

GREECE MACRO MONITOR

July 3, 2014

Greek GDP NOWcasting model update

Real GDP estimates for Q2 2014: -0.3% YoY and +0.8% in QoQ seasonally adjusted terms

Switch into positive annual growth expected in Q3 2014

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This note presents a preliminary estimate of Greek GDP for the second quarter of this year, based on a range of monthly data released up to June 30, 2014. Our Nowcasting model produces high frequency, real-time estimates of Greece's gross domestic product by applying an econometric methodology that can properly handle data reporting lags, revisions and other important aspects characterizing the daily flow of macroeconomic information. Our mid-point estimate points to a further slowdown in the pace of annual GDP contraction in the second quarter of 2014 to around -0.3% , from -0.9%YoY in Q1 2014 and -2.3%YoY in the final quarter of last year. This should not come as a major surprise, as the flow of macroeconomic data released year-to-date has been broadly positive, supporting expectations for an ongoing stabilization in domestic economy activity. As we explain in the present document, the flow of macro data pertaining to Q2 2014 will continue in the following couple of months and thus, our Nowcasting GDP estimate for that quarter should be considered as strictly preliminary. All in all, we consider our updated model estimates as being broadly consistent with a switch into positive real GDP annual growth rates from the third quarter onwards and positive growth between 0.5% and 1.0% for the current year as a whole.

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Eurobank GDP NOWcasting model estimate for Q2 2014

This section presents the results of our GDP Nowcasting model for Greek GDP in Q2 2014. The model produces high frequency, *real-time* estimates of Greek GDP by applying an econometric methodology that can properly handle data reporting lags, revisions and other important aspects characterizing the daily flow of macroeconomic information. A technical description of the model and its output can be found in our *Greece Macro Monitor*, November 18, 2013¹. Our Q2 GDP growth estimate is derived from a range of higher-frequency (monthly) data released up to June 30, 2014. As such, it should be considered as strictly preliminary as, due to significant reporting lags, the flow of macroeconomic data pertaining to the second quarter of this year will continue in the following couple of months. Notably, Greece's stats agency (EL.STAT) is scheduled to release its initial (flash) estimate of Q2 GDP no earlier than in mid-August, with a revision of the said estimate expected a month later. Graph 1.1 below shows the evolution of real GDP growth in Greece on quarter-on-quarter seasonally adjusted terms² along with the respective Nowcasting model fitted values. Similarly, Graph 1.2 depicts the realized YoY GDP growth rates, our model estimates and short-term forecasts. Finally, Table A in Annex shows the high-frequency indicators used in estimating different specifications of our Greek GDP Nowcasting model³. In more detail, our estimated values for Q2 2014 are as follows:⁴

¹[http://www.eurobank.gr/Uploads/Reports/GDP%20Nowcasting%20-%20Greece%20-%20Macro%20Monitor%20\(18%20November%202013\).pdf](http://www.eurobank.gr/Uploads/Reports/GDP%20Nowcasting%20-%20Greece%20-%20Macro%20Monitor%20(18%20November%202013).pdf)

² Respective series were derived by applying the ARIMA X12 seasonal adjustment model.

³ These have been selected from an initial set of more than 60 indicators, on the basis of their economic significance and statistical properties.

⁴ All model estimates of real GDP growth in quarter τ ($\tau = 1Q 2006, 2Q 2006, \dots, 2Q 2014$) are derived based on data for the respective quarter available up to the end of the first month of quarter $\tau+1$ i.e., before the Greek statistics agency publishes its *flash* national accounts data for quarter τ . The only exemption to this is the model estimation for Q2 2014, which is based on monthly indicators released up to June 30, 2014 i.e., right at the end of the reference quarter).

