

# Yannis Stournaras: The Greek economy 10 years after the crisis and lessons for the future both for Greece and the Eurozone

Speech by Mr Yannis Stournaras, Governor of the Bank of Greece, at the European Court of Auditors, Luxembourg, 28 June 2019.

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Ladies and gentlemen,

*It gives me great pleasure to be here today. The European Court of Auditors (ECA), representing the interests of the European taxpayer, has a key role to play. It is responsible for checking whether the European Union spends its money in accordance with the rules and regulations of the EU budget and for the purposes for which this money is intended. To this end, besides its other activities, the 2017 ECA special report on the Commission's intervention in the Greek financial crisis provided us with invaluable lessons about the design of such support programmes and about the remaining challenges for the Greek economy. Benefiting from the insights of this report, I will present to you my own views on the state of play in the Greek economy 10 years after the crisis and on the lessons to be learned for Greece and the Eurozone.*

## 1. Brief overview and lessons from the Greek crisis

In Greece, the sharp deterioration in the fiscal and the macroeconomic environment in 2008 and 2009, and the subsequent downgrades of sovereign debt and rising sovereign spreads, cut off the Greek sovereign and banks from international capital and money markets. Substantial deposit withdrawals and extremely tight liquidity conditions put strain on the banking sector. An EU-IMF financed economic adjustment programme was initiated in 2010, aimed to correct the imbalances.

The crisis has taken a heavy toll on output, incomes and wealth. Between 2008 and 2016, Greece lost over one fourth of its GDP at constant prices, and the unemployment rate rose by nearly 16 percentage points. Furthermore, GDP per capita at purchasing power parity declined to 67.4% of the EU average in 2018, down from 93.3% in 2008. Meanwhile, there was a large brain drain and massive underinvestment, with immeasurable economic and social consequences.

The deterioration in the macroeconomic environment and the slide of the GDP growth rate into negative territory raised the debt-to-GDP ratio to unsustainable levels despite the fiscal consolidation and caused debt-servicing problems for households and businesses. As a result, non-performing loans (NPLs) rose substantially, weakening banks' asset quality, thus making it difficult for banks to finance the real economy. Resolving the Greek crisis took eight years, three economic adjustment programmes, major debt restructuring and three rounds of bank recapitalisation.

Several factors can explain the length and depth of the Greek crisis:

**First**, the size and speed of fiscal consolidation were unprecedented. This primarily had to do with the fact that the initial macroeconomic imbalances were much higher in Greece than in other Member States under financial stress.

Second, the fiscal multipliers turned out to be higher than initially anticipated, aggravating the recession. As a result, the economy was soon caught in a vicious circle of austerity and recession.

**Third**, given the size of the initial fiscal imbalances, more emphasis was initially placed on tax hikes rather than expenditure cuts, growth-enhancing reforms, privatisations, tackling tax evasion

and reorganising the public sector.

**Fourth**, the idiosyncratic sequencing of structural reforms led to real wages declining more than initially planned, deepening the recession. The reform effort focused much more on the labour market than on goods and services markets. Hence, nominal wages declined faster and more strongly than prices. Households experienced a massive drop in purchasing power, which, in turn, constrained personal consumption and deepened the recession.

**Fifth**, the non-performing loans (NPL) problem proved more difficult to manage than initially anticipated. Mainly the result of economic contraction, it was further exacerbated by legislative changes such as the blanket moratorium on primary residence auctions and the abuse of foreclosure protection (under Law 3869/2010), as well as several other legal and judicial impediments. A more dynamic response during the first years of the crisis, by implementing the necessary legislative changes much earlier and introducing a centralised asset management framework for NPLs as other Member States have done, could have reduced the problem we face today.

**Sixth**, certain reforms fell behind the agreed time schedule due to several factors, including: insufficient ownership of the necessary reforms; populist rhetoric, rivalry and failure of the political parties to reach an understanding; and the resistance of various – small and large – vested interests to reform.

