HELLENIC REPUBLIC
Ministry of Finance

Stability Programme 2019

Athens, April 2019

Preface

The Stability Programme of the Hellenic Republic for the period 2019-2022 is submitted to the Council and to the Commission in line with the requirements set out in Council Regulation (EC) 1466/1997 and corresponds to the national medium-term fiscal plan of Article 4(1) of Regulation (EU) 473/2013 of the European Parliament and of the Council.

The format and content of the Stability Programme are in line with the updated "Code of Conduct of the Stability and Growth Pact" that has been agreed by the Economic and Financial Committee on 15 May 2017.

The macroeconomic forecasts included in the Stability Programme have been endorsed by the Hellenic Fiscal Council (HFC), as required under Article 4(4) of Regulation (EU) 473/2013.

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1. Economic Outlook

According to the Ministry of Finance baseline forecast, real GDP is projected to increase by 2.3% in 2019. Domestic demand and net exports are expected to be the main drivers of output growth. Economic growth will be reflected in labour market conditions, with employment growth projected at 1.6%. The rate of inflation is expected to moderately rise to 0.9%. Medium-term prospects for output growth remain positive throughout the medium-term period.

Risks to the baseline scenario, mainly linked to the external environment, are tilted to the downside. Notably, a slowdown in global demand and EU growth driven, inter alia, by trade tensions may weigh on short-term and medium-term prospects, given the considerable role of exports in Greece's economic recovery, as shown by their significant increase in the previous two years (2017-2018). Medium-term risks related to geopolitical developments in the wider area of the eastern Mediterranean may also turn out to be an important factor.

1.1 Macroeconomic Outturn 2018

According to national accounts data, real GDP increased by 1.9% in 2018. Specifically, GDP growth gathered pace in the first three quarters of the year, while it decelerated to 1.6% in the fourth quarter. The main drivers of growth in 2018 were private consumption and net exports, on the back of consistently rising employment, an increasing wage rate, and a high base effect on imports stemming from rapid import recovery in 2017. Moreover, the overall contribution of inventories to output growth was 0.2% of GDP.

On the domestic demand front, investment fell by 12.2% in 2018, due to transport equipment's downward course and the steep decline in construction investment (other than housing) that is largely attributed to 2017 base effects (sizeable reclassification of spending from inventories to investment). The other equipment categories recorded steady growth at double-digit rates, along with a strong rebound in housing construction by 17.2%.

Public consumption contracted by 2.5%, despite the moderate increase in the wage bill of the general government. Unlike investment, private consumption followed an upward path throughout 2018, which turned out to be considerably more favourable than previously projected by international institutions. Private consumption's contribution to GDP growth amounted to 0.75%, while its year-on-year growth rate reached 1.1%, confirming the sustained improvement in consumer confidence and retail trade expectations indices during the year.

Exports of both goods and services have been increasing steadily in the last two years. In 2018, the external sector's overall contribution to output growth was 1.3% of GDP, of which 0.9% came from the goods balance and 0.4% from the services balance. The lower contribution from the services balance is due to the high-paced recovery in imports of services.

The current account of the balance of payments recorded a deficit, mainly due to the faster increase in imports of goods relative to exports of goods and the decline in net primary income receipts. On the contrary, an increase by 9.6% was recorded in the travel balance and by 12.8% in the transport balance, pointing to a solid performance in several services sectors.

Labour market reforms in recent years have helped Greece regain cost competitiveness and contributed to increasing employment rates and falling levels of unemployment. Employment (Labour Force Survey data) rose by 2.0% in 2018, while unemployment dropped to 19.3% (from 21.5% in 2017), falling below 20% for the first time since 2012. In spite of considerable improvements in the labour market, youth unemployment remained high at 39.9%, though remaining on a downward path since the peak of 58.3% was reached in 2013, while long term unemployment amounted to 70.4%, only 3 percentage points lower than its peak of 73.6% that was recorded in 2014. Female unemployment rate continued to remain high at 24.2%, though improved compared to the 30.7% rate observed in 2014, while the corresponding figure for men was 15.4%. At the same time, wage developments remained positive for a second consecutive year, with compensation of employees increasing by 3.6% in 2018, following an increase by 2.3% in 2017.

With respect to the price level, inflation (on a HICP basis) moderated in 2018, at 0.8% from 1.1% in 2017, mostly due to lower oil prices and the fading out of the impact from the indirect tax increases of 2017. Core inflation remained low at 0.5% from 0.6% in 2017, reflecting relatively low domestic demand. The GDP deflator, which reflects the price change in the economy as a whole, remained unchanged compared to 2017 at 0.6% due to the low private consumption and investment deflators, the faster increase of imports deflator against that of exports, as well as public consumption deflator's increase which offset other deflators' losses.

1.2 Macroeconomic Projections for 2019

Prospects for the global economy have weakened relative to last year's forecasts amid the escalation of trade tensions, the normalization of monetary policy in the advanced economies, credit tightening in China, macroeconomic shocks in Turkey and Argentina and disruptions in automobile production in Germany. Prospects for the Euro area have weakened considerably, with a growth forecast of 1.3% for 2019 revised downwards from 1.9% one year ago according to the IMF WEO.

US dollar-denominated oil prices (per barrel) are expected to remain relatively stable throughout the forecast period. When combined with expectations of a slight weakening in the USD/EUR exchange rate, these results imply a profile for the oil price in euro that is slightly higher than in the base year.

Projections for the Greek economy in 2019 have taken into account, inter alia, current official assumptions indicating a slowdown of the global economy. Output growth (2.3%) is expected to be slightly lower than the value projected in the Draft Budgetary Plan 2019 (2.5%). Nevertheless, economic recovery is expected to sustain its positive momentum and expand further, in real terms, compared to the previous year (1.9%), on the back of improved economic climate, sustained fiscal credibility, the anticipated easing in financial conditions of the economy and the continuation of structural reforms.

Table 1: External assumptions (% unless stated otherwise)

	2018	2019	2020	2021	2022
World GDP (excluding EU)	3.9	3.6	3.8	3.8	3.8
EU GDP	1.9	1.5	1.7	1.6	1.6
Growth of relevant foreign markets	3.5	2.5	3.1	3.2	3.2
World import volumes (excluding EU)	4.8	3.4	3.7	3.8	3.8
Oil prices (Brent, USD/barrel)	71.5	65.5	65.0	64.4	64.2

The main contribution to output growth is expected to stem both from an expansion of domestic demand, as consumption and investment-led growth are set to recover, and from a further increase of export market shares in global trade. Private consumption (1.0% compared to 1.1% in 2018) is expected to be supported by positive confidence effects and the rise in households' disposable income. This projection is underpinned by firmly elevated consumer and business confidence, improvements in retail and wholesale trade and industrial production, as well as favourable employment developments. Public consumption growth is expected to turn positive and stand at 1.6% versus -2.5% in 2018.

Investment growth is also expected to move into positive territory, reaching 3.9% from -12.2% in 2018. All sub-components of fixed capital formation, with the exception of non-residential construction, are forecast to contribute to investment growth. Housing and equipment spending are expected to largely support the reversal of trend in total investment, while the recovery of the real estate market, the improvement in financing conditions, the acceleration of structural reforms and the privatization programme are expected to be the main drivers of investment growth. The Investment Plan for Europe is also expected to contribute to investment growth dynamics, as the European Commission estimates (as of April 2019) that total financing under the European Fund for Strategic Investments in Greece amounts to €2.7 billion and is set to trigger €11 billion in additional investments.

Exports of goods and services are projected to continue to expand at 5.9% compared to 8.7% in 2018, due to the significantly improved export market share in global trade, the growth of export-oriented sectors and firms, the cumulative positive effect of competitiveness gains since the beginning of the crisis as well as the inelastic demand for several categories of exported goods despite weak Euro area economic prospects. High activity is expected in the categories of goods (excluding fuels), transport - especially shipping - as well as tourism (where expenditure per arrival is projected to rise). Net exports are projected to continue to add to output growth for a second consecutive year.

The positive trend in labour market conditions is expected to continue in line with growth expectations. On the basis of sectoral historical statistical data, the positive outlook is expected across almost all branches of economic activity. Employment growth is forecast to continue (1.6% compared to 1.7% in 2018) and unemployment (Labour Force Survey data) to further decline to 17.8% from 19.3% in 2018, amid expectations of increased capital investment and consumer spending. The steady recovery of the economy and sustained improvements in labour market conditions are also linked with an increase in compensation of employees by 4.5% versus 3.6% in 2018.

Projections for HICP inflation point to a moderate increase to 0.9%, close to the levels of the previous year (0.8%), as a result of various factors, namely a relatively greater pressure of domestic demand, a slowdown of global trade, downward trends in international oil prices and a downward revision of Euro area inflation by ECB in March 2019. The GDP deflator is estimated to increase to 1.1%, mostly due to higher investment and private consumption deflators, as well as due to the faster increase of the exports deflator against that of imports.

1.3 Medium-term Growth Prospects 2020-2022

The medium-term outlook of the Greek economy is positive as the country's spare productive capacity is gradually mobilized. Growth is estimated to remain robust over the projected horizon, mostly on the back on internal drivers. Domestic demand is projected to be the main driving force behind GDP growth, with gross fixed capital formation (primarily) and private consumption (secondarily) being the components that are estimated to have the largest impact.

Investment is considered as a key factor for a sustainable economic recovery. Looking ahead, there are expectations for investment that will be more conducive to productivity increases, mainly through a rise in construction other than housing and equipment. Investment is expected to benefit from the continuation of structural reforms in the areas of business environment, export capacity, digital economy, transparent governance, justice system, labour market and social welfare system that are reflected in the National Growth Strategy. From a sector perspective, investment-led growth will be supported mainly from energy, transport and logistics, shipping, tourism, agri-food and manufacturing. Relatedly, the anticipated stimulating improvement of financial conditions, based on a more intensive reduction of non-performing loans, a further lifting of capital controls in the banking system, an improved banks' access to financial markets and an increase in credit flow to the real economy, should underpin investment growth.