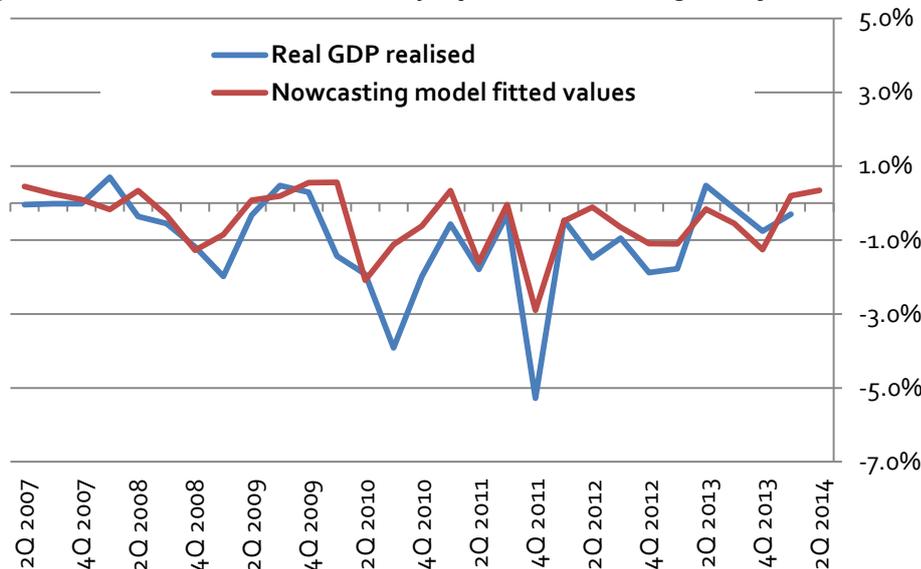
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GDP NOWcasting model estimates for Q2 2014 GDP

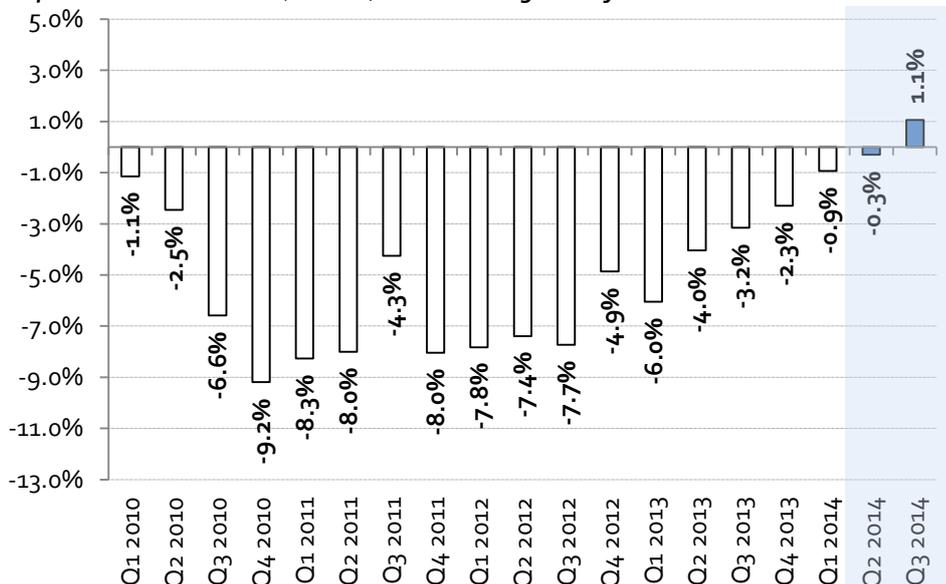
GDP in 2005 prices: € 40.6bn in Q2 2014 vs. €36.9bn in Q1 2014

QoQ seasonally adjusted GDP growth (2005 prices): +0.8% in Q2 2014 vs. -0.2% in Q1 2014

YoY GDP growth (2005 prices): -0.3% in Q2 2014 (mid-point estimate) vs. -0.9% in Q1 2014.