**Seventh**, political economy deliberations in the euro area also played their part in delaying the recovery of the Greek economy. The Eurogroup decision of November 2012 to grant further debt relief was put off for several years and was implemented only in June 2018. This undermined the growth prospects of the Greek economy and prolonged the crisis.

## 2. Progress since the beginning of the debt crisis

Despite the missteps, occasional backsliding and delays, significant progress has been made since the beginning of the sovereign debt crisis in 2010. The implementation of a bold economic adjustment programme has eliminated the root causes of the Greek crisis. It is particularly worth noting that:

- ♦ The fiscal adjustment was unprecedented, turning a primary deficit of 10.1% of GDP in 2009 into a primary surplus of 4.3% of GDP in 2018 (according to the enhanced surveillance definition). The primary surplus exceeded the programme target for the fourth year in a row.
- ♦ The current account deficit has been reduced by 12 percentage points of GDP since the beginning of the crisis.
- ♦ Labour cost competitiveness has been fully restored, and price competitiveness has recorded substantial gains since 2009.
- ♦ A bold programme of structural reforms was implemented, covering various areas, such as the pension and healthcare systems, goods and services markets, the business environment, the tax system, the budgetary framework and public sector transparency.
- ♦ The banking system has been restructured. Only four large banks control today over 95% of the market, as more than ten other banks have been merged or liquidated. Meanwhile, the role of the Bank of Greece was pivotal in the restructuring and recapitalisation of the banking system, as well as in the enhancement of its corporate governance. Today, banks' capital adequacy ratios stand at satisfactory levels, and their loan-loss provisions are sufficient to address potential credit risks.

Furthermore, a number of important reforms have been implemented, aiming to provide banks with an array of tools to tackle the problem of non-performing loans (NPLs), including a strengthening of the supervisory framework by setting operational targets for NPL reduction, the

creation of a secondary NPL market and the removal of various legal, judicial and administrative barriers to the management of NPLs.

These actions have started to bear fruit, as shown by the continued reduction of the NPL stock in line with the targets set. Non-performing loans amounted to €80 billion at the end of March 2019, down by €27.2 billion from their peak in March 2016. However, the NPL ratio remains high, at 45.2% in March 2019.

On account of the reforms implemented since the beginning of the crisis and the effort of enterprises to make up for declining domestic demand by exporting to new markets, following the improvement in competitiveness, openness has increased substantially, and the economy has started to rebalance towards tradable, export-oriented sectors.

- ♦ The share of total exports in GDP increased from 19.0% in 2009 to 36% in 2018. Exports of goods and services, excluding the shipping sector, have increased in real terms by 60% since their trough in 2009, outperforming euro area exports as a whole.
- ♦ The volume of tradable goods and services in the economy increased cumulatively between 2010 and 2017 by approximately 14% relative to non-tradables in terms of gross value added. The rebalancing of the economy towards the internationally tradable sectors was facilitated by increases in the relative prices and net profit margins of tradable goods and services. It is worth underlining the fact that, in 2017, the estimated net profit margins of tradables were three times higher than those of non-tradables.

Thanks to the improved economic conditions and the reforms implemented, the unemployment rate, though still high, fell to 19.2% in the first quarter of 2019, from 27.8% at the end of 2013.

### 3. The outlook of the Greek economy

Following the stagnation of 2015–2016, GDP growth turned positive in 2017 (1.5%) and picked-up to 1.9% in 2018. Recent real GDP data point to continued, albeit decelerating, expansion in the first quarter of 2019 (1.3% y-o-y). Looking forward, the **Bank of Greece expects that economic activity** will remain on a positive growth trajectory, growing by 1.9% in 2019 and 2.1% in 2020. The catching-up effect from a long depression is projected to counterbalance the negative effect of the global slowdown. Growth will be driven by robust, though decelerating, export performance; solid private consumption growth, supported by rising employment and gradually rising compensation per employee; and increased investment spending, reflecting the implementation of new investment projects, thanks to the gradual improvement in both confidence and financing conditions, as the acceleration in NPL reduction is expected to improve bank lending.

