 1050, May 2009.

(c) Gross Fixed Capital Formation: (13.6% of GDP): after peaking in 2003 as a percentage of GDP (23.3%), investment started falling, and from 2008 is continuuslly falling in absolute terms as well. In 2011 investment fell by 19.6% and by another -17.6% in 2012. Net disinvestment undermines long-term growth potential. Although this constitutes a favorable basis effect, the reduced level of domestic demand results in low capacity utilization, so that enterprises need not invest in order to serve this demand. Given that domestic demand will continue to fall in 2013, investment for businesses serving the domestic market is not expected to flourish.

On the other hand, private investment should benefit from decline of uncertainty regarding the country's maintenance in the Eurozone and the avoidance of a disorderly default. The recapitalization Greek banks in May and continuing support of their liquidity from the ECB can help in avoiding further credit squeeze. At the moment, however, liquidity scarcity and a high risk premium keep interest rates elevated, thus eliminating positive NPV for many investment projects and making the recovery of investment very difficult.

Labor market reforms already legislated and product market reforms (opening-up of closed professions in particular), as well as measures to improve the entrepreneurial environment (simplification of procedures for starting a business, targeted and tax-relief oriented investment law, fast-tracking of strategic investment projects etc) are hoped to improve investment prospects and produce a supply boost. Some flagship deals are already underway. Furthermore, the privatization programme can spur further investment in order to upgrade acquired assets and infrastructures. However, the full impact of those developments will materialize only gradually, within a 5-year window.

Public investment, after 4 years in which it was continuously being reduced in order to achieve fiscal targets, is projected to remain flat in 2013 at €6.85bn. There is scope for increase here, given the availability of ca €20bn by EU Structural and Cohesion Funds, little use of which has been made so far, and the easing of the requirement for national sources' co-financing. The latter is now allowed to be moved in the future and funds are also being available by the EIB. However, bureaucratic procedures for absorbing those funds have not been improved considerably yet.

Taking into account all aforementioned developments, as well as regularities observed in previous crisis years linking disinvestment with recession, GFCF would fall by ca -10.9%. (against IMF's projection for -3.3%). Note though that investment is the GDP component with the highest sensitivity (both downside and upside) to developments in the economic climate.

Domestic demand (105% of GDP): -8% change.

(d) Exports of g&s (27% of GDP): As long as competitiveness is concerned, the relevant measure is nominal ULC, except for tourism for which CPI is more relevant. However, in 2012, an 8% fall in nominal ULC was accompanied by a -2.4% decrease in exports. The reasons include subdued demand from Eurozone partners, harm to tourism by uncertainty surrounding double elections and liquidity constraints facing exporters. Some of these limitations have been removed or greatly reduced, thereby indicating room for a positive effect this year. In terms of competitiveness, a further -6.2% fall in nominal ULC is expected for 2013 and a decline of -1% in HICP (for the first time in decades). With tourism accounting for 20.4% of total Greek exports in 2012, the combined improvement in competitiveness should be 5.1%. In terms of international demand, roughly 50% of Greek exports go to Eurozone countries and another 25% to SE Europe. Eurozone is expected to remain in a mild recession of -0.3% but SE Europe is expected to accelerate to +1.3% (from +0.6% in 2012). Especially for tourism, pre-bookings indicate a historical record of arrivals. To be conservative, we assume a unitary elasticity of international demand for Greek exports w.r.t. both trading partners' growth rates, as well as to prices (competitiveness gains). Hence, the overall effect should be a 5.3% increase.

The effect from the Cyprus crisis is expected to be rather limited. In the last decade, exports of goods to Cyprus averaged only 5.8% of total exports (in 2012, €1.36bn or 6% of total exports), while imports from Cyprus averaged only 0.9%. Considering our projection for a -10.9% recession in Cyprus in 2013 and assuming a unitary elasticity of Cypriot demand for Greek exports w.r.t. Cyprus' growth rate, the marginal impact for Greek exports should be -0.6%. On the other hand, there are indicatons that tourism is benefiting from cancellations in Cyprus (and Egypt), which should mediate the net effect by ca 0.2%.

Accounting for that effect, overall, Greek exports should grow by 4.9% in real terms.