Graph 1.1– Greek real GDP (QoQ % seasonally adjusted) & NOWcasting model fit

Source: ELSTAT, Eurobank Global Markets Research

Graph 1.2 – Greek GDP YoY (realized) & NOWcasting model forecast

Source: ELSTAT, Eurobank Global Markets Research

Pace of GDP contraction decelerated further in Q1 2014

The revised national accounts (provisional) data for the first quarter of this year revealed a further deceleration in the annual pace of real GDP contraction to -0.9% from an *initially-reported* reading of -1.1% (flash estimate) and a decline of 2.3% recorded in Q4 2013. The reading was pretty close to a rate of -0.8% estimated by our GDP Nowcasting model in mid-March.⁵ The breakdown of the report showed a further improvement in all expenditure-side components, with private spending recording positive real growth (+0.7% YoY) for the first time since Q1 2010, exports of goods and services accelerating to 5.4% (highest rate of increase since Q4

⁵See, "Eurobank GDP NOWcasting model update - Greek GDP forecast: -0.8% YoY in Q1 2014 VS. -2.3% YoY in Q4 2013"; Greek Macro Monitor, March 19, 2014. http://www.eurobank.gr/Uploads/Reports/GDP_Nowcasting_Update-Greece_MacroMonitor_March19_2014.pdf

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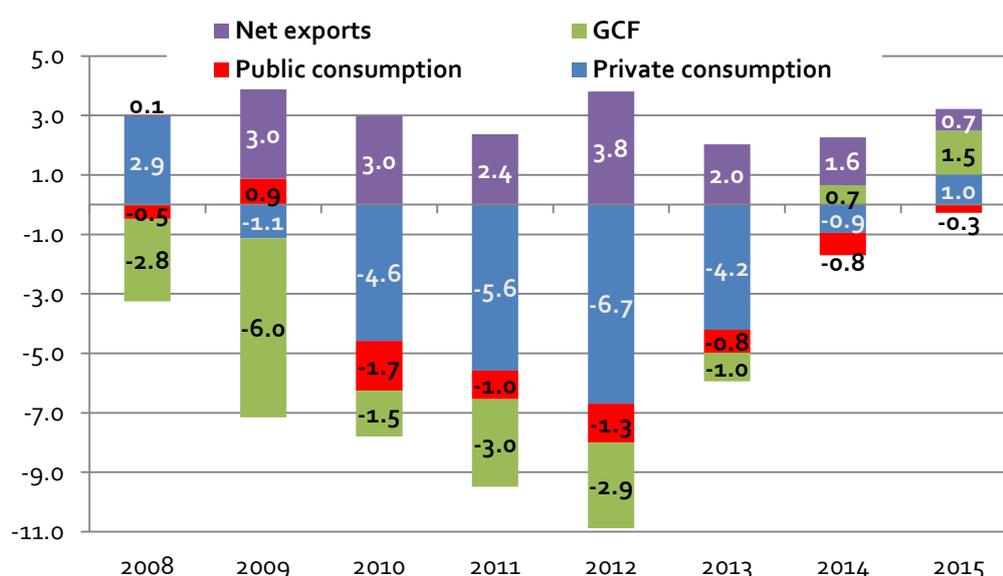
2010) and the annual pace of decline of gross fixed capital formation easing to -7.9%, from -15.3% in the prior quarter and -11.4% in Q1 2013 (Table 1). Maybe on a less constructive note, imports of goods and services recorded a further recovery in the first quarter of this year, growing by 2.2% YoY in real terms, after declining by 5.6% YoY in the prior quarter (and by 7.0% YoY in Q1 2013). If the latter trend continues, then we may see a further decline in the positive contribution of net exports this year, broadly in line with the official (*i.e.*, government and European Commission) estimates (Graphs 2). EL.STAT does not currently release seasonally adjusted data, but according to our ARIMA X-12 filter, Greek GDP dropped by ca 0.15% on a quarter-on-quarter seasonally adjusted basis in Q1 2014 (and by 0.51%, if a shorter time series starting in Q1 2009 is utilized for seasonal adjustment, so as to address a structural break in the GDP data in 2008).