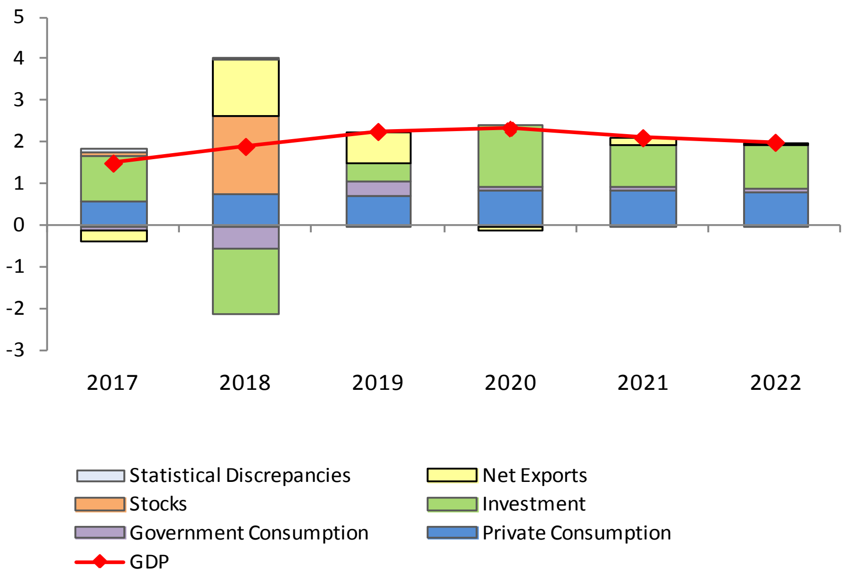
Exports are projected to keep expanding in 2020 as the effect of learning by exporting is estimated to broaden. Firms should upgrade their quality standards, which are positively correlated with an increase in export market shares in global trade. Over the period 2021-2022 exports are expected to moderate as final demand is set to be mainly determined by the domestic demand contribution. The expansion of the country's export capacity is expected to ease the pressure on the trade balance as domestic investment demand will be strengthening import growth. Consequently, net export contribution to GDP growth is forecast to be marginal over the medium-term horizon.

Table 2: Key macroeconomic indicators and forecasts

	2018	2019	2020	2021	2022
A. Demand and Real Output (in volume)					
Real GDP	1.9	2.3	2.3	2.1	2.0
Components					
Private consumption	1.1	1.0	1.2	1.2	1.2
Public consumption	-2.5	1.6	0.6	0.4	0.4
Gross fixed capital formation	-12.2	3.9	12.9	8.0	7.9
Exports of goods and services	8.7	5.9	5.4	3.8	3.3
Imports of goods and services	4.2	3.5	5.7	3.3	3.1
Contribution to change in real GDP					
Final domestic demand	-1.4	1.5	2.4	1.9	1.9
Inventories	2.0	0.0	0.0	0.0	0.0
Net exports of goods & services	1.3	0.8	-0.1	0.2	0.1
B. Potential Output					
Potential GDP	-0.8	-0.3	0.0	0.1	0.2
Contributions					
Labour	-0.2	-0.1	-0.1	-0.1	-0.1
Capital	-0.3	-0.1	0.0	0.0	0.1
Total factor productivity	-0.3	-0.1	0.1	0.2	0.2
Output gap	-6.0	-3.8	-1.9	-1.3	-0.6
C. Prices					
GDP deflator	0.6	1.1	1.4	1.6	1.7
HICP	0.8	0.9	1.3	1.5	1.7
D. Income and employment					
Compensation of employees (nominal)	3.6	4.5	3.6	3.5	3.2
Total employment*	1.7	1.6	1.2	1.0	0.7
Unemployment rate (LFS)	19.3	17.8	16.5	15.3	14.2

(*) On a national accounts basis

Figure 1: Contributions to real GDP growth



Total employment is estimated to moderate over the medium-term and the unemployment rate is projected to de-escalate further, while labour force growth is expected to remain stable for the whole period. Wage growth, as reflected in compensation of employees, is expected to moderate along with employment trend. HICP inflation is projected to increase over 2020-2022 assuming that energy prices stabilize and core inflation rises in tandem with positive growth prospects, which will further contribute to narrowing the output gap. The GDP deflator is expected to be in line with the HICP rising trend, mainly driven by consumption and investment deflators' increase.

Output gap, as calculated according to the commonly agreed methodology, is expected to narrow significantly in 2020 (-1.9%) compared to -6% for 2018 and the extreme negative value of -15.8% calculated for 2013.

2. Budget Balance and Government Debt

Greece has successfully completed an ambitious fiscal consolidation programme, and has fully redressed the flow imbalances that led to its exclusion from international capital markets in 2010. 2018 was the fourth successive year in which Greece over-achieved its primary fiscal target by a wide margin. It was also the third consecutive year in which the country registered a surplus in the overall headline balance. The fiscal over-achievement of the past four years restored fiscal credibility, strengthened economic confidence and led to a substantial decline in the 10-year government bond yield, allowing Greece to return to capital markets in a sustainable way.

Moreover, fiscal consolidation was accompanied by the development of new well targeted social policy tools that sheltered the most vulnerable segments of society from the effects of the crisis.

Table 3: Fiscal developments 2015-2018

Budget balance % of GDP	2018	2017	2016	2015
Headline budget balance (ESA 2010)	1.1	0.7	0.5	-5.6
Primary Balance (ESA 2010)	4.4	3.9	3.6	-2.1
Primary Balance (enhanced surveillance definition)	4.3	4.2	3.7	0.7
Primary Balance target (enhanced surveillance definition)	3.5	1.8	0.5	-0.3
Fiscal Space	0.8	2.4	3.2	1.0

Note: In 2015 2.9 % of GDP refers to banks support scheme

The headline budget balance in 2018 reached 1.1% of GDP, higher by 0.7 p.p. of GDP in relation to the estimate for the year 2018 that was included in the 2019 Draft Budgetary Plan (DBP). The primary balance stood at 4.4% of GDP, higher by 0.5 p.p. than both the 2019 DBP estimate and the primary balance recorded in 2017. The primary balance according to the enhanced surveillance definition is estimated at 4.3 % of GDP versus 3.8% in the 2019 DBP, well above the target of 3.5% of GDP.

Table 4 summarizes the fiscal projections of the Stability Programme at a medium-term horizon.

Table 4: Medium-term fiscal projections

Budget balance % of GDP	2022	2021	2020	2019
Headline budget balance (ESA 2010)	1.7	1.3	1.1	1.6
Primary Balance (ESA 2010)	4.6	4.2	4.0	4.7
Primary Balance (enhanced surveillance definition)	4.6	4.1	3.9	4.1
Primary Balance target (enhanced surveillance definition)	3.5	3.5	3.5	3.5
Fiscal Space	1.1	0.6	0.4	0.6

The General Government is projected to generate headline fiscal surpluses that exceed 1% of GDP, while the primary balance fiscal target of 3.5% of GDP is met and additional fiscal space that reaches 1.1% of GDP by 2022 will be used for the deployment of fiscal measures that sustain growth and protect the most vulnerable.

Following the successful completion of the economic adjustment programme, Greece has been re-integrated into the standard European fiscal surveillance framework, the latter also including member states' obligation to set their Medium-Term Objective (MTO) in the context of their Stability/Convergence Programme. The MTO is a country-specific fiscal target that is defined in Regulation (EC) 1466/1997 and constitutes a core element of the preventive arm of the Stability and Growth Pact (SGP). It is expressed in structural terms, adjusting the fiscal position for the effect of the cycle and without taking into account measures of a one-off or temporary nature. According to Regulation (EC) 1466/1997, the MTO should provide a safety margin with respect to the 3% deficit limit, ensure sustainability or a rapid progress towards it and allow room for budgetary manoeuvre, in particular by taking into account the needs for public investment.

Being a contracting party to the Fiscal Compact, Greece has committed itself to an MTO that cannot be lower than a (structural) deficit of 0.5% of GDP. However, the minimum MTO for Greece for the period 2020-2022, calculated on the basis of the agreed methodology and published in the 2019 edition of the European Commission's "Vade Mecum on the Stability and Growth Pact", is equal to a structural surplus of 0.25% of GDP as a result of the large ratio of public debt to GDP.

For the period 2020-2022, the MTO for Greece will be at 0.25% of GDP, i.e. equal to the minimum MTO that has been calculated on the basis of the commonly agreed methodology. The projected values for the structural balance and the comparison with the MTO are summarized in Table 5. On the basis of the commonly agreed methodology for the calculation of the output gap and of the latest update on fiscal semi-elasticities, the structural balance is estimated at 4.6% of GDP for 2018, due to the positive headline balance and the sizeable negative output gap. In the 2019-2022 period, the structural balance corresponding to the Stability Programme's medium-term scenario is declining as a result of the projected narrowing of the output gap, but remains considerably above the MTO, at levels close to 2% of GDP, throughout the period examined.

Table 5: MTO and structural balance

Structural balance % of GDP	2022	2021	2020	2019	2018
Headline Structural budget balance (ESA 2010)	2.0	1.8	1.9	2.9	4.6
Primary Structural Balance (ESA 2010)	4.9	4.7	4.8	6.0	7.9
Reference value (MTO)	0.25	0.25	0.25	N/A	N/A
Cyclically adjusted headline balance	2.1	1.9	2.1	3.6	4.2

Table 6 offers a comparison between the no policy change scenario and the medium-term scenario. Note that the no-policy change scenario has been modified to include the already legislated and implemented measures of the 10% decrease of ENFIA (unified property tax) starting from 2019, as well as the gradual reduction of the CIT tax rate from the existing 29% to 28% in 2019, 27% in 2020, 26% in 2021 and 25% in 2022, but exclude interventions on ENFIA and CIT of the 2017 pre-legislated package.

