

GREECE MACRO MONITOR

March 19, 2014

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Eurobank GDP NOWcasting model update **Greek GDP forecast** **-0.8% YoY in Q1 2014 vs. -2.3% YoY in Q4 2013**

Preface

This note presents a preliminary estimate of Greek GDP in the first quarter of this year, based on a range of monthly data released up to March 15, 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 updated model estimates point to a further slowdown in the pace of annual GDP contraction in the first quarter of 2014 to around -0.8%, from -2.3% YoY in Q4 2013. This should not come as a major surprise, as the flow of macroeconomic data released so far this year have 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 the first quarter of the current year will continue in the following weeks and months and thus, our Nowcasting model estimate for Q1 should be considered as strictly preliminary and subject to sizeable revisions. We will provide a second (and, arguably, more accurate) estimate of Q1 2014 GDP in early May, a few days before EL.STAT publishes its flash national accounts for the first quarter of this year. All in all, we consider our Nowcasting model estimates as being broadly consistent with a switch into positive year-on-year GDP growth rates from the third quarter of 2014 onwards.

Methodological change in estimating GDP deflator causes sizeable revisions to past GDP data

Greece's stats agency, EL.STAT, published last week provisional data for the country's 4th quarter 2013 national accounts. The release contained sizeable revisions to quarterly GDP data over the period 2005-2013 as a result of a methodological change implemented in estimating the GDP deflator. As per the said report, the change was deemed necessary because in the results of the quarters of 2012 and 2013 there was a "significant and persistent" discrepancy between the estimated output-side GDP deflator and the respective expenditure-side metric. As also noted in the provisional national accounts report, the quarterly data for the years 2012 and 2013 were calculated according to a standard method for making provisional estimates, which primarily relies on short-term statistics with no benchmarking to independent estimates of annual data of the corresponding years. According to EL.STAT, this benchmarking will take place after the completion of an ongoing statistical work on the revision of annual data for the period up to 2012. This involves the integration of new and updated data from various sources in the production of annual national accounts, which will be combined with a wider set of statistical works related to the implementation of the new European System of Accounts (ESA 2010) and the regular revision of the base year (from 2005 to 2010). All this work will be completed in September 2014 and may result in "quite significant" revisions of the annual GDP data, as well as of the quarterly data that will be benchmark to them.

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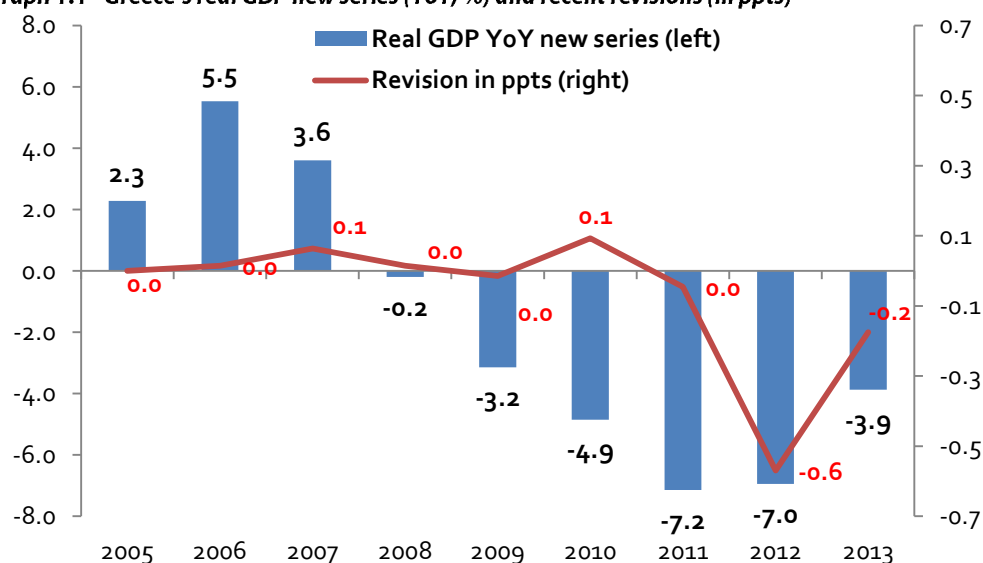
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Greek real GDP contracts by 2.3% in Q4, pace of decline decelerates from -6.0% in Q1 2013