Table 1- Greece: Real GDP and components (YoY, %)

	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1
Gross Domestic Product									
at market prices	-7.8%	-7.4%	-7.7%	-4.9%	-6.0%	-4.0%	-3.2%	-2.3%	-0.9%
Production method									
Gross value added (at basic prices)	-7.7%	-7.3%	-7.8%	-5.0%	-6.0%	-3.9%	-3.1%	-2.0%	-0.8%
+ Taxes on products	-8.8%	-7.6%	-7.4%	-4.6%	-6.5%	-5.5%	-4.0%	-4.0%	-1.6%
- Subsidies on products	-8.6%	-7.3%	-7.8%	-4.5%	-6.6%	-4.5%	-3.8%	-4.0%	-1.6%
Expenditure method									
Final consumption expenditure	-8.0%	-8.1%	-10.7%	-8.5%	-8.9%	-6.4%	-6.1%	-0.8%	0.8%
Households and NPISH	-9.7%	-8.7%	-9.2%	-9.6%	-8.7%	-6.6%	-7.8%	-0.2%	0.7%
General Government	-0.8%	-5.8%	-17.4%	-3.3%	-9.7%	-5.5%	1.7%	-2.6%	1.2%
+ Gross capital formation	-33.8%	-19.7%	-27.4%	6.1%	8.4%	-18.0%	9.1%	-15.4%	-16.7%
Gross fixed capital formation	-22.8%	-21.5%	-21.5%	-10.3%	-11.4%	-11.5%	-12.9%	-15.3%	-7.9%
+ Exports of goods and services	4.2%	-2.3%	-3.1%	-4.0%	-2.2%	1.6%	5.2%	0.5%	5.4%
- Imports of goods and services	-14.9%	-12.9%	-18.7%	-8.1%	-7.0%	-11.1%	2.7%	-5.6%	2.2%

Source: EL.STAT

Graph 2 - Component contribution to real GDP growth (in ppts)



Source: ELSTAT, European Commission, Eurobank Global Markets Research

Latest high-frequency data signal ongoing stabilization of domestic economic activity

As we noted already, the flow of domestic macroeconomic data released so far this year has been broadly supporting expectations for an ongoing stabilization of domestic economy activity. Among others:

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- The **Economic Sentiment Indicator** for Greece hit a near 6-year peak of 103.7 in June, surpassing the 100 point mark for the first time since August 2008. The breakdown of the report showed that all five major components improved. Notably, both the Industrial and Retail Trade Confidence Indicators swung into a positive territory for the first time since late 2007 and 2009, respectively. In a similar vein, the Services Confidence Indicator rose to a six-year high and remained in a positive territory for the sixth consecutive month, a development that took place for the first time since late 2008.
- Greece's **PMI manufacturing Index** fell back below the boom-or-bust threshold of 50 in June coming in at a seven-month trough of 49.4. Yet, on a three-month rolling basis, the index came in at 50.5 in June, remaining above the aforementioned threshold for the 5th month running. The breakdown of the June 2014 report showed that output increased by the weakest pace in three months partly due to a modest decline in incoming new work, the first in the last seven months. On a positive tone, new export orders rose for the second straight month and by the fastest rate since August 2011, as renewed cuts in output prices helped Greek manufactured goods becoming more competitive.
- The year-on-year growth of the **retail trade volume index**, including automotive fuel⁶, rose by 7.3% in April, the biggest pace of increase in near four years, mainly supported by improved consumer sentiment and ongoing recovery in the tourism sector. Furthermore, **total road motor vehicles** (including both road motor cars and motorcycles over 50cc) that were put into circulation for the first time ever, rose in May for the seventh month in a row, a development that has not been recorded since late 2007.
- Greece's **travel balance** recorded a surplus of €252mn in the first four months of this year, marking a 29.9% increase on an annual basis as a 27.8%YoY rise in travel receipts outpaced a 26.9%YoY rate of growth in travel payments.
- The **current account balance** remained in an improving trend over the first four months of this year, recording a deficit of ca €2.22bn vs. a shortfall of €3.39bn in the same period a year earlier. This positive development was mainly attributed to: (i) a 31.6%YoY increase in the services surplus on the back of strong tourism receipts; (ii) a 30.5%YoY improvement in the current transfer surplus due to higher general government net receipts (primarily from the EU); and (iii) a 24.7%YoY drop in the income account deficit thanks to a hefty fall in net interest payments. The trade deficit came in at €6.28bn, 3.6% wider on an annual basis.
- **Deposits and repos** of domestic households and non-financial corporations in Greek MFIs excluding the Bank of Greece edged up by €0.7bn in May, the third monthly consecutive increase, coming in at a five month high of €162.1bn. Greece's banking system deposit base currently stands ca €11.5bn (or 7.6%YoY) higher compared to a seven-year trough recorded in June 2012