The outlook is subject to downside risks, related both to the external and domestic environment. The global growth and trade slowdown could affect export growth more markedly, while a disorderly Brexit is also a significant downside risk to the forecast. A possible sharp correction in global financial markets could increase the cost and reduce the availability of funding. There are also downside risks on the fiscal front due to ongoing court rulings on pensions cuts, which could weigh on debt sustainability. Additional risks for the budget outcome in 2019 arise from the recently implemented (May 2019) expansionary fiscal package. However, there are also upside risks relating to a possible acceleration of NPL reduction, which would improve financing conditions for companies and households, as well as to an acceleration of investment.

### 4. The Greek economy continues to face major challenges

Despite the progress made so far, major challenges and crisis-related legacies remain. For example, the European Commission, in its 2019 report for the European Semester, points out that Greece faces excessive macroeconomic imbalances. In particular, the main challenges

are:

- ♦ The high stock of non-performing loans (NPLs), which impairs banks' lending capacity and delays the recovery of investment and economic activity.
- ♦ The high public debt (whose sustainability improved significantly in the medium term with the measures adopted by the Eurogroup in June 2018) creates uncertainty about the country's ability to service its debt in the long term, raising the cost of borrowing both for the public and for the private sector, and hampering growth prospects. On top of all this, maintaining large primary surpluses over a prolonged period (e.g. 3.5% of GDP until 2022) impacts negatively on GDP growth. The restrictive effect of large primary surpluses is even more pronounced when accompanied by very high taxation, which increases the informal sector of the economy, and public investment spending under-execution.
- ♦ The still negative current account balance and the negative net international investment position.

The slow digital transformation of the economy. Based on the Digital Economy and Society Index of the European Commission, Greece for the year 2019 is ranked 26th among the 28 EU countries, which implies a high risk of technological lag and digital illiteracy.

- ♦ The still high unemployment rate, which generates inequalities that threaten social cohesion and increases the risk of human capital erosion.
- ♦ The projected demographic decline (due to population ageing and outward migration), which exerts downward pressure on potential growth.
- ♦ The multi-year recession has left an extremely large investment gap and risks permanently impairing the productive capacity of the Greek economy through a hysteresis effect. In-house estimates of the Bank of Greece indicate that the net capital stock of the Greek economy (at constant 2010 prices) declined by €65.1 billion in the period 2010–2016. In order to raise the net capital stock over the next decade to pre-crisis levels, gross fixed capital formation at constant prices needs to increase by about 10% per year by 2029. Excluding residential investment, gross fixed capital formation at constant prices needs to increase by about 5% per year by 2029.
- ♦ Without ignoring the effects of relatively low domestic demand, the higher cost of capital and funding constraints that hinder new investment, the business environment cannot be considered investment-friendly and discourages investment. This is due to the high tax rates, excessive red tape, the existence of barriers and obstacles that have proven to hamper investment, and delays in court proceedings and rulings. In this context, it should be noted that non-price competitiveness, so-called "structural competitiveness", is not only low compared to the European partners, but has in fact fallen in recent years, according to the ease of doing business index of the World Bank (October 2018), the global competitiveness index of the World Economic Forum (October 2018) and the global competitiveness ranking for 2019 of the IMD World Competitiveness Center.

## 5. The prerequisites for sustainable growth

To address the challenges facing the Greek economy, speed up the recovery and strengthen investor confidence in Greece's long-term economic prospects, economic policy should focus on the following policy actions:

1st Reducing the high stock of NPLs with the timely implementation of the systemic solution proposed by the Bank of Greece, as well as the solution proposed by the Ministry of Finance, which will supplement banks' own efforts.

2nd Reducing the primary surplus target from 3.5% of GDP to 2.2% until 2022 as well as changing the fiscal policy mix, with an emphasis on lower tax rates and higher public investment,

so as to boost the growth impact of fiscal policy. With a public debt-to-GDP ratio of 180%, higher growth (or lower interest rates) is 1.8 times more effective in reducing the debt ratio than a higher primary surplus.

3rd Broadening the scope for public-private cooperation, in line with best international practices, for example by strengthening public-private partnerships in investment, social security and healthcare.