The methodological amendments contained in the Q4 national accounts resulted in downward revisions of GDP data in 2012 and 2013, with the respective full-year growth rates having been revised to -7.0% and -3.9% from -6.4% and -3.7% reported earlier (see Graph 1.1 below and Table 2 in Annex). Yet, this should not conceal the fact that the pace of output contraction has been on a decelerating path in recent quarters, with the year-on-year change in real GDP reaching -2.3% in Q4 2013, from -6.0% in the first quarter of last year. The former has been revised upwards from an initial (flash) estimate of -2.6%. In mid-November we forecasted a real GDP contraction of -1.9% YoY in Q4 2013, based on the respective estimates produced by our GDP NOWcasting model for Greece.¹ It should be noted though that the series used in estimating the latter model are not directly comparable to the (revised) official ones, as a result of the recent methodological changes implemented in estimating the GDP deflator.

Graph 1.1 - Greece's real GDP new series (YoY, %) and recent revisions (in ppts)



Source: ELSTAT, Eurobank Global Markets Research

Net exports were the only positive contributor to annual GDP growth in 2013

Table 1 below shows the European Commission's latest (Winter 2014) forecasts for Greece's real GDP growth in 2013-2015. It also compares the 2013 figures with the respective realized values reported in the most recent national accounts statistics, which as we explained earlier, contained significant revisions to past data due to a methodological change in estimating the GDP deflator. As shown in the said table, net exports were the only positive contributor to GDP growth last year (to the tune of 2ppts – see also Graph 1.2), while domestic demand remained a negative contributor, though its annual pace of decline decelerated to -5.8%, from -10.2% in 2012. As also demonstrated in Graph 2 (Annex), the ratio of exports to imports of goods and services (national account basis) increased further in 2013, reaching 0.95, compared to 0.88 a year earlier and 0.63 in 2007-2008. It should be noted that the latest development was mainly due to the sharp decline in imports over the past 6 years.

¹ See "Eurobank GDP NOWcasting model", Eurobank Global Markets Research, Nov 2013

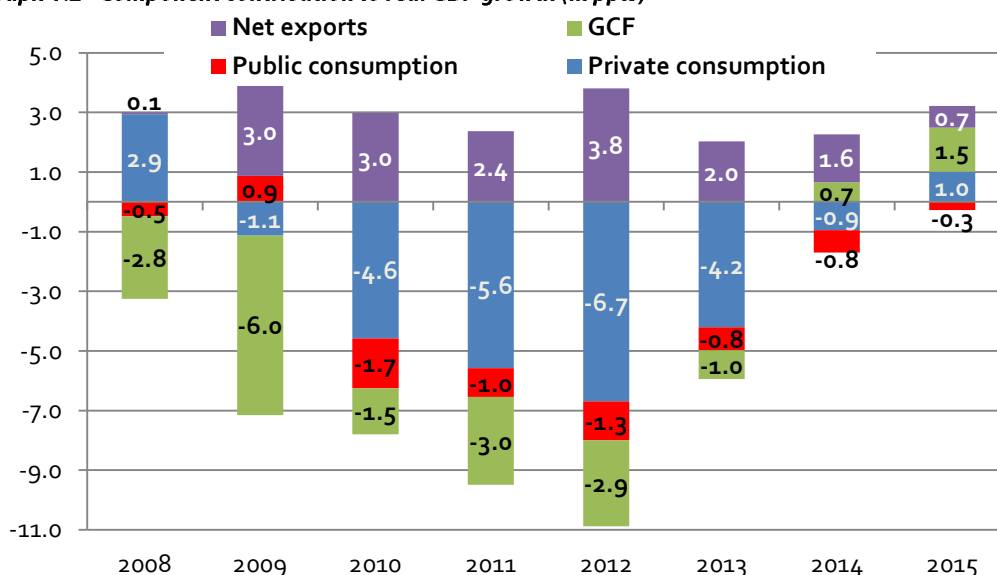
[http://www.eurobank.gr/Uploads/Reports/GDP%20Nowcasting%20-%20Greece%20-%20Macro%20Monitor%20\(18%20November%202013\).pdf](http://www.eurobank.gr/Uploads/Reports/GDP%20Nowcasting%20-%20Greece%20-%20Macro%20Monitor%20(18%20November%202013).pdf)