Full-year real GDP growth seen switching into positive territory in 2014

Following cumulative losses in excess of 25ppts since 2008, domestic real GDP growth is expected to switch into a positive territory this year, coming in between 0.5% and 1.0%. Table 2 below shows the latest forecasts for Greek GDP and its components as presented in the latest IMF assessment⁷. The table suggests that the improvement in this year's GDP dynamics will mainly be driven by: (i) a further slowdown in the pace of contraction of private spending; (ii) recovering investment activity; and (iii) a positive contribution from net exports, though to a lesser extent than in 2012.

Table 2 – Greek GDP and components: realizations and official forecasts (YoY, %)

	2012	2013 (provisional data)	2014 ^f	2015 ^f
Private Consumption	-9.3	-6.0	-1.8	1.7
Public Consumption	-6.9	-4.1	-1.7	-2.0
Gross fixed capital formation	-19.2	-12.8	5.9	9.7
Exports (goods & services)	-1.7	1.8	4.1	5.2
Imports (goods & services)	-13.8	-5.3	-1.3	2.2
GDP	-7.0	-3.9	0.6	2.9

Source: IMF Country Report No. 14/151 (June 2014), Eurobank Global Markets Research

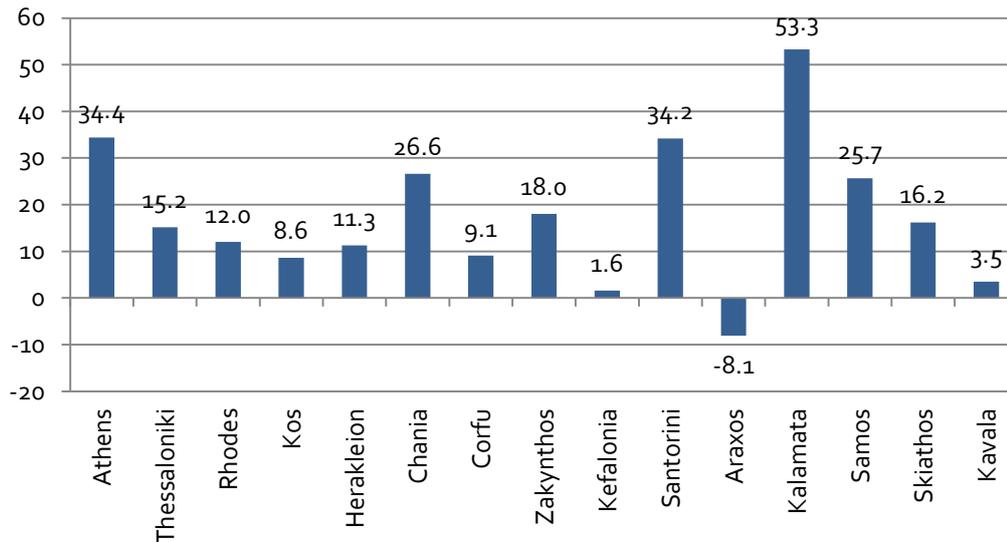
We broadly concur with the official forecasts for 2014 presented in the table above. However, at this point we see upside risks to the official projection for private consumption this year, taking into account the positive growth reading recorded in Q1 2014 (+0.7% YoY), recovering retail trade and consumer confidence as well as expectations for a pretty strong tourism season (Graph 3). Tourist arrivals (including cruise passengers) are now expected to reach a new record high above 20 million visitors, with full-year direct

⁶ Greece's retail trade accounts for ca 40% of the personal expenditure component of GDP.