4th Improving the effectiveness of public administration and the efficiency of state-owned enterprises.

5th Stepping up the pace of the privatisation programme and improving the management of state assets.

6th Implementing a more focused policy for **attracting foreign direct investment (FDI)**, as domestic savings are insufficient to meet the investment needs of the Greek economy. Emphasis should be placed on reducing the tax burden, improving public administration efficiency and removing major disincentives, such as bureaucracy, legislative and regulatory ambiguity, especially regarding land use, and the remaining capital controls.

7th Maintaining labour market flexibility and pursuing structural reforms in the goods and services markets in order to boost competition and increase innovation and productivity growth.

8th Improving the quality and safeguarding the independence of public institutions. Independent and well-functioning institutions enhance long-term economic growth. In this context, a **speedier delivery of justice**, legal certainty and a clear and stable legal framework are essential conditions for strengthening the public's sense of fairness and justice, for improving the investment climate and for accelerating economic growth.

**9th Enhancing** the so-called “knowledge triangle”, i.e. education, research and innovation, as well as the digitalisation of the economy by adopting policies and reforms that support research, technology diffusion, entrepreneurship and foster closer ties between businesses, research centres and universities. This would contribute to further increasing R&D spending and the ICT sector's share in GDP. However, exploitation of ICT calls for continuous development and training in new technologies, the adoption of innovative products and the enhancement of start-up entrepreneurship. Overall, sustained efforts are required to foster innovation and R&D spending in order to boost Greece's digital transformation.

## **6. The EMU dimension**

### **6.1 Progress over the past 20 years**

The euro area was quite successful during its first ten years. Real GDP per capita grew on average at par with the US, there was substantial nominal and real convergence, and the ECB was able to credibly bring inflation close to target. During the first decade of Economic and Monetary Union (EMU), the number of EMU members increased from the original 11 to 15. Moreover, the euro immediately became the second most important world currency. The euro's share in foreign currency reserves has remained broadly stable at 20% since its creation.

The low interest rate environment and easy access to credit slowed down structural reforms and led to excessive public and private borrowing. The financial crisis of 2007–2009 and the euro area sovereign debt crisis that followed, brought to the surface the flaws in the initial design of EMU. EMU lacked the tools to avert and to contain the crisis. The Stability and Growth Pact (SGP) failed to control the build-up of public debt in the pre-crisis period. There was no sufficient monitoring and control over macroeconomic imbalances, such as the evolution of the current account and private debt. The sovereign-bank “doom loop” amplified the financial crisis and the

recession. Euro area crisis management and resolution tools were poor or non-existent on account of concerns about moral hazard, and due to the lack of the appropriate institutional setting. There was no provision for risk-sharing in the initial EMU architecture. In this context, the ECB forcefully stepped in to restore market confidence, to contain the sovereign debt crisis and to support the euro area economy, by safeguarding price and financial stability.

The ECB's response provided the time required for euro area governments to take the actions necessary to strengthen the EMU. Policy actions have focused on addressing institutional weaknesses, structural fragilities and excessive risk-taking that led to the sovereign debt crisis and the negative feedback loop between sovereigns and banks, which in turn undermined euro area stability. The key initiatives were the provision of intergovernmental loans to Greece; the establishment of the EFSF, and its successor the ESM; the creation of a banking union with a Single Supervisory Mechanism and a Single Resolution Mechanism and the introduction of stricter rules on banking regulation and supervision; the establishment of the European Systemic Risk Board and the development of appropriate macro-prudential tools, which allowed greater emphasis on identifying and addressing system-wide risks; the strengthening of the SGP; the initiation of the Macroeconomic Imbalance Procedure and the European Semester. As a result of the above initiatives, all Member States that received EU-IMF assistance are back on their feet, macroeconomic imbalances have been corrected to a large extent, and growth has been restored. Economic expansion in the euro area as a whole continues, albeit at a slower pace, and EU banks have become more resilient to financial shocks over the past two years, as reflected in the results of the recent EU-wide stress tests. Moreover, EMU admitted four additional Member States in the course of the crisis years.