The medium-term scenario incorporates interventions on the revenue side aiming at reducing progressively the tax burden while fully respecting the medium-term fiscal target commitments.

Table 6: Comparison between the no-policy change and the medium-term scenario

Change/ No polocy change scenarios	Policy change	No policy change	Policy change	No policy change	Policy change	No policy change	Policy change	No policy change
General government	**2019**	**2019**	**2020**	**2020**	**2021**	**2021**	**2022**	**2022**
1. Net lending/net borrowing	**1.6**	**1.7**	**1.1**	**1.4**	**1.3**	**1.5**	**1.7**	**2.0**
1. Total revenue	**47.8**	**47.8**	**45.9**	**46.2**	**45.1**	**45.3**	**44.2**	**44.5**
1.1 Taxes on production and imports	16.7	16.7	16.3	16.3	16.0	16.0	15.8	15.8
1.2 Current taxes on income, wealth, etc	9.6	9.7	9.4	9.8	9.4	9.7	9.5	9.7
1.3 Capital taxes	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1.4 Social contributions	13.8	13.8	13.5	13.5	13.2	13.2	12.8	12.8
1.5 Property income	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
1.6 Other	7.2	7.2	6.3	6.3	6.1	6.1	5.8	5.8
p.m.: Tax Burden	**40.3**	**40.3**	**39.3**	**39.7**	**38.7**	**39.0**	**38.1**	**38.4**
Total expenditure	**46.2**	**46.2**	**44.8**	**44.8**	**43.8**	**43.8**	**42.5**	**42.5**
2.1 Compensation of employees	11.6	11.6	11.3	11.3	11.0	11.0	10.6	10.6
2.2 Intermediate consumption	4.7	4.7	4.6	4.6	4.5	4.5	4.3	4.3
2.3 Social payments	19.6	19.6	18.8	18.8	18.2	18.2	17.7	17.7
2.4 Interest expenditure	3.1	3.1	2.9	2.9	2.9	2.9	2.9	2.9
2.5 Subsidies	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9
2.6 Gross fixed capital formation	3.9	3.9	4.1	4.1	4.3	4.3	4.1	4.1
2.7 Capital transfers	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
2.8 Other	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.5

The evolution of public debt for the period up to 2022 is presented in Table 7. General Government debt, as a percentage of GDP, is expected to follow a declining path mainly due to denominator effects and the partial early repayment of IMF loans in 2019, while its total reduction is projected at almost 28 p.p. of GDP over the medium-term horizon.

Table 7: Evolution of public debt

Debt evolution	**2022**	**2021**	**2020**	**2019**	**2018**
Nominal Debt	327000	323800	324800	325800	334573
as a % of GDP	153.3	157.5	163.9	170.6	181.1
Change	-4.2	-6.3	-6.7	-10.6	5.0

3. Sensitivity Analysis

The baseline scenario forecasts a moderately increased GDP growth for 2019 and 2020, at 2.3%, which gradually declines thereafter to marginally below 2.0% by the end of the medium term. Underlying the baseline forecast are the external assumptions for the basic exogenous inputs, such as GDP growth in the EU and in relevant foreign markets, world imports, the nominal effective exchange rate, short-term and long-term interest rates, and oil prices. Developments in nearly all external assumptions have proved more subdued in 2018 compared to the respective estimates underlying the Draft Budgetary Plan for 2019 (October 2018). This trend is projected to carry over to 2019 under the baseline scenario, in light of the recently downward revised forecast for global and EU growth in the short run.

In this context, although endogenous risks for the macro-scenario are still to be eliminated (such as vulnerabilities in the balance sheets of banks or potential political cycle implications), the major risk factors are markedly linked to the external environment and are tilted to the downside. Apart from the weakened global growth prospects versus the autumn outlook forecast, economic slowdown could deepen more should downside risks materialize in areas such as trade policies, risk appetite, global geopolitical tensions and Brexit. Finally, yet importantly, the pace of monetary policy normalization in the larger advanced economies should also affect world economic developments.

The sensitivity analysis examines the impact from stylized shocks to two key exogenous inputs, EU output growth and interest rates. As a result, GDP growth in the Greek economy is driven downwards in both plausible scenarios relative to the baseline assuming throughout the forecast period:

- A more subdued growth in EU's real domestic demand, by 1.5 percentage point cumulatively at the end of the forecast horizon (Scenario A);
- A gradual, monetary policy-induced increase in interest rates by 150 basis points at the end of the forecast horizon (Scenario B)

Table 8: Sensitivity analysis results – macroeconomic variables (change in growth rates versus the baseline)

	2019	2020	2021	2022
Scenario A: 1.5 pp decrease in the level of real domestic demand in the EU				
Real GDP	-0,26	-0,22	-0,17	-0,12
Private consumption	-0,06	-0,07	-0,05	-0,04
Investment	-0,50	-0,31	-0,22	-0,14
Exports	-0,76	-0,61	-0,46	-0,30
Imports	-0,26	-0,23	-0,17	-0,12
Employment	-0,13	-0,10	-0,08	-0,05
Scenario B: 150 basis points increase in interest rates due to monetary policy shock				
Real GDP	-0,08	-0,06	-0,05	-0,05
Private consumption	-0,11	-0,08	-0,06	-0,06
Investment	-0,28	-0,29	-0,26	-0,26
Exports	-0,08	-0,06	-0,05	-0,05
Imports	-0,16	-0,15	-0,13	-0,13
Employment	-0,04	-0,03	-0,02	-0,02

Table 8 presents the results of the sensitivity analysis for the main macroeconomic variables, showing the change in these variables growth rates compared with the medium-term scenario of the Stability Programme. According to the results, the impact from a slowdown in demand in the EU will be clearly stronger than the impact from a shock in interest rates. The macroeconomic and fiscal effects of each alternative scenario are described in more detail below.

Scenario A: Response to a slowdown in EU real domestic demand growth

A further slowdown in the level of real domestic demand in the EU is assumed, cumulatively reaching 1.5% in 2022 (0.5% in 2019, 0.9% in 2020, 1.3% in 2021 and 1.5% in 2022). Relative to the baseline forecast, this dampens economic growth in Greece, with the impact transmitted primarily through the trade channel. Lower external demand implies moderated export growth and production, which accordingly hamper investment growth and exacerbate unemployment. At the end of 2022, Greece's output level with respect to the GDP volume of 2018 should be 0.82 percentage points lower than in the baseline forecast. The most affected real GDP component should be exports, their growth rate being lower than the baseline estimate by 2.42 percentage points at the end of the forecast horizon.

The fiscal implications of the assumed slowdown in EU demand are presented in Table 9. The sensitivity of the headline balance was calculated by employing elasticities used in the context of the European fiscal surveillance framework. Specifically, the value of the budget balance semi-elasticity has been used, in line with the updated calculations presented in the 2018 Report on Public Finances in EMU. For Greece, this semi-elasticity has been calculated at 0.524 implying a rise (decline) in the budget balance by 0.5% of GDP as a result of an increase (decrease) of GDP by 1%.

Table 9: Sensitivity analysis – fiscal implications of Scenario A

	2018	2019	2020	2021	2022
Headline budget balance	1.1%	1.5%	0.8%	0.9%	1.3%
Difference to stability programme scenario	*0.0%*	*-0.1%*	*-0.2%*	*-0.3%*	*-0.4%*
Cyclically adjusted balance	4.2%	3.5%	1.8%	1.6%	1.7%
Structural balance	4.6%	2.8%	1.6%	1.5%	1.6%

As shown in the table, the headline balance is estimated at 1.3% of GDP in 2022 in case scenario A materializes, lower by 0.4% in relation to the medium-term scenario of the Stability Programme.

Scenario B: Response to interest rates increase

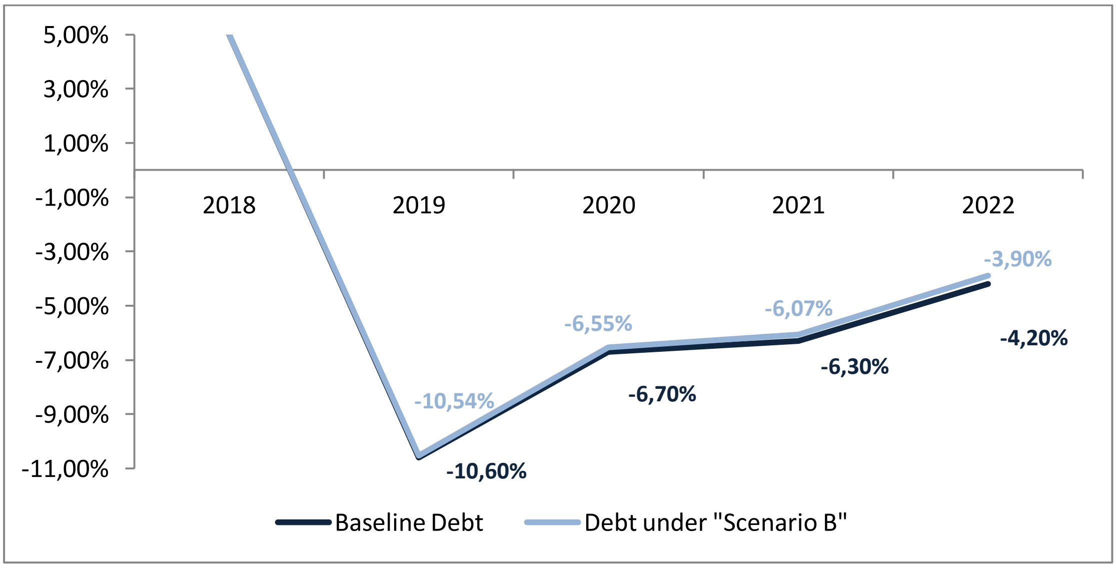
A monetary shock of increasing interest rates versus the baseline scenario is assumed to materialize gradually and at a decelerating pace, leading to a 150 basis points increase over four years (50 basis points in 2019, 40 basis points in 2020, 30 basis points in 2021 and in 2022). This has a negative effect on output growth, transmitted primarily through investment due to higher borrowing costs, and on private consumption, due to increased consumer savings. In turn, the dampened domestic demand should affect employment growth negatively, albeit only marginally, and put some marginal downward pressure on prices as of 2020. On the other hand, the decrease in exports is offset by the relatively larger decrease in imports, which reflects investment developments. Overall, increased interest rates versus the baseline should result in lower real GDP growth level by 0.24% at the end of 2022 with respect to the GDP volume of 2018, coupled with lower investment growth by 1.39%, and lower private consumption by 0.32%. The results for the sensitivity of the budget balance to the rise in interest rates are depicted in Table 10 and show a marginal effect of just 0.1% of GDP for years 2020-2022.