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Table 1 – Greek real GDP YoY, % (realizations and official forecasts)

	2013e	2013 realised (provisional data)	2014f	2015f
Private Consumption	-7.2	-6.0	-1.6	1.4
Public Consumption	-6.1	-4.0	-4.0	-1.2
Gross fixed capital formation	-8.7	-12.8	5.3	11.3
Exports (goods & services)	2.5	1.8	4.6	5.5
Imports (goods and services)	-6.8	-6.5	-1.3	2.7
GDP	-3.7	-3.9	0.6	2.9

Source: EU Commission (Winter 2014 European Economic Forecast) & Eurobank Global Markets Research

Graph 1.2 - Component contribution to real GDP growth (in ppts)Source: ELSTAT, Eurobank Global Markets Research
(2014 & 2015 data broadly in line with the troika baseline forecasts)

Eurobank GDP NOWcasting model estimate for Q1 2014

This section presents the results of our GDP NOWcasting model for Greek GDP in Q1 2014. Our NOWcasting 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 18 November 2013 *Greece Macro Monitor* ([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)). Our Q1 GDP growth estimate is derived from a range of higher-frequency (monthly) data released up to March 15, 2014. As such, it should be considered as strictly preliminary as, due to significant reporting lags, the flow of macroeconomic data pertaining to the first quarter of this year will continue in the following weeks and months. In early May (and a few days before ELSTAT publishes its Q1 2014 flash national accounts) we will provide a second (and, arguably, more accurate) estimate of Q1 GDP. Graph 1.3 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 1.4 depicts the realized YoY GDP growth rates and our NOWcasting model estimate for Q1 2014. In more detail, our estimated values for Q1 2014 are as follows

² Respective series was derived by applying the ARIMA X12 seasonal adjustment methodology.

GDP NOWcasting model estimates for Q1 2014 GDP

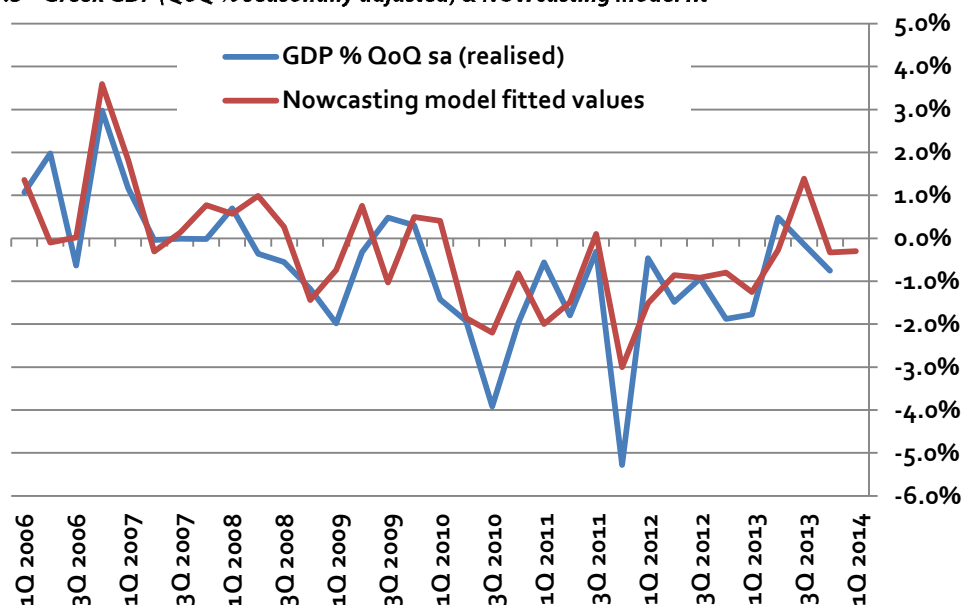
GDP in 2005 prices: CA €37bn in Q1 2014 vs. ca €40bn in Q4 2013

QoQ seasonally adjusted GDP (2005 prices): -0.2% in Q1 2014

YoY GDP (2005 prices): -0.8% in Q1 2014 vs. -2.3 in Q4 2013.