Notable progress was made in the June 2019 Euro Summit, where a broad agreement was reached a) on the budgetary instrument for convergence and competitiveness (BICC) for the euro area (and for ERM II Member States on a voluntary basis) and b) on **revising the ESM treaty text** to allow for a common backstop for bank resolution and an instrument of precautionary financial assistance. The Eurogroup will continue its work on both issues as a matter of priority.

## **6.2 Remaining challenges**

Despite the progress achieved so far and the good overall economic situation, the euro area faces several challenges ahead. The recovery of the euro area from the financial crisis lags behind the recovery of global competitors. This reflects weak productivity performance and a lagging behind in innovation and digital technologies. Moreover, population ageing and climate change pose serious concerns about the longer-term outlook of the euro area economy.

After the crisis, we have seen a home bias in investment and a flow of euro-area excess savings towards the rest of the world rather than within the EU (from higher to lower GDP per capita countries). This has also led to a halt in financial integration, which weakens private risk-sharing in the euro area. It is striking that in the euro area only 20% of shocks to GDP growth can be smoothed via capital markets, compared with 40% in the United States.

Economic convergence in terms of real GDP per capita among the 12 old euro area countries (EA12) has stopped since 2010. There is real divergence even if Greece is excluded. Only the new euro area Member States have showed sustained convergence. Divergence has widened also in terms of unemployment rates and in terms of income inequality indicators, such as the share of population at risk of poverty or social exclusion or the ratio of total income received by the 20% of the population with the highest income to that received by the 20% of the population with the lowest income (S80/S20 income quintile ratio), in particular among the 12 old euro area Member States.

Real divergence, the weakening of social convergence and the North-South divide due to the

sovereign debt crisis, coupled with the effect of globalisation and the digital revolution on the low-skilled and the rise in migration, have created social tensions, sparked anti-EU rhetoric and propagated mistrust towards European policies and institutions. The greatest manifestations of these have been Brexit and the rise of populist anti-EU voices and political parties across Europe. Nevertheless, according to recent surveys, more than two thirds of the euro area citizens have positive views about the euro, and trust in EU institutions at the EU-28 level has improved relative to the past.

Last but not least, the financial system continuously innovates, the work of regulators comes with a lag and shadow banks remain insufficiently monitored and under-regulated. Further challenges arise from geopolitical risks, trade disputes or even trade wars, or cyber-risks. As central banks, we have to be prepared for all contingencies.

### **6.3 Policy actions needed to deepen EMU**

Central banks are expected to continue to use the asset side of their balance sheets, as well as other tools such as forward guidance, in addition to their standard interest rate policies, as the effective lower bound will likely continue to be a binding constraint on interest rate policy in a low inflation, low interest rate environment. However, monetary policy alone cannot stabilize the economy in perpetuity. Fiscal policy should also be active in Member States with sufficient fiscal and current account space. To address the remaining challenges and to be better prepared for a future crisis, we must also take action now in order to further deepen EMU. At the moment there is no appetite for a fully-fledged political and fiscal union. However, there are important steps that we can take in order to enhance the functioning of EMU.

In the financial sector, it is a priority to complete the Banking Union by creating the European Deposit Insurance Scheme (EDIS), and the Capital Markets Union (CMU). The completion of the Banking Union will improve the stability of the banking sector by cutting the still strong bank-sovereign link. More developed and integrated capital and banking markets will improve the financing of the real economy by diversifying the sources of financing, and will facilitate private risk-sharing through the capital and credit channels. Moreover, the more risk is shared through the private channel, the less fiscal risk-sharing is needed<sup>1</sup>. However, we should make sure that the expansion of the non-bank sector does not endanger financial stability.

The integration and connection of European financial centres in the context of the Capital Markets Union becomes even more important in view of Brexit. The emphasis on sustainable finance and, recently, on the pan-European personal pension product (PEPP), and possibly the development of occupational pensions or investment savings accounts, may be a way forward in order to boost the demand for the CMU. However, the cross-border portability of these instruments is key to their success. Besides harmonisation towards best practices in securitisation, accounting, insolvency law, company law and property rights, we need to take steps that address the debt-equity bias, to improve financial literacy and revive the equity investment culture.