Table 10: Sensitivity analysis – fiscal implications of Scenario B

	2018	2019	2020	2021	2022
Headline budget balance	1.1%	1.6%	1.0%	1.2%	1.6%
Difference to stability programme scenario	*0.0%*	*0.0%*	*-0.1%*	*-0.1%*	*-0.1%*
Cyclically adjusted balance	4.2%	3.6%	2.0%	1.8%	1.9%
Structural balance	4.6%	2.9%	1.8%	1.7%	1.9%

The materialization of Scenario B would also have an effect on the evolution of public debt. However, given the specificities of the structure of the Greek debt – and despite its size as a fraction of GDP – the analysis suggests that this effect will be exceptionally small. Greece has completed the economic adjustment programme with a sizeable cash buffer that it has progressively built up over the recent years. The current level of the cash buffer is fairly sufficient to cover the gross financing needs for, at least, the next four years. Thus Greece does not face short-term refinancing risks and is shielded against refinancing and interest rate risks, having the ability to implement liability management operations in order to further improve its debt profile. Funding strategy for the following years is based on the principle that the new issues will not exceed the annual gross financing needs.

Figure 2: Change in gross general government debt to GDP ratio under the Stability Programme scenario and under scenario B



Since the beginning of 2019 Greece has already issued two new benchmark bonds of a 5-year and a 10-year maturity, with an outstanding amount of €2.5 billion each, while the sovereign yield curve has moved downwards for short and long term maturities. Greece's debt is mainly held by the official sector, having a weighted average maturity of approximately 21 years, with the floating part of it representing no more than 10% of the total. As a result of the structure of the Greek debt, a possible increase of the interest rates by 150 basis points during the years 2019-2022 will have only a slight effect on the gross debt ratio, as depicted in Figure 2. The assumed increase in interest rates will lead to a small decline in the projected annual change of the debt to GDP ratio, without affecting its strongly decreasing trend.

4. Sustainability of Public Finances

4.1 Main Assumptions and Background

The present chapter analyses the impact of ageing on public finances over a long-term horizon, including an update of the calculations presented in the context of the 2018 Ageing Report for the evolution of pension expenditure. Specifically, the results on the cost of ageing for the period 2018–2070 are based on:

- the current (2018) pension legislation,
- the most recent Eurostat's demographic projections (the same used for the 2018 Ageing Report) and
- the macroeconomic assumptions prepared by the Ageing Working Group (AWG) of EU's Economic Policy Committee (EPC) for the 2018 Ageing Report.
- the long-term projections on age-related expenditure in the areas of health care, long-term care, education and other expenditures that have been prepared by the EPC's AWG in the context of the 2018 Ageing Report

As far as pension expenditure is concerned, the projections include the main and auxiliary pension provision of the public pension system, as well as means-tested benefits (Uninsured elderly and social solidarity grant provision).

With regards to the pension legislation, the pension reform introduced in May 2016 by Law 4387/2016 as in force (2018) is taken into account. This reform:

- Integrates all social insurance pension funds into a single social insurance pension organization for the main provision (EFKA) and a single social insurance pension organization for the auxiliary provision (ETEAEP) with unified governance, administration and accounting framework for each one of them.
- Harmonizes pension benefit rules.
- Affects the already accrued rights of both pensioners (except farmers) and insured (for farmers a 15-year transition period is provided) by applying the unified pension benefit rules.
- Implies immediate application of the pension reform as of May 2016.

The key elements of the main pension system are the following:

- Introduction of a flat-rate pension (national pension) set at €384/month (12 payments per annum) for at least 20 years of contributions. The amount of €384 is decreased by 2% per annum for contributory period between 19 and 15 years (reduced to €345,60 for 15 years). The national pension is financed by the state.
- Marginally applied accrual rates with the same profile for all workers solely based on career length. The new accrual rates are in broad terms lower than those in the old system.
- Pensionable earnings are calculated based on the full-earnings history. The valorisation mechanism for the calculation of pensionable earnings is based on the change in the average annual general consumer price index up to 2020 and on the salary change index (calculated by ELSTAT) from 2021 onwards.

- Pension indexation (national and contributory part) is equal to the minimum of either the CPI or the sum of 50% CPI and 50% GDP growth [min(50% GDP growth +50% CPI, CPI)]. Indexation is frozen up to 2022.
- All main pensions granted up to the entry into force of Law 4387/2016 are recalibrated according to the new system's rules. Each pension consists of the following components: a) National pension, b) Contributory pension according to the new rules and c) Personal difference, defined as the difference between the total pension amount according to the old and new rules.
- Personal differences that correspond to pensions with lower pension amount according to the new rules are compensated with future pension indexation starting from 2023 onwards. Personal differences that correspond to pensions with higher pension amount according to the new rules are granted in 5 installments starting from 2019 onwards.
- The full contributory period is set at 40 years.
- Unified statutory retirement ages are set for all (67 years). The minimum age for retirement was set initially at 62. (Law 4093/2012 and Law 4336/2015)
- From 2021 onwards, the minimum and statutory retirement ages are adjusted every three years in line with changes in life expectancy.
- For those with less than 15 years of contributions, and thus not eligible for pension, a flat rate means-tested benefit (€360/month) is provided which constitutes an important social safety net.

The key elements of the auxiliary pension system are the following:

- The auxiliary pension provision works in parallel to the main pension provision and is mandatory for most categories of insured. The auxiliary pension is financed separately from the main pension from both employer and employee, without any state contribution. It is awarded under the prerequisite of receiving a main pension.
- On February 2012 the Parliament adopted a reform of the auxiliary pension system by Law 4052/2012, which established a unified auxiliary pension organization aiming to incorporate all employees' funds, and introduced a pay-as-you-go (PAYG) notional defined contribution system (NDC). On May 2016 Law 4387/2016 mainly introduced a unified calculation method for already accrued rights:
    - A pro-rata pension calculation is applied for those insured before 1.1.2014. The new system is implemented starting on 1.1.2015 and pension comprises of two components: a) The first component is using the arrangements of the DB system (accrual rate 0,45% and pensionable earnings calculated according to the method of the main pension) for as many years as the insured worked before 1.1.2015. b) The second component is using the NDC arrangements for as many years as the insured worked after 1.1.2015. Those insured after 1.1.2014 are included in the new NDC system.
    - All auxiliary pensions granted up to 31.12.2014 are recalibrated according to the new system's rules. Each pension consists of the following components:
        - ✓ Contributory pension according to the new rules.

- ✓ Personal difference, defined as the difference between the pension amount according to the old and new rules, only for the cases where the new pension amount is lower than the old one.
  Personal differences are completely eliminated starting from the 2nd half of 2016 in the case that the sum of pension amounts (main and auxiliary) is higher than €1,300.
- A balancing mechanism is applied to guarantee the system's financial sustainability, (no pension indexation in case of deficit). Any deficits are covered by fund's assets.

The main demographic and macroeconomic assumptions are the ones used in the context of the 2018 Ageing Report and are reproduced in Table 11 Eurostat's demographic projections point to a slow rise in the fertility rate, which reaches a value of 1.64 in 2070 from 1.33 in 2020. However, the fact that the fertility rate remains below the level required for maintaining a non-decreasing total population, along with the marginal projected effect of net migration, leads to a declining population that is projected to fall below ten million by 2030 and decline further to 7.7 million by the end of the horizon. The basic macroeconomic assumptions point to a slowly increasing growth rate of potential GDP that will stabilize at levels around 1.2%-1.3% by 2060-2070, while labour productivity growth is projected to follow an increasing path until 2050 before returning to a long-run value of 1.5%.

Table 11: Demographic projections and macroeconomic assumptions

	2020	2030	2040	2050	2060	2070
Demographic projections						
Fertility rate	1.33	1.4	1.46	1.52	1.58	1.64
Net migration as % of population	-0.2	0	0.1	0.1	0.1	0.1
Total population (million)	10.5	9.9	9.4	8.9	8.3	7.7
Macroeconomic assumptions						
Potential real GDP growth	-0.3	0.5	0.8	1.1	1.3	1.2
Growth rate of labour productivity	-0.4	0.8	1.6	1.9	1.7	1.5
Total Factor Productivity	0	0.5	1	1.2	1.1	1
Capital deepening	-0.3	0.3	0.5	0.7	0.6	0.5

Source: 2018 Ageing Report

With respect to non-pension age-related expenditure, the 2018 Ageing Report projections show a moderate rise from 8.4% to 8.9% of GDP between 2020-2070. This result is mostly due to the projected rise in health care expenditure from 5.1% to 6.2% of GDP, while education expenditures are projected to decline from 3% to 2.4% of GDP over the long-term horizon.

4.2 Updated Projections for Pension Expenditure

The main differences between the current pension projections and the ones included in the 2018 Ageing Report are described below:

1. The provision for the reduction of the main pensions paid up to 13.05.2016 is abolished. The abolished provision provided that "personal differences which correspond to main

pensions with lower pension amount according to the new rules are fully or partially eliminated in 2019. Pension cut cannot exceed 18% of the pension paid (calculated according to the old rules)". However, the initial clause that any personal differences of this category of main pensions are compensated with future pension indexation starting from 2023 onwards remains.