(e) Imports of g&s (32% of GDP): throughout 2009-2012 imports fell more aggressively than general domestic demand (-20.2%, -6.2% and -7.3% -11.5% respectively in each year). This constitutes a low basis but it also reflects the fact that, to a large extent, imports comprise consumer goods of high income elasticity and investment goods. Furthermore, efforts to capture the grey economy pressurize imports further since the grey economy has a larger propensity to import. Hence, the adjustment that already took place in 2009-2011 should not mediate further adjustment in 2012.[5] On the other hand, still elevated oil prices affect imports negatively as oil accounts for ca 1/3 of Greek imports. Furthermore, the containment of investment decline in

[5] Effectively, we assume that the reduction of imports' share in the consumer's basket, which happened in previous years, will continue in 2013.

comparison to previous years and the reinvigoration of exports will put a limit on imports' decline, as both exports and investment have a large import content. In order to remain conservative, we use an income elasticity of imports of 1.2, which is close to the empirical elasticity observed in previous years. This results in the -7.7% reduction of real disposable income calculated above to imply a 9.2% real reduction of imports.

3. Derivation of real GDP growth forecast for 2014 (+0.4%)

(a) Private consumption (71% of GDP): we proceed with the same rationale as above for the 2014 projection. Given the net nominal disposable income decline by 8.7% in 2013, it should stand at €136.8bn at the beginning of 2014. The updated MTFS projects measures worth ca €3.7bn for 2014, from which €2.2bn will come from the expenditure side and ca €1.5bn from the revenue side. Measures come mainly in the areas of social benefits, restructuring of government and pension spending and hence have a strong impact on disposable incomes. We estimate that fiscal measures will incur a reduction of net nominal disposable income by €3.1bn or by -2.3 % in 2014.

As for nominal wages, we maintain the AMECO projection of a nominal decrease by -1.8%. This results in a €1.2bn or -0.9% decrease of net nominal disposable income.

We expect the unemployment rate to rise further to 27% of the labour force, i.e. ca 25,000 more persons unemployed compared to 2013. Assuming that the per person loss in disposable incomes is approximately equal to the difference between the –reduced- per capita net income and the unemployment benefit, increase of unemployment will reduce the total net nominal disposable income by ca €0.3bn or by 0.2 %.

Increase of profits on capital is projected by AMECO to accelerate to 6.3%. Considering a 40% share of capital in the GDP, this means a ca €4.7bn or 3.4% increase in nominal disposable income.

In total, net nominal disposable income is projected to remain flat in nominal terms. We project the HICP to decline by a further -0.5% in 2014 due to the continuing sluggishness of domestic demand and structural changes in product markets which should have started kicking in by then. Then, real disposable incomes should increase by -0.5%.

Assuming, as before, a unitary income elasticity of consumption, real private consumption would increase in 2014 by 0.5% (against an EC's projection of -1.6%).

(b) Government consumption: (17.2% of GDP) we maintain the IMF projection of a -3.1% change.

Final consumption (88.2% of GDP): -0.2%

(c) Gross Fixed Capital Formation: (12.6% of GDP): IMF projects a 5.7% increase. Although investment will be the first to rebound in a positive change of economic climate, a still high country risk premium and continued liquidity scarcity is likely to keep interest rates elevated, so this is too optimistic. We pencil a 1.5% increase.

Domestic demand (100.8% of GDP): flat in real terms.

(d) Exports of g&s (29.6% of GDP): EC projects a -1.5% decrease in nominal ULC on continuous pressures from high unemployment and impact of structural reforms in the labour market. We also project HICP, which is more relevant for tourism, to decrease by -0.5%. Overall, competitiveness should see a combined improvement by 1.3%. Foreign demand will also benefit from a projected acceleration in Greece's trading partners' growth: Eurozone countries are projected to grow by 1.1% on average and SE Europe by 2.3% on average (with roughly 50% of Greek exports going to Eurozone countries and another 25% to SE Europe). Again, assuming a unitary elasticity of Greek exports w.r.t. both trading partners' growth rates and prices, we pencil a 2.4% increase in exports. To that we have to add the spillover from the Cyprus crisis; with a -4.8% recession projected for Cyprus in 2014, 5.8% of Greek exports destined to Cyprus and assuming a unitary elasticity of Cypriot demand for Greek exports w.r.t. Cyprus' growth rate, the marginal impact for Greek exports should be -0.3%. Cumulatively, Greek exports should grow by 2.1% in real terms (against an IMF projection of 3.7%).

(e) Imports of g&s (30.3% of GDP): The 0.5% increase in real disposable income calculated above, together with a 1.2 income elasticity of imports, imply a 0.6% real increase in imports (against an IMF projection of -1.6%).

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