

### 1.3. Factor model forecasts for the short-term prospects in GDP

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The current section presents the updated short-term forecasts of KEPE concerning the evolution of the rate of change of real GDP in Greece for 2018.<sup>1</sup> The forecasts are produced by implementing a dynamic structural factor model, a detailed description of which can be found in Issue 15 (June 2011) of the *Greek Economic Outlook*. The underlying time series database used to estimate the model and produce the forecasts includes 126 variables, covering the main aspects of economic activity in the country on a quarterly basis, spanning the time period from January 2000 up to December 2017. Specifically, the database incorporates both real economy variables (such as the main components of GDP from the expenditure side, general and individual indices concerning industrial production, retail sales, travel receipts and the labor market) and nominal variables (such as the general and individual consumer

price indices, monetary variables, bond yields, interest rates, exchange rates and housing price indices). In addition, the data sample includes a considerable number of variables reflecting expectations and assessments of economic agents (such as economic sentiment and business expectations indicators). It is noted that the seasonal adjustment of all time series is carried out by use of the Demetra+ software, which is freely available from Eurostat.<sup>2</sup>

According to the econometric estimates presented in Table 1.3.1, and having incorporated published (provisional) seasonally adjusted GDP data up to the fourth quarter of 2017, the mean annual rate of change of real GDP for 2018 is predicted at 2.1%. This forecast reflects an improvement in economic conditions, as compared to the official<sup>3</sup> rate of change of real GDP for 2017, amounting to 1.4%. In addition, the rates of change for the first and second half of 2018 are estimated at 2.0% and 2.2%, respectively. It follows that the present factor model forecast for the first half of 2018 incorporates an upward revision of the corresponding forecast of the preceding period of reference (1.7%), while it also uncovers a tendency towards a moderate enhancement of the growth rate during the second half of 2018. This trend is further mirrored in the estimated quarterly growth rates for 2018, as compared to the respective four quarters of 2017, predicted at 2.4%, 1.6%, 2.0% and 2.4%.

**TABLE 1.3.1 Real GDP rate of change for 2018 (% , y-o-y)**

Quarters	2018			
	2018Q1	2018Q2	2018Q3	2018Q4
Quarterly rate of change	2.41 [2.34 , 2.48]	1.61 [1.49 , 1.74]	2.01 [1.83 , 2.19]	2.36 [2.12 , 2.59]
Mean rate of change, 1st and 2nd half of 2018	2.01 [1.92 , 2.11]		2.18 [1.98 , 2.39]	
Mean annual rate of change	2.10 [1.95 , 2.25]			

*Note:* Values in brackets indicate the lower and upper boundaries of the 95% confidence interval of the forecasts.

1. The date of the forecast is May 4, 2018.

2. The TRAMO/SEATS filter was used for the seasonal adjustment.

3. According to the most recent publication by ELSTAT for the Quarterly National Accounts, dated March 5, 2018.

The above presented forecasts of the rate of change of real GDP for 2018 reveal the key aspects of the most recent short-term developments in the Greek economy and are in line with the course of the incorporated economic data referring to the last quarter of 2017. In particular, the upward trend in the GDP growth rate recorded during the last quarter of 2017 seems to be carried over to the first quarter of 2018, while it appears that a correction occurs in the second quarter, interrupting the increasing path, which is then reinforced during the second half of 2018. These predictions indicate that the conditions are now provided for the gradual recovery and stabilization of the Greek economy. Such a development is associated, on the one hand, with the favourable course of certain major macroeconomic components, alongside the –stronger than expected– economic recovery in Europe and worldwide, as well. On the other hand, it is linked to (a) the positive effects arising from the rebalancing of major fiscal aggregates over time and the implementation of crucial structural reforms, securing the basic financing conditions for the Greek economy and (b) the prospects for the final completion of the fiscal adjustment programmes, as well as for a potential arrangement with reference to the issue of the Greek debt. At the same time, the lack of indications for stronger growth dynamics in the country could be due to delays in the legislation and implementation of certain economic measures, but mainly to the overall financial burden weighing on households and enterprises.

The above findings and assessments are consistent with the recent upward course of a significant number of economic variables, as observed on the basis of the latest data, on a non-seasonally adjusted basis, for the last quarter of 2017. More specifically, indicative are the favorable developments in: (a) investment (excluding housing), (b) goods and services' exports, (c) industry, based on both the general industrial production index and individual index categories (apart from the category of energy and capital goods), as well as the general turnover index in industry (overall and, in particular, for the external market, in the latter case with the exception of capital goods), (d) travel and transport receipts, (e) passenger cars and motorcycles, according to private passenger car licenses issued and the turnover index for motor trade, (f) building activity, in terms of volume, on the basis of permits issued, (g) wholesale trade, on the basis of the turnover index, (h) the Athens stock exchange, according to the General Index, and (i) spreads, which declined significantly.

An upward course also characterized most of the indicators reflecting business expectations on a sectoral level, especially in manufacturing, as well as some of the indicators incorporating the assessments for new and anticipated orders in industry and exports, and also the overall economic sentiment indicator for Greece. Furthermore, of great importance is the continuation of the gradual reduction in unemployment (on an aggregate level, for the long-term and newly unemployed) and the preservation of the increasing trend in employment (on an aggregate level, but also in the three individual sectors, and especially in the secondary sector), despite the overall adverse conditions still characterizing the domestic labour market.

On the negative side,<sup>4</sup> significance is attached to the downward course of the major macroeconomic component of private consumption, while downward trends also characterized the volume index in retail trade (mostly the general index and, in particular, the individual index categories for department stores and supermarkets), the turnover index in industry for the domestic market, as well as individual indicators concerning construction, such as the production index in construction. In addition, most of the competitiveness indicators considered did not record any significant improvement.

Greek real GDP and the overall domestic economic conditions may evolve according to a more or less favourable –than indicated by the above presented forecasts– scenario during 2018, depending on certain critical and decisive developments which concern a wide range of factors. These are associated, on the one hand, with the course of the major GDP components: private consumption, to boost domestic demand, but also investment and exports to strengthen the key economic sectors in the country, with the aim to enhance growth dynamics in the medium- to long-term and secure the creation of new jobs. On the other hand, they relate to the prospects of the country being able to raise funding directly from financial markets in the summer of 2018 and to settle the issue of the Greek debt. At the same time, these factors concern all the possibly adverse effects arising from the implementation of economic measures, incorporating significant additional financial burdens for households and enterprises and exerting further pressure on their tax-paying and financial capacity. They further concern potential downward risks related to any worsening of geopolitical tensions or of the overall global economic and political environment.

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4. Here again, the ascertainties refer to the course of the variables on a non-seasonally adjusted basis.