⁷ IMF Country Report No. 14/151 "Greece: Fifth Review Under the Extended Arrangement Under the Extended Fund Facility, and Request for Waiver of Nonobservance of Performance Criterion and Rephrasing of Access; Staff Report; Press Release; and Statement by the Executive Director for Greece", (June 2014)

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revenue from tourism now seen exceeding €13bn, from ca €12bn in 2013⁸. In our view, strong tourism revenue and somewhat better than expected private spending growth this year should be adequate to offset a potential underperformance of the official growth forecast for domestic investment as well as what currently appears to be a faster recovery of imports. Regarding external sector developments, concerns still remain as regards the weak performance of Greek exports excluding fuels and revenue from tourism. To a certain extent, this reflects tight credit conditions in the domestic economy, earlier trade-finance problems and the fact Greece's CPI-real effective exchange rate (REER) maintains a certain overvaluation (by ca 10ppts, according to the latest IMF estimates) relative to main trading partners.

Graph 3 – Incoming passenger traffic to major tourism destinations in Greece (YoY, %)

Source: SETE

⁸ Tourism's gross value added to Greek GDP is estimated at ca 16.5%, with the industry accounting for 18.5% of total employment.

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ANNEX

Table A – Data series used in estimating different specifications of our GDP Nowcasting model

Data series	Source	Full-sample period	Data collection period/ reporting frequency
GDP (constant prices)	ELSTAT	3Q 2005-1Q2014	Quarterly
Retail sales index (volume)	ELSTAT	March 2005-April 2014	Monthly
Road motor vehicles put into circulation for the 1 st time	ELSTAT	March 2005-May 2014	Monthly
Unemployment rate	ELSTAT	April 2007-March 2014	Monthly
Number of employeeed	ELSTAT	April 2007-March 2014	Monthly
New Primate Sector Hirings	Ministry of Labour, Social Security & Welfare	January 2006-May 2014	Monthly
CPI	ELSTAT	March 2005-May 2014	Monthly
Building permits	ELSTAT	January 2008-March 2014	Monthly
Industrial production index	ELSTAT	March 2005-April 2014	Monthly
Manufacturing production index	ELSTAT	March 2005-April 2014	Monthly
Current account balance	BoG	March 2005-April 2014	Monthly
Turnover index in retail trade	ELSTAT	July 2007-March 2014	Quarterly
Index of new orders in industry	ELSTAT	March 2006-Feb 2014	Monthly
Turnover index in industry	ELSTAT	October 2006-April 2014	Monthly
MFI credit to domestic businesses and households	BoG	October 2008-May 2014	Monthly
Domestic private sector bank deposits	BoG	October 2008-May 2014	Monthly
CPI-based REER	ECB	Mar 2005-Nov 2013	Monthly
ULC-based REER	ECB	Mar 2005-Nov 2013	Quarterly
Central gvnt revenue	FinMin	March 2005-April 2014	Monthly
Central gvnt expenditure	FinMin	March 2005-April 2014	Monthly
Economic Sentiment Index	IOBE	Mar 2005-June 2014	Monthly
Athens Stock Exchange (ASE) index	Bloomberg	Mar 2005-June 2014	Monthly
ASE Volatility	Bloomberg	Mar 2005-June 2014	Monthly
EONIA	Bloomberg	Mar 2005-June 2014	Monthly
VIX	Bloomberg	Mar 2005-June 2014	Monthly

Source: ECB, ELSTAT, EC, Bloomberg, Ministry of Labour, Social Security & Welfare, Eurobank Global Markets Research

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