2. The provision for the reduction of the auxiliary pensions is abolished. The abolished provision provided that "remaining personal differences of auxiliary pensions (for the cases that the sum of pension amounts -main and auxiliary - is lower than €1,300) is eliminated fully or partially in 2019. Pension cut cannot exceed 18% of the pension paid (calculated according to the old rules)".
3. The contribution rate for the main pension of the self-employed is set to 13.33% from 1.1.2019 (instead of 20% that was applied up to 31.12.208) on their monthly income from the exercise of their professional activity during the previous tax year.
   The monthly contribution resulting from the above (13.33% x monthly income) cannot be less than 20% of the minimum wage. Due to the increase of the minimum wage from 1.2.2019 (from €586.08 to €650.00), the minimum contribution is set to the amount of €130.00 (20% x €650.00), instead of the amount of €117.22 (20% x €586.08).
   Also, the monthly contribution may not exceed 13.33% of 10-times the minimum wage. Due to the increase of the minimum wage from 1.2.2019, the maximum contribution is set to the amount of €866.45 (13.33% x €6,500.00), instead of the amount of €781.25 (13.33% x € 5,860.80).
4. The contribution rate for the main pension of farmers is set at 12% for the year 2019, 12.67% for the year 2020, 13% for the year 2021 and 13.33% from 2022 onwards (instead of 18%, 19%, 19.5% and 20% accordingly), calculated on their monthly income from the exercise of agricultural activity during the previous tax year. The above income cannot be less than 70% of the minimum wage or more than 10-times that. Due to the increase of the minimum wage from 1.2.2019, the minimum monthly contribution base is €455.00 (70% x €650.00) instead of € 410.26 until 31.1.2019 (70% x €586.08) and the maximum monthly contribution base is €6,500.00 (10 x €650.00) instead of €5,860.80 until 31.1.2019.
   The monthly contribution cannot be less than:
   - from 1.2.2019 up to the end of the year, the amount of €81.90 (18% x €455.00)
   - in 2020, the amount of €86.45 (19% x €455.00)
   - in 2021, the amount of €88.73 (19.5% x €455.00)
   - from 2022 onwards, the amount of €91.00 (20% x €455.00)

   The monthly contribution cannot be higher than:
   - from 1.2.2019 up to the end of the year, the amount of €780.00 (12% x €6,500.00)
   - in 2020, the amount of €823.55 (12,67% x €6,500.00)
   - in 2021, the amount of €845.00 (13% x €6,500.00)
   - from 2022, the amount of €866.45 (13.33% x €6,500.00)

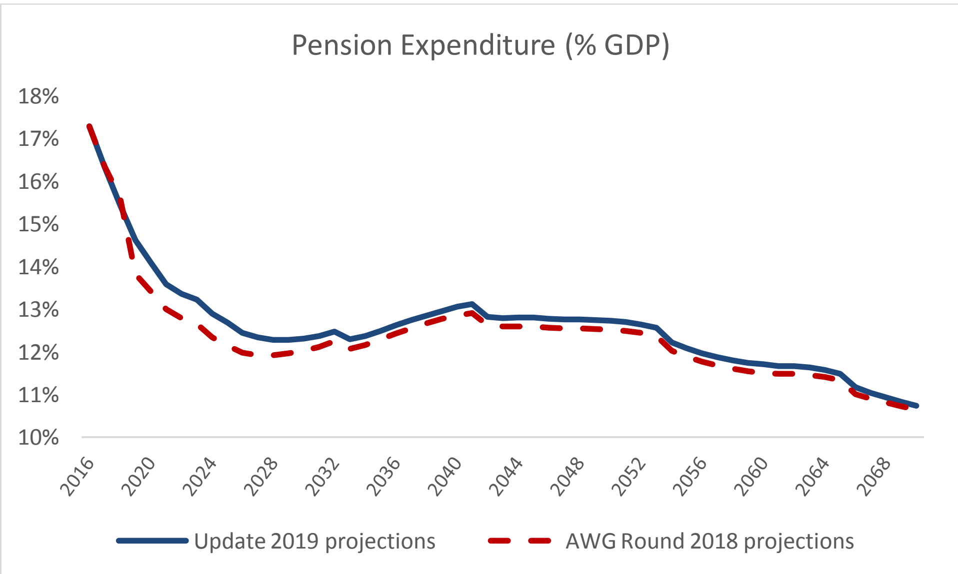
5. From 1.1.2019 for the self-employed and the farmers (insured persons of Articles 39 and 40 of Law 4387/2016), the pensionable earnings are defined as the amount which corresponds to the insured monthly income derived by taking into account the amount

of contributions actually paid for each month of insurance and contribution rate 20% (i.e. Pensionable Earnings = [amount of contributions actually paid] / 20%).

6. The basis for calculating the insurance contribution in favor of auxiliary pension is changed from 1 January 2017 onwards for self-employed persons and from 1 January 2019 for salaried lawyers, which is equal to the minimum wage, as applicable.
7. A minimum amount to insured's survivors is granted under specific conditions, defined as the full amount of the national pension for 20 years of insurance, i.e. €384 or, in case of the insured's death with 15 years of insurance, €360 per month.
8. New calculation method for AKAGE and health contributions (amounts withheld from pensions). Annual gross pension expenditure integrates AKAGE and health contributions. AKAGE was calculated on the gross pension. Health contribution was calculated on the pension excluding AKAGE contributions and cuts due Laws 2010-2012.
   From 1.1.2019 all pensions are recalculated according to the provisions of Law 4387/2016 (pensions reform). Taking into account par. 1 of article 27 of Law 4584/2018, from 1.1.2019 AKAGE is calculated on the pension as it is formed under Law 4387/2016 provisions (national pension + contributory part).
   Following the new provision, AKAGE and health contributions will be decreased since the base for the calculation from 1.1.2019 is lower than the base used until 31.12.2018. This reduction has an impact on the annual gross pension expenditure.

Figure 3 shows the evolution of pension expenditure taking into account the above changes compared to the pension expenditure included in the AR2018. In relation to the AR2018 projections, the update leads to marginally higher pension expenditure that dissipates in the long-run. Specifically, the difference between the two projections stands at 0.71% of GDP for 2020 and declines to just 0.14% of GDP by 2070, implying a negligible effect of the aforementioned changes in terms of the long-term sustainability of the pension system.

Figure 3: Evolution of pension expenditure in the 2018 Ageing Report projections and under the updated projections



The main results of the analysis are presented in Table 12 and show a significant decline of 2.87 percentage points of GDP in age-related expenditure between 2020 and 2070, stemming mainly from the declining path of pension expenditure which is projected to approach 10% of GDP in the long-run from a value of 17.3% of GDP in 2016 and 14.1% of GDP in 2020. The analysis' results show that the reforms that have taken place over the previous years in the pension system can ensure long-term sustainability even in a context of highly unfavourable demographic developments that imply a reduction of the share of working age population by approximately 10 percentage points between 2020-2070, to a level of 53.8% of total population in 2070.

Table 12: Results of long-term sustainability analysis

	2020	2030	2040	2050	2060	2070
Total expenditure	**44.35%**	**41.64%**	**42.49%**	**42.66%**	**41.85%**	**40.67%**
of which age-related expenditure	*22.51%*	*20.61%*	*21.46%*	*21.63%*	*20.82%*	*19.64%*
of which pension expenditure	*14.11%*	*12.31%*	*13.06%*	*12.73%*	*11.72%*	*10.74%*
Total revenues	**45.43%**	**44.71%**	**44.66%**	**44.61%**	**44.57%**	**44.61%**
of which pensions contributions	*7.36%*	*7.65%*	*7.59%*	*7.54%*	*7.51%*	*7.55%*

Source: National Actuarial Authority, Ministry of Finance

As far as the projections for total revenue and expenditure over GDP are concerned, they are mechanistically projected under the assumption that changes in these ratios after the horizon of the Stability Programme are due only to the projected changes in age-related expenditure and revenues from pensions' contributions. In order to facilitate comparison with the long-term projections that have been endorsed by the Economic Policy Committee, the values used for the evolution of GDP are in line with the AR2018 assumptions. As a result, the estimates included in Table 12 for total revenue and expenditure as a % of GDP differ slightly from the respective estimates of the medium-term scenario of the Stability Programme. It should be stressed that, due to the mechanistic nature of these projections and to the fact that the period covered considerably exceeds the Stability Programme's policy horizon, the values included in Table 12 for total revenue and expenditure should not be understood as forecasts.

5. Quality of Public Finances

Besides the significant fiscal effort undertaken successfully by Greece over the past decade during the economic adjustment programme, a number of major structural reforms have taken place in the area of Public Financial Management (PFM), contributing to better fiscal planning and monitoring, as well as to the enhancement of the fiscal data transparency and reliability. The continued implementation of on-going reform projects is expected to ensure the attainment of further objectives in both the short and the medium-term.

Weaknesses that had to be addressed in the PFM area included, inter alia, instances of fragmentation of functions, a high degree of centralization of budget procedures, overlaps in controls performed by various institutions, low accountability and the lack of a multiannual planning framework. The main PFM reforms focused on the budgeting framework, fiscal reporting, cash management, accounting, payment processes, as well as to various institutional reforms and are briefly described below, along with on-going reform projects.

Medium Term Fiscal Strategy

A medium term fiscal strategy has been established with a time horizon of 4 years (including the budget year), where the government’s economic policy is described emphasizing on fiscal planning. The MTFS includes the baseline scenario (no policy change scenario) as well as the after measures scenario (policy change), which includes the fiscal interventions necessary to meet the set annual fiscal targets of the period under examination. The first two years are binding on a rolling basis. The MTFS sets expenditures ceilings per Ministry, as well as balance targets for Local Governments (LGs) and Extra Budgetary Funds (EBFs) and contains analytical tables per subsector, the annual yields of fiscal interventions, as well as the consolidated picture for the General Government.