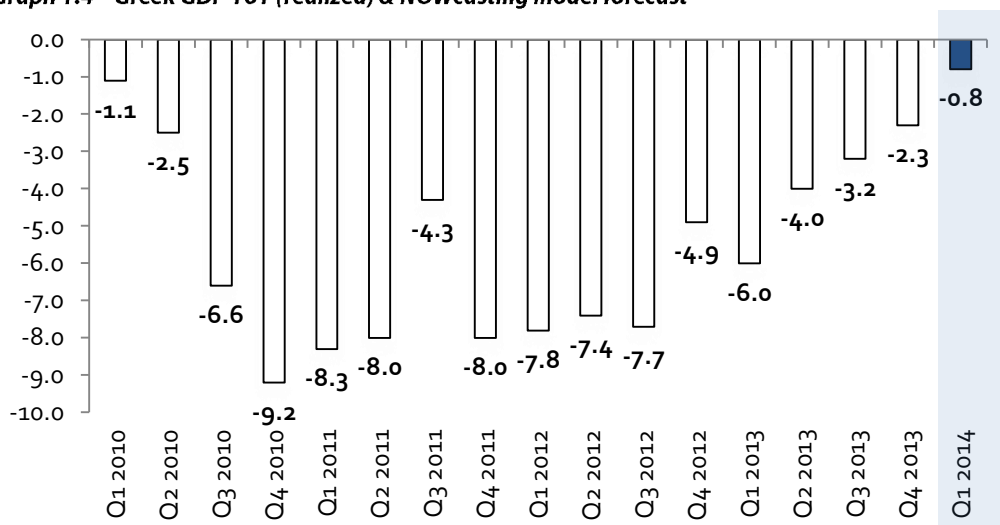
Finally, note that all model estimates of real GDP growth in quarter τ ($\tau = 1Q 2006, 2Q 2006, \dots, 4Q 2013$) are derived based on data for the respective quarter available up to the end of the first month of quarter $\tau+1$ i.e., before the Greek statistics agency publishes its *flash* national accounts data for quarter τ . The only exemption to this is the model estimation for Q1 2014, which is based on monthly indicators released up to March 15, 2014 i.e., 16 calendar days before the end of the reference quarter.

Graph 1.3 – Greek GDP (QoQ % seasonally adjusted) & NOWcasting model fit



Source: ELSTAT, Eurobank Global Markets Research

Graph 1.4 – Greek GDP YoY (realized) & NOWcasting model forecast



Source: ELSTAT, Eurobank Global Markets Research

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Macro data releases so far this year point to ongoing stabilization of domestic economic activity

As noted in the previous section, our NOWcasting model estimates point to a further slowdown in the pace of annual GDP contraction in the first quarter of 2014. This result should not come as a major surprise as the flow of macroeconomic data released so far this year (in our case, up to March 15, 2014) has been broadly positive, supporting expectations for an ongoing stabilization of domestic economy activity. Among others:

- The Economic Sentiment Indicator for Greece improved for the second month running in February, hitting a 5-½-year peak of 94.8. The breakdown of the February report showed that both the Industrial and Retail Trade Confidence Indicators rose, marking their highest level in 5-½ and 4 years, respectively.
- In a similar vein, the Services Confidence Indicator remained in a positive territory for the second consecutive month in February, a development that takes place for the first time since late 2008.
- Greece's PMI Manufacturing Index improved further in February, coming in at a 5-½ year high of 51.3, pointing to a further expansion in the domestic manufacturing sector. The breakdown of the report showed that production rose for the fourth consecutive month and by the fastest rate since August 2008, while new orders moved higher for the third month running and at the strongest pace since May 2008.
- The Industrial Production index rose by 1.1%YoY in January, marking the second consecutive monthly increase mainly supported by a hefty rise in electricity production. In this fashion, the year-on-year growth of the manufacturing production index shifted to a positive territory in the same month, halting a nine-month-long declining streak
- 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 February for the fourth month in a row, a development that has not been recorded since late 2007.
- Finally, the execution of the State Budget in the first two months of this year provides an encouraging picture as regards the attainability of the 2014 fiscal target. In more detail, the Central Government balance recorded a surplus of €495mn compared to a deficit target of €527mn, while the respective primary balance yielded a surplus of €2,072mn (or 1.1ppts-of-GDP) compared to a budget target of €1,047mn. Furthermore, State Budget net revenue in January-February 2014 increased by 9.7% YoY, overshooting the respective budget target by €433nm.