We must take steps to enhance public sector risk-sharing in EMU by creating a centralised fiscal stabilisation tool. The recent agreement on the new budgetary instrument is expected to enhance the resilience and adjustment capacities of euro area economies as well as the mechanisms of economic governance and strengthen potential growth. A fully-fledged central fiscal capacity could provide effective protection against asymmetric shocks triggered by regional disturbances. Building on the agreement for an instrument of precautionary financial assistance, the European Stability Mechanism could be further enhanced and eventually transformed into a European Monetary Fund that would act as lender of last resort for Member States. Besides that, the issuance of a European Safe Asset could be a promising idea as it will break the sovereign-bank nexus and strengthen the international role of the euro. A euro-denominated Safe Asset will allow the efficient functioning of the EU financial system and the development of EU capital markets,

reducing financing costs for the euro area economies. Such a policy will also increase the global relevance of European financial regulation and of the EU-based payment systems.

At the euro area level, it is essential to ensure that the economic rebalancing mechanisms (i.e. the Macroeconomic Imbalance Procedure) operate symmetrically, i.e. both for countries with external deficits and for countries with external surpluses. Symmetric adjustment to imbalances helps real convergence in a currency union. Instead, the burden of correcting external imbalances in the aftermath of the crisis was incurred primarily by “deficit countries”, mainly via the income channel and “internal devaluation”. This asymmetry in external rebalancing has contributed to the great divergence of GDP per capita between the North and the South after 2010. Therefore, the countries with large current account surpluses could consider taking steps to limit their excessive surpluses. For example, by increasing clean energy public investment, they could both increase potential growth and address climate change, and at the same time generate positive spillover effects on previously “deficit countries”.

Both at the EU and at the Member State level, action is required in order to address weak long-term growth and the lack of real convergence. Emphasis should be placed on increasing productivity growth by investing in public infrastructure, innovation, R&D and in the digital transformation of our economies. Growth policies should address climate change (e.g. by means of carbon taxes, subsidies to green innovation and targeting public procurements at “green” products), while at the same time ensuring social cohesion (by offsetting the impact on low-income households and the unemployed). Fiscal policy should promote sustainable and inclusive growth. However, fiscal positions should remain sound in order to ensure public debt sustainability and to allow for fiscal stabilisation in difficult times. A sound fiscal position would imply that both automatic stabilisers and discretionary fiscal policies could be used in a recession.

Climate change will increasingly gain prominence as a factor of relevance to monetary policy due to its potential to exert multiple impacts on firms, households, banks and, eventually, on the economy at large. It is therefore within the mandates of central banks and supervisors to ensure that the financial system is resilient to such risks. At the present time, several central banks, including the Bank of Greece and the ECB, participate in the Network for Greening the Financial System (NGFS), aiming to enhance the role of the financial system in managing climate and environmental risks, analyse the macro-financial impact of climate change and strengthen the global response to the threat of climate change. Over the past ten years, the Bank of Greece has been actively engaged and investing in research related to climate change.

A well-functioning EMU requires flexible markets for goods, services, labour and capital in order to strengthen economic resilience, i.e. to reduce vulnerability to shocks, and to prevent economic shocks from having significant and persistent effects on income and employment levels.

In the context of economic policy coordination and with a view to fostering real convergence, improvements should be made in institutional quality and good governance across euro area Member States.

National ownership of reforms and credible implementation of the country-specific recommendations are crucial for promoting economic policy coordination and for risk reduction – for example, the reduction of non-performing loans or national discretions in supervisory and resolution rules for banks. The latter will facilitate greater public risk-sharing.

In my view, what we urgently need today in the Eurozone is to promote simultaneously risk-sharing and risk-reduction measures. It is only in this way that we can transform what is, in effect, an almost non-cooperative zero-sum negotiating game into a cooperative win-win one.

## References

Bank of Greece (2019), Monetary Policy Report, July (forthcoming).