Fiscal Reporting

Since 2010 there have been major steps in improving fiscal reporting. Two monthly reports are published, one containing data on state budget execution, while the other providing data for the whole general government on a consolidated cash basis, along with data on arrears of the General Government entities. This is a complete set of data that allows strict fiscal monitoring in a timely manner and at a higher frequency than required by Directive 2011/85/EU. In a similar vein, fiscal monitoring has also benefited greatly from the establishment of commitment registries in all General Government entities, which monitor the monthly evolution of payables towards third parties, their maturity and the entire payment process in its various stages.

Monitoring mechanisms

The legal framework has been significantly strengthened regarding the available mechanisms for the monitoring of budget execution of EBFs, State-Owned Enterprises (SOEs) and LGs. Entities with a budget above €10 million are monitored and a quarterly bulletin is published comparing their budget execution against the original targets set. A higher than 10% divergence requires justification and corrective actions, while sanctions may also be imposed. Especially for LGs, a separate monitoring mechanism exists in the form of the LGs Observatory, whereby a divergence from the targets for two subsequent quarters can lead to a mandatory Consolidation Programme. While subject to the Consolidation Programme, LGs are obliged, inter alia, to increase their own revenues, restrict their expenses and suspend hirings.

Cash management

The cash management framework has improved significantly given the previous fragmentation of the accounts in many different commercial banks and the existence of idle reserves that could not be properly managed at a central level in order to facilitate the State's liquidity operations. Around 2,000 accounts of the State in commercial banks have been closed down in the period 2014-2016 and their reserves have been transferred to the Single Treasury Account (STA). As far as the Central and General Government entities are concerned, most of their balances have been transferred to the Bank of Greece and are available for liquidity management through repo operations between the Bank of Greece and the Public Debt Management Agency. These developments have led to a substantial increase in the General Government liquidity that the State can access, as well as to a more efficient liquidity management that reduces the financing needs of the State.

Future steps in the context of this reform that have already started to materialize include the transfer of remaining balances that are still held in the commercial banking system, the introduction of cash flow forecasting by large General Government entities and the regular monitoring of entities' balances in the commercial banking system by the Ministry of Finance.

Payment procedure - Arrears clearance

Major steps have taken place in gradually reorganizing the entire payment procedure that was characterized by significant delays and instances of duplication of tasks, through the introduction of electronic payments from 2014 onwards and through the gradual phasing-out of ex ante audits on public spending. The last phase of this series of reforms was the transfer of all related responsibilities to the Ministries' financial services, which took effect in 1.1.2017.

The existence of delays in payments, leading to the accumulation of payables and arrears, has been a traditional deficiency in Greek PFM. The structural reasons included the cumbersome process of payments that has been described above, the shortage or misallocation of staff in several entities and the temporal pattern of the disbursements of grants from the State Budget, while the situation deteriorated dramatically when severe liquidity constraints – due to the crisis – were added to these structural issues.

As a result, the stock of arrears reached excessive levels, necessitating the implementation of two programmes for arrears clearance, first in 2013-2014, and then from July 2016 onwards. The clearance of arrears that has been accomplished so far has been based not only on ESM financing, but also on the increasing use of own resources, indicating both the improved condition of public finances and the strong commitment to the elimination of arrears throughout the General Government.

Independent national fiscal institutions

In the context of the EU fiscal surveillance framework, great importance is placed on the reliability of macroeconomic forecasts underlying budgetary forecasts. The former should be produced or endorsed by independent national fiscal institutions in order to safeguard transparency and accuracy.

Two independent fiscal institutions have been established in Greece. The first is the Parliamentary Budget Office that was established in 2010. The PBO reports to the President of the Hellenic Parliament and its operation is determined through a Special Regulation. The PBO's responsibilities include the monitoring of the execution of the State Budget, the analysis and assessment of budget projections, the provision of assistance to the relevant Committees of the Parliament and the submission of reports on the observance of the medium-term fiscal targets.

The second independent institution is the Hellenic Fiscal Council (HFC), established in 2014 as an Independent Administrative Authority responsible for monitoring and assessing the macroeconomic and fiscal projections, as well as compliance to the fiscal rules that have been set with a view to attaining the medium-term fiscal targets. Specifically, the HFC assesses the macroeconomic projections on which both the annual budget and the MTFS are based, the fiscal estimations incorporated in the budget or in the MTFS, the fiscal targets set for the MTFS years and the implementation of the relevant policies. Furthermore, the HFC monitors compliance with numerical fiscal rules incorporated in the national fiscal framework, in order to achieve the MTO. The HFC publishes at least twice a year (aligned with the European semester) a report explaining the results of its assessments regarding macroeconomic and fiscal projections, fiscal targets and fiscal outcomes (according to Directive 2011/85/EU and Regulations 473/2013 and 1466/97).

Chart of accounts

A major on-going reform is the new chart of accounts, designed to be implemented in all General Government entities and including an economic, an administrative and a functional classification. The new chart of accounts will replace the different arrangements that are currently in place for the State, pension funds, hospitals, LGs and public law entities. The economic classification of the new CoA has already been finalized and, along with the new administrative classification for the State, is already in use in the context of the 2019 State Budget. In parallel, the Ministry of Finance is working on the functional classification of the government’s operations, which constitutes a solid base for the transition to performance budgeting, as well as on the new accounting rules and the gradual expansion of the reform to GG entities.

The adoption of the new CoA will increase the transparency of fiscal reports and financial statements, while the use of the same economic classification for both budgeting and accounting purposes will make the information more intelligible to all interested parties by providing a common point of reference.

Spending reviews

Three spending reviews have been conducted from 2012 until 2017. The first review took place in 2012, covered the whole general government and resulted mainly to horizontal cuts of public expenditures. The second review was conducted in 2014 and focused on 6 Ministries, while the third review took place in two phases (a pilot and a full-scale phase) in 2016-2017 and accounted for the entire general government.

The performance of spending reviews has been deemed necessary both due to the general need for a rationalization of expenditure across the General Government and in an attempt to counteract the inefficiencies related to horizontal expenditure cuts in the context of the country's adjustment programme. Moreover, the results and recommendations arising out of spending reviews can be helpful, depending on the prevailing fiscal conditions, either for the realization of fiscal savings or for a desired re-allocation of spending from relatively inefficient, low priority items towards strengthening the framework for social protection or reducing the citizens' tax burden.

Since January 2018 a permanent structure has been created in the Ministry of Finance in the form of a new unit that is responsible for carrying out spending reviews of General Government entities on a regular rather than an ad hoc basis, building upon the experience gathered and the know-how developed through the reviews that have already been conducted. The operation of the new unit will ensure that there will be adequate follow-up to the fiscal savings identified in these reviews and that effort to increase the efficiency of public spending will continue.

For 2018 a more targeted spending review was initiated in three Ministries (Ministry of Health, Ministry of Culture & Ministry of Infrastructure) and the entities supervised by them. Inter-ministerial working groups were established in order to trace expenditure of low efficiency, design proposals for freeing up resources to other uses of high social effectiveness and determine indices for monitoring the proposed actions. The review continues in 2019 with the addition of the Ministry of Agriculture.

Performance budgeting

The budgeting framework in Greece is built exclusively on an economic classification referring to different types of expenditure and provides little systematic information on the efficient use of resources in different policy areas.

Although certain steps towards the introduction of a framework for performance budgeting had been made in the past, the outbreak of the fiscal crisis led to a drastic change in the priorities of fiscal policy. However, the benefits from such a reform have not been disputed and recent decisions have focused on its implementation and on the creation of a permanent structure that will be responsible for carrying it out. As a result, a new unit has been established in the Ministry of Finance with the responsibility to design the introduction of performance budgeting in both the State and General Government entities, carry out the implementation and coordinate all relevant activities and operations.

The change in the system of budget preparation and monitoring of its execution is intended to materialize in two stages over the next five years. The first stage includes the presentation of the budget in programme structure in parallel with the existing format from year 2022. The second stage refers to the preparation (in 2023) and execution of performance budgeting for the year 2024, based on the successful implementation of the accounting reform.

Annex I: Stability Programme Tables

Table 1a. Macroeconomic Prospects

	ESA Code	2018	2018	2019	2020	2021	2022
		levels	rate of change	rate of change	rate of change	rate of change	rate of change
1. Real GDP	B1*g	190817	1.9	2.3	2.3	2.1	2.0
2. Nominal GDP	B1*g	184714	2.5	3.4	3.8	3.7	3.7
Components Of real GDP							
3. Private consumption expenditure	P.3	129856	1.1	1.0	1.2	1.2	1.2
4. Government consumption expenditure	P.3	39635	-2.5	1.6	0.6	0.4	0.4
5. Gross fixed capital formation	P.51	21292	-12.2	3.9	12.9	8.0	7.9
6. Changes in inventories and net acquisition of valuables (% of GDP)	P.52 + P.53	2537	1.3	1.3	1.3	1.2	1.2
7. Exports of goods and services	P.6	64949	8.7	5.9	5.4	3.8	3.3
8. Imports of goods and services	P.7	67452	4.2	3.5	5.7	3.3	3.1
Contribution to real GDP growth							
9. Final domestic demand		-2572	-1.4	1.5	2.4	1.9	1.9
10. Changes in inventories and net acquisition of valu	P.52 + P.53	3690	2.0	0.0	0.0	0.0	0.0
11. External balance of goods and services	B.11	2503	1.3	0.8	-0.1	0.2	0.1

Table 1b. Price developments

	2018	2018	2019	2020	2021	2022
	levels	rate of change	rate of change	rate of change	rate of change	rate of change
1. GDP deflator	96.8	0.6	1.1	1.4	1.6	1.7
2. Private consumption deflator	96.7	0.3	0.9	1.3	1.5	1.7
3. HICP	101.9	0.8	0.9	1.3	1.5	1.7
4. Public consumption deflator	89.2	1.6	0.9	1.2	1.3	1.5
5. Investment deflator	96.1	0.3	1.3	1.7	2.0	1.8
6. Export price deflator (goods and services)	102.8	3.3	0.3	1.0	1.9	2.0
7. Import price deflator (goods and services)	99.7	5.3	0.0	0.9	1.9	2.0