As we noted already, the flow of macro data corresponding to Q1 2014 will continue in the following weeks and months and thus, our NOWcasting model estimate for that quarter should be considered as strictly preliminary and subject to sizeable revisions.

High-frequency indicators used in estimating different specifications of our GDP NOWcasting model for Greece

As a final note to this document, Table A below shows the high-frequency indicators used in estimating different specifications of our Greek GDP Nowcasting model³:

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

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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 2005-4Q2013	Quarterly
Retail sales index (volume)	ELSTAT	Mar 2005-Dec 2013	Monthly
Road motor vehicles put into circulation for the 1 st time	ELSTAT	Mar 2005-Feb 2014	Monthly
Unemployment rate	ELSTAT	Apr 2007-Dec 2013	Monthly
Number of employed	ELSTAT	Apr 2007-Dec 2013	Monthly
New Private Sector Hirings	Ministry of Labour, Social Security & Welfare	Jan 2006-Dec 2013	Monthly
CPI	ELSTAT	Mar 2005-Feb 2014	Monthly
Building permits	ELSTAT	Jan 2008-Dec 2013	Monthly
Industrial production index	ELSTAT	Mar 2005-Jan 2014	Monthly
Manufacturing production index	ELSTAT	Mar 2005-Jan 2014	Monthly
Current account balance	BoG	Mar 2005-Dec 2013	Monthly
Turnover index in retail trade	ELSTAT	Jul 2007-Dec 2013	Quarterly
Index of new orders in industry	ELSTAT	Mar 2006-Dec 2013	Monthly
Turnover index in industry	ELSTAT	Oct 2006-Dec 2013	Monthly
MFI credit to domestic businesses and households	BoG	Oct 2008-Jan 2014	Monthly
Domestic private sector bank deposits	BoG	Mar 2005-Jan 2014	Monthly
CPI-based REER	ECB	Mar 2005-Nov 2013	Monthly
ULC-based REER	ECB	Mar 2005-Nov 2013	Quarterly
Central gvnt revenue	FinMin	Mar 2005-Feb 2014	Monthly
Central gvnt expenditure	FinMin	Mar 2005-Feb 2014	Monthly
Economic Sentiment Index	IOBE	Mar 2005-Feb 2014	Monthly
Athens Stock Exchange (ASE) index	Bloomberg	Mar 2005-March 2014	Monthly
ASE Volatility	Bloomberg	Mar 2005-March 2014	Monthly
EONIA	Bloomberg	Mar 2005-Mar 2014	Monthly
VIX	Bloomberg	Mar 2005-Mar 2014	Monthly

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

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ANNEX

Table 2 – Greece's real GDP (YoY, %)

	2001-07 average	2008	2009	2010	2011	2012	2013
a1. Private consumption	4.2%	4.3%	-1.6%	-6.2%	-7.7%	-9.3%	-6.0%
a2. Public consumption	3.1%	-2.6%	4.9%	-8.7%	-5.2%	-6.9%	-4.1%
Final consumption (a1+a2)	3.9%	2.8%	-0.3%	-6.7%	-7.2%	-8.8%	-5.6%
Gross capital formation (b1+b2)	6.6%	-10.4%	-25.0%	-8.3%	-16.4%	-17.8%	-6.7%
Exports g&s	3.7%	1.7%	-19.5%	5.2%	0.3%	-1.8%	1.8%
Imports g&s	4.7%	0.9%	-20.2%	-6.1%	-7.4%	-13.7%	-5.5%
GDP	4.1%	-0.3%	-3.3%	-4.8%	-7.1%	-7.1%	-3.9%

Source: ELSTAT; Eurobank Global Markets Research

Graph 2 – Total exports to imports ratio (national accounts data)

Source: ELSTAT; Eurobank Global Markets Research

Eurobank Global Markets Research

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