Bank of Greece (2018), Monetary Policy, Interim Report, December.  
[www.bankofgreece.gr/BogEkdoseis/Inter\\_NomPol2018.pdf](http://www.bankofgreece.gr/BogEkdoseis/Inter_NomPol2018.pdf)

Buti, M., M. Jolles and M. Salto (2019), “The euro – a tale of 20 years: The priorities going forward”, VoxEU 19 February.

[voxeu.org/article/euro-tale-20-years-priorities-going-forward](http://voxeu.org/article/euro-tale-20-years-priorities-going-forward)

Codogno, L. and P. van den Noord (2019), “The rationale for a safe asset and fiscal capacity for the Eurozone”, LSE ‘Europe in Question’ Discussion Paper Series, No 144/2019 May.

Dabrowski, M. (2019), The Economic and Monetary Union: Past, Present and Future, Study requested by the ECON Committee European Parliament.

Demertzis, M., A. Sapir and G. Wolff (2019), “Promoting sustainable and inclusive growth and convergence in the European Union”, Bruegel, Contribution to the Informal Ecofin Meeting, Bucharest 5 April.

Eurogroup (2019), Letter by the President Centeno to President Tusk on the deepening of the Economic and Monetary Union, Brussels, 15 June.

[www.consilium.europa.eu/media/39769/eurogroup-president-letter-to-euro-summit-president.pdf](http://www.consilium.europa.eu/media/39769/eurogroup-president-letter-to-euro-summit-president.pdf)

European Commission (2018), The Digital Economy and Society Index 2018, Country Report: Greece.

[ec.europa.eu/digital-single-market/en/scoreboard/greece](http://ec.europa.eu/digital-single-market/en/scoreboard/greece)

European Commission (2018), “Economic Resilience in the EMU”, Quarterly Report on the Euro Area, Institutional Paper 086, vol. 17, no 2, July.

European Commission (2018), Sustainable convergence in the euro area: A multi-dimensional process, Quarterly Report on the Euro Area, Institutional Paper 072, vol.16 no 3, February.

European Commission (2019), Spring 2019 Economic Forecasts: Growth continues at a more moderate pace, Brussels.

[ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2019-economic-forecast-growth-continues-more-moderate-pace\\_en](http://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2019-economic-forecast-growth-continues-more-moderate-pace_en).

European Commission (2019), 2019 European Semester, Country Report: Greece 2019, Including an In-Depth Review on the prevention and correction of macroeconomic imbalances, Brussels.

[ec.europa.eu/info/sites/info/files/file\\_import/2019-european-semester-country-report-greece\\_en.pdf](http://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-greece_en.pdf)

European Court of Auditors (2017), The Commission’s intervention in the Greek financial crisis, Special Report No 17, Luxembourg.

[publications.europa.eu/webpub/eca/special-reports/greek-crisis-17-2017/en/](http://publications.europa.eu/webpub/eca/special-reports/greek-crisis-17-2017/en/)

de Guindos, L. (2019), “Building the EU’s Capital Markets: what remains to be done”, speech at the Association for Financial Markets in Europe Conference, Supervision and Integration Opportunities for European and Banking and Capital Markets, Frankfurt am Main, 23 May.  
[www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190523~b1245030d5.en.html](http://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190523~b1245030d5.en.html)

de Guindos, L. (2019), “Deepening EMU and the implications for the international role of the euro”, speech at the joint conference of the European Commission and the European Central Bank on European financial integration and stability, Brussels, 16 May.  
[www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190516~1c0d48c7d8.en.html](http://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190516~1c0d48c7d8.en.html)

de Guindos, L. (2019), “Euro at 20 years: the road ahead”, address at the European Parliamentary Week, 19 February.

[www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190219~6f4c9be85b.en.html](http://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190219~6f4c9be85b.en.html)

IMD World Competitiveness Center (2019), World Competitiveness Ranking 2019, Lausanne.