Table 1c. Labour market developments

	ESA C	2018	2018	2019	2020	2021	2022
		levels	rate of change	rate of change	rate of change	rate of change	rate of change
1. Employment, persons		4217	1.7	1.6	1.2	1.0	0.7
2. Employment, hours worked		8539635	1.5	1.6	1.2	1.0	0.7
3. Unemployment rate (%)		915	19.3	17.8	16.5	15.3	14.2
4. Labour productivity, persons		45	0.2	0.6	1.1	1.1	1.3
5. Labour productivity, hours worked		0	0.4	0.6	1.1	1.1	1.3
6. Compensation of employees	D.1	61778	3.6	4.5	3.6	3.5	3.2
7. Compensation per employee		21723	1.3	2.4	2.0	2.3	2.4

Table 1d. Sectoral balances

	ESA Code	2018	2019	2020	2021	2022
		% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
1. Net lending/borrowing vis-a-vis the rest of the world	B.9	0.0	1.3	1.8	1.9	2.5
of which						
- Balance on goods and services		-0.3	0.7	0.7	0.9	1.0
- Balance of primary incomes and transfers		-0.1	0.1	0.2	0.1	0.1
- Capital account		0.4	0.5	0.9	0.9	1.4
2. Net lending/borrowing of the private sector	B.9	-1.1	-0.3	0.7	0.7	0.8
3. Net lending/borrowing of general government	EDP B.9	1.1	1.6	1.1	1.3	1.7
4. Statistical discrepancy		0.0	0.0	0.0	0.0	0.0

Table 2a. General government budgetary prospects

	ESA Code	2018	2018	2019	2020	2021	2022
Net lending (EDP B.9) by sub-sector		levels	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
1. General government	S.13	1,991	1.1	1.6	1.1	1.3	1.7
2. Central government	S.1311	-861	-0.5	0.7	-0.1	0.0	0.5
3. State government	S.1312						
4. Local government	S.1313	544	0.3	0.1	0.1	0.1	0.1
5. Social security funds	S.1314	2,308	1.2	0.8	1.0	1.1	1.1
General government (S13)							
6. Total revenue	TR	88,625	48.0	47.8	45.9	45.1	44.2
7. Total expenditure	TE	86,635	46.9	46.2	44.8	43.8	42.5
8. Net lending/borrowing	EDP B.9	1,990	1.1	1.6	1.1	1.3	1.7
9. Interest expenditure	EDP D.41	6,159	3.3	3.1	2.9	2.9	2.9
10. Primary balance		8,149	4.4	4.7	4.0	4.2	4.6
11. One-off and other temporary measures		-601	-0.3	0.7	0.2	0.1	0.0
Selected components of revenue							
12. Total taxes (12=12a+12b+12c)		50,010	27.1	26.4	25.8	25.5	25.3
12a. Taxes on production and imports	D.2	31,570	17.1	16.7	16.3	16.0	15.8
12b. Current taxes on income, wealth, etc	D.5	18,284	9.9	9.6	9.4	9.4	9.5
12c. Capital taxes	D.91	156	0.1	0.1	0.1	0.1	0.1
13. Social contributions	D.61	26,241	14.2	13.8	13.5	13.2	12.8
14. Property income	D.4	468	0.3	0.3	0.3	0.3	0.3
15. Other		11,906	6.4	7.2	6.3	6.1	5.8
16=6. Total revenue	TR	88,625	48.0	47.8	45.9	45.1	44.2
p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)		76,251	41.3	40.3	39.3	38.7	38.1
Selected components of expenditure							
17. Compensation of employees + intermediate consumption	D.1+P.2	29,983	16.2	16.3	15.9	15.5	14.9
17a. Compensation of employees	D.1	21,818	11.8	11.6	11.3	11.0	10.6
17b. Intermediate consumption	P.2	8,165	4.4	4.7	4.6	4.5	4.3
18. Social payments (18=18a+18b)		38,061	20.6	19.6	18.8	18.2	17.7
of which Unemployment benefits		1,044	0.6	0.6	0.6	0.6	0.5
18a. Social transfers in kind supplied via market producers	D.6311, D.63121, D.63131	3,536	1.9	1.9	1.8	1.8	1.8
18b. Social transfers other than in kind	D.62	34,525	18.7	17.7	16.9	16.4	15.9
19=9. Interest expenditure	EDP D.41	6,159	3.3	3.1	2.9	2.9	2.9
20. Subsidies	D.3	1,616	0.9	1.0	0.9	0.9	0.9
21. Gross fixed capital formation	P.51	6,093	3.3	3.9	4.1	4.3	4.1
22. Capital transfers	D.9	2,242	1.2	0.6	0.6	0.5	0.5
23. Other		2,482	1.3	1.7	1.6	1.5	1.5
24=7. Total expenditure	TE	86,635	46.9	46.2	44.8	43.8	42.5
p.m.: Government consumption (nominal)	P.3						

Table 2b. No policy change scenario

	2018	2018	2019	2020	2021	2022
	levels	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
1. Total revenue at unchanged policies	88,625	48.0	47.8	46.2	45.3	44.5
2. Total expenditure at unchanged policies	86,635	46.9	46.2	44.8	43.8	42.5

Table 2c. Expenditure to be excluded from the expenditure benchmark

	2018	2018	2019	2020	2021	2022
	levels	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
1. Expenditure on EU programmes fully matched by EU funds revenue	2,105	1.1	1.9	1.6	1.6	1.3
1.a Of which investment expenditure fully matched by EU funds revenue	2,086	1.1	1.9	1.6	1.6	1.3
2. Cyclical unemployment benefit expenditure	302	0.2	0.1	0.1	0.1	0.0
3. Effect of discretionary revenue measures	523	0.3	-0.3	-0.1	-0.1	-0.1
4. Revenues increased mandated by law						

Table 3. General government expenditure by function

	COFOG Code	2017	2022
		% of GDP	% of GDP
1. General public services	1	8.3	7.5
2. Defence	2	2.5	2.2
3. Public order and safety	3	2.1	1.9
4. Economic affairs	4	3.6	3.2
5. Environmental protection	5	1.3	1.2
6. Housing and community amenities	6	0.2	0.2
7. Health	7	5.2	4.7
8. Recreation, culture and religion	8	0.7	0.6
9. Education	9	3.9	3.5
10. Social protection	10	19.4	17.4
11. Total expenditure (=item 7=23 in Table 2)	TE	47.3	42.5

Table 4. General government debt

	ESA Code	2018	2019	2020	2021	2022
		% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
1. Gross debt		181.1	170.6	163.9	157.5	153.3
2. Change in gross debt ratio		5.0	-10.6	-6.7	-6.3	-4.2
Contributions to changes in gross debt						
3. Primary balance		4.4	4.7	4.0	4.2	4.6
4. Interest expenditure	EDP D.41	-3.3	-3.1	-2.9	-2.9	-2.9
5. Stock-flow adjustment		-6.0	9.0	5.6	5.1	2.5
of which:						
- Differences between cash and accruals						
- Net accumulation of financial assets		-6.0	9.0	5.6	5.1	2.5
of which:						
- privatisation proceeds		-0.4	-0.2	-0.5	-0.1	-0.1
- Valuation effects and other		-5.6	9.2	6.1	5.1	2.5
p.m.: Implicit interest rate on debt		1.8	1.8	1.8	1.8	1.9
Other relevant variables						
6. Liquid financial assets						
7. Net financial debt (7=1-6)						
8. Debt amortization (existing bonds) since the end of the previous year		1.1	4.6	0.7	2.1	2.4
9. Percentage of debt denominated in foreign currency		4.0	3.1	2.2	1.4	0.6
10. Average maturity		18.2	21.1	21.0	21.0	21.0

Table 5. Cyclical developments

	ESA Code	2018	2019	2020	2021	2022
		% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
1. Real GDP Growth		1.9	2.3	2.3	2.1	2.0
2. Net Lending of general government	EDP B.9	1.1	1.6	1.1	1.3	1.7
3. Interest expenditure	EDP D.41	3.3	3.1	2.9	2.9	2.9
4. One-off and other temporary measures		-0.3	0.7	0.2	0.1	0.0
4.a Of which one-offs on the revenue side: general government		0.5	0.7	0.2	0.1	0.0
4.b Of which one-offs on the expenditure side: general government		-0.8	0.0	0.0	0.0	0.0
5. Potential GDP growth (%)		-0.8	-0.3	0.0	0.1	0.2
contributions:						
- labour		-0.2	-0.1	-0.1	-0.1	-0.1
- capital		-0.3	-0.1	0.0	0.0	0.1
- total factor productivity		-0.3	-0.1	0.1	0.2	0.2
6. Output gap		-6.0	-3.8	-1.9	-1.3	-0.6
7. Cyclical budgetary component		-3.2	-2.0	-1.0	-0.7	-0.3
8. Cyclically-adjusted balance (2 - 7)		4.2	3.6	2.1	1.9	2.1
9. Cyclically-adjusted primary balance (8 + 3)		7.6	6.7	5.0	4.8	5.0
10. Structural balance (8 - 4)		4.6	2.9	1.9	1.8	2.0

Table 7. Long-term sustainability of public finances

	2020	2030	2040	2050	2060
	% of GDP	% of GDP	% of GDP	% of GDP	% of GDP
Total expenditure	44.4	41.6	42.5	42.7	41.9
Of which: age-related expenditures	22.5	20.6	21.5	21.6	20.8
Pension expenditure					
Social security pension	14.1	12.3	13.1	12.7	11.7
Old-age and early pensions	11.0	9.4	10.3	10.2	9.4
Other pensions (disability, survivors)	3.2	2.9	2.8	2.6	2.4
Occupational pensions (if in general government)					
Health care	5.1	5.5	5.9	6.2	6.3
Long-term care (this was earlier included in the health care)	0.1	0.1	0.1	0.2	0.2
Education expenditure	3.0	2.6	2.3	2.4	2.5
Other age-related expenditures	0.2	0.1	0.1	0.1	0.1
Interest expenditure					
Total revenue	45.4	44.7	44.7	44.6	44.6
Of which: property income					
Of which: from pensions contributions (or social contributions if appropriate)	7.4	7.6	7.6	7.5	7.5
Pension reserve fund assets					
Of which: consolidated public pension fund assets (assets other than government liabilities)					
Systemic pension reforms18					
Social contributions diverted to mandatory private scheme					
Pension expenditure paid by mandatory private scheme					
Assumptions					
Labour productivity growth	-0.4	0.8	1.6	1.9	1.7
Real GDP growth	-0.3	0.5	0.8	1.1	1.3
Participation rate males (aged 20-64)	81.9	82.9	84.8	86.2	85.6
Participation rates females (aged 20-64)	67	71.5	74.2	76.2	75.9
Total participation rates (aged 20-64)	74.3	77.1	79.5	81.3	80.9
Unemployment rate	16.5	11.2	9.5	7.8	7.8
Population aged 65+ over total population	22.8	27.4	32.9	36.5	35.4

Table 7a. Contingent liabilities

	2018	2019
	% of GDP	% of GDP
Public guarantees	4.7	3.9
Of which: linked to the financial sector	1.3	0.8

Table 8. Basic assumptions

	2018	2019	2020	2021	2022
Short-term interest rate (annual average)	-0.3	-0.3	-0.2	0	0.1025
Long-term interest rate (annual average)	1.1	1	1.3	1.5	1.6
USD/€ exchange rate (annual average)	1.18	1.13	1.13	1.13	1.13
Nominal effective exchange rate	4.84	-1.56	-0.12	0	0
(for countries not in euro area or ERM II) exchange rate vis-à-vis the € (annual average)					
World excluding EU, GDP growth	3.9	3.6	3.8	3.8	3.8
EU GDP growth	1.9	1.5	1.7	1.6	1.6
Growth of relevant foreign markets	3.5	2.5	3.1	3.2	3.2
World import volumes, excluding EU	4.8	3.4	3.7	3.8	3.8
Oil prices (Brent, USD/barrel)	71.5	65.5	65	64.4	64.2

Annex II: Opinion of the Hellenic Fiscal Council

The Hellenic Fiscal Council's Opinion on the Macroeconomic Forecasts of the Stability Program 2020-2023

EU Regulation no. 473/2013 Article 4(1), requires that the macroeconomic forecasts on which the Stability Program is based, have been endorsed by an independent national institution. The Hellenic Fiscal Council (hereafter - the Council) provides an evaluation based on three elements: a comparison between the Ministry of Finance's (hereafter - MoF) macroeconomic forecasts and the Council's short term and medium term macroeconomic projections; consideration of the latest available forecasts from a number of domestic and international institutions; estimates of the overall performance of the Greek economy in the coming years.

The Council endorses the set of macroeconomic forecasts since they are within an acceptable range in the light of the information currently available.

Table 1: Macroeconomic forecast indicators endorsed by the Council (at constant 2010 prices)

GDP and its components (%, y-o-y)	2019	2020	2021	2022	2023
Gross domestic product	**2.3%**	**2.3%**	**2.1%**	**2.0%**	**1.9%**
Private consumption	1.0%	1.2%	1.2%	1.2%	1.1%
Public consumption	1.6%	0.6%	0.4%	0.4%	0.3%
Gross fixed capital formation	3.9%	12.9%	8.0%	7.9%	7.0%
Exports of goods and services	5.9%	5.4%	3.8%	3.3%	3.1%
Imports of goods and services	3.5%	5.7%	3.3%	3.1%	2.8%

Source: Stability Program of Greece, April 2019.

During the last two years, Greek economy recovered from a deep recession where the GDP recorded a contraction of approximately 26% (2007-2016). There are indications that the positive momentum will be maintained and the economy may expand at a similar modest pace in the coming years. The international markets seem to adopt a positive outlook for the Greek economy, a fact that is reflected on the significant reduction of the Greek government bond yields.

The MoF baseline scenario for GDP growth during the period 2019-2023 is within acceptable limits. Furthermore, the MoF macroeconomic forecasts are largely in line with the forecasts provided by the European Commission and other institutions (IMF, OECD, Bank of Greece) for 2019 and 2020 (see table 2).

Table 2: Forecasts of key macroeconomic indicators by domestic and international institutions

Macroeconomic Forecasts	2019	2020	2021	2022	2023
Real GDP growth (%, y-o-y)					
MoF (Apr. 2019)	2.3	2.3	2.1	2.0	1.9
BoG (Apr. 2019)	1.9	n.a.	n.a.	n.a.	n.a.
EC (Feb. 2019)	2.2	2.3	n.a.	n.a.	n.a.
IMF (Apr. 2019)	2.4	2.2	1.6	1.2	1.2
OECD (Nov. 2018)	2.2	2.1	n.a.	n.a.	n.a.
EBRD (Nov. 2018)	2.3	n.a.	n.a.	n.a.	n.a.
Nominal GDP growth (%, y-o-y)					
MoF (Apr. 2019)	3.4	3.8	3.7	3.7	3.7
EC (Nov. 2018)	3.2	3.3	n.a.	n.a.	n.a.
IMF (Apr. 2019)	3.4	3.5	3.3	2.8	3.0
OECD (Nov. 2018)	3.0	3.1	n.a.	n.a.	n.a.
Inflation / HIPC (%, y-o-y)					
MoF (Apr. 2019)	0.9	1.3	1.5	1.7	1.7
BoG (Dec. 2018)	1.1	0.9	n.a.	n.a.	n.a.
EC (Nov. 2018)	1.2	1.0	n.a.	n.a.	n.a.
IMF (Apr. 2019)	1.1	1.4	1.7	1.7	1.8
OECD (Nov. 2018)	1.0	1.1	n.a.	n.a.	n.a.
Unemployment rate (as a % of labor force)					
MoF (Apr. 2019)	17.8	16.5	15.3	14.2	13.1
BoG (Dec. 2018)	18.2	16.8	n.a.	n.a.	n.a.
EC (Nov. 2018)	18.2	16.9	n.a.	n.a.	n.a.
IMF (Apr. 2019)	18.5	17.5	16.2	15.0	14.3
OECD (Nov. 2018)	18.1	17.0	n.a.	n.a.	n.a.

Sources: 1) MoF: Stability Program of Greece, April 2018. 2) BoG: a) Report of the Governor for 2018, April 2019 & b) Monetary Policy, Interim Report 2018, December 2018. 3) EC: a) Winter forecasts, 2019 - Greece, 7 February 2019 & b) Autumn forecasts, 2018 - Greece, 8 November 2018. 4) IMF: World Economic Outlook Database, April 2019. 5) OECD: Economic Outlook, No 104, November 2018. 6) EBRD: Regional Economic Prospects, November 2018.

The forecasts for **GDP growth** are in line with the upper bound of the Council's projections for 2019-2020. These forecasts are assessed by the Council as optimistic, albeit achievable under certain conditions. The ease of the economy's expansion pace after 2020 is considered by the Council as more plausible.

Private consumption is estimated to grow on average rate at 1.2% during the 2019-2023 period. The Council considers the aforementioned growth rate as highly likely propelled by the decline of unemployment and the expectation of higher consumer confidence. The significant rise in the minimum wage may further support household spending in the coming years.

The Council supports the downward revision of the rate of growth in investments (Gross Fixed Capital Formation) for 2019 (+3.9%) compared to the targets of MTFS 2019-2022 (+12.1%) as a more realistic scenario and likely achievable. However, the pick-up of fixed investments at a rate of 12.9% in 2020 is regarded as optimistic as it relies heavily on factors such as increased bank lending to firms. The constraint of government spending on public investments is also a factor that will negatively affect fixed investments. The moderate increase of investments during the period 2021-2023 is considered as feasible.

As far as the **external balance of goods and services** is concerned, the scenario of the MoF for a growth in exports of 3.9% on the average during the period 2019-2023 is deemed feasible. During the last years the Greek economy has become more export-oriented thus the scenario for further export growth seems quite realistic. However, the scenario of a moderate growth in imports is considered as somewhat favorable considering the high marginal propensity to import of the Greek economy.

The MoF projections for a modest annually increase in **Public consumption** by 0.45% on average is highly likely since government spending will remain sustained in order to fulfill the ambitious targets for high primary budget surpluses for the next years.

The trajectory of macroeconomic developments as forecast by the MoF scenario is subject to uncertainty and to a range of risks that may result in outcomes across a spectrum of metrics that may be materially different from the projections. Specifically:

- The possible slowdown of the European economies, which may negatively affect the Greek exports of goods to the European countries and may ease the tourism revenue growth.
- The risk of an escalation of the protectionist stance present in major economies with adverse impacts on world trade.
- The risk of increased financial instability in Europe due to a “no-deal Brexit” withdrawal of the United Kingdom from the European Union.
- The high ratio of non-performing loans in the domestic banking system, which on the one hand negatively affects the banks' capital adequacy and profitability and on the other hand, restrains the amount of credit that can be channeled to Greek firms and households.
- In the long run, unfavorable demographic developments and the migration flows of the Greek citizens abroad (the so-called “brain drain”) may have negative repercussions on the evolution of labor force and unemployment in Greece, as well as on the evolution of the share of labor to total output. These factors may also affect the contribution of labor to the formation of the Greek potential output.

A more extended assessment will be published in the Council’s forthcoming opinion about macroeconomic and fiscal forecasts of the MTFS 2020-2023, in May 2019. A detailed discussion of the endorsement process and an assessment of the macroeconomic projections will be provided in the Council’s forthcoming Semi-Annual Report, which is scheduled for publication at the end of May 2019.

The President of the Board of Directors
Prof. Panagiotis Korliras