[www.imd.org/wcc/world-competitiveness-center-rankings/countries-profiles/](http://www.imd.org/wcc/world-competitiveness-center-rankings/countries-profiles/)

Montoya, L.A. and M. Buti (2019), “The euro: From monetary independence to monetary sovereignty”, voxeu, 1 February.

[voxeu.org/article/euro-monetary-independence-monetary-sovereignty](http://voxeu.org/article/euro-monetary-independence-monetary-sovereignty)

Stouraras, Y. (2018), “Investment Opportunities in Greece – Investment opportunities in Greece”, speech at the “Repositioning Greece” event of Ekali Club, 17 December.  
[www.bankofgreece.gr/Pages/en/Bank/News/Speeches/Displtem.aspx?Item\\_ID=556&List\\_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b](http://www.bankofgreece.gr/Pages/en/Bank/News/Speeches/Displtem.aspx?Item_ID=556&List_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b)

Stouraras, Y. (2018), “What lies in store for the eurozone? An assessment of the Greek bailout programmes: Has the EU become wiser?”, speech at the Economist’s event: Southeast Europe–Germany Business and Investment Summit: Reassessing Europe’s priorities, Berlin, 3 December.

[www.bankofgreece.gr/Pages/el/Bank/News/Speeches/Displtem.aspx?Item\\_ID=553&List\\_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b](http://www.bankofgreece.gr/Pages/el/Bank/News/Speeches/Displtem.aspx?Item_ID=553&List_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b)

Stouraras, Y. (2019), “A Retrospective on Euro Area Monetary Policy during and after the Recent Financial Crisis”, Speech at the 23rd International Conference on Macroeconomic Analysis and International Finance, University of Crete, Department of Economics, Rethymno, 31 May.

[www.bankofgreece.gr/Pages/en/Bank/News/Speeches/Displtem.aspx?Item\\_ID=596&List\\_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b](http://www.bankofgreece.gr/Pages/en/Bank/News/Speeches/Displtem.aspx?Item_ID=596&List_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b)

Stouraras, Y. (2019), “Climate Change: Threats, Challenges, Solutions for Greece”, keynote address at the Symposium on “Climate Change: Threats, Challenges”, Solutions for Greece, April.

[www.bankofgreece.gr/Pages/en/Bank/News/Speeches/Displtem.aspx?Item\\_ID=589&List\\_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b](http://www.bankofgreece.gr/Pages/en/Bank/News/Speeches/Displtem.aspx?Item_ID=589&List_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b)

Stouraras, Y. (2019), “Lessons from the Greek Crisis: Past, present, future”, speech at the 87th International Atlantic Economic Conference, Athens 28 March.  
[www.bankofgreece.gr/Pages/en/Bank/News/Speeches/Displtem.aspx?Item\\_ID=583&List\\_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b](http://www.bankofgreece.gr/Pages/en/Bank/News/Speeches/Displtem.aspx?Item_ID=583&List_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b)

Stouraras, Y. (2019), “International economic developments and prospects of the Greek economy”, speech at an event of the Federation of Industries of Northern Greece, Thessaloniki, 15 March.

[www.bankofgreece.gr/Pages/el/Bank/News/Speeches/Displtem.aspx?](http://www.bankofgreece.gr/Pages/el/Bank/News/Speeches/Displtem.aspx?)

[Item\\_ID=582&List\\_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b](#)

Stournaras, Y. (2019), “Addressing reversal of financial integration”, aArticle published in the 100th edition of The Bulletin (OMFIF).

[www.bankofgreece.gr/Pages/en/Bank/News/Speeches/DispItem.aspx?Item\\_ID=560&List\\_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b](http://www.bankofgreece.gr/Pages/en/Bank/News/Speeches/DispItem.aspx?Item_ID=560&List_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b)

Stournaras, Y. (2019), New Year Speech to the Bank of Greece staff, Athens, January 9.

[www.bankofgreece.gr/Pages/en/Bank/News/Speeches/DispItem.aspx?Item\\_ID=559&List\\_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b](http://www.bankofgreece.gr/Pages/en/Bank/News/Speeches/DispItem.aspx?Item_ID=559&List_ID=b2e9402e-db05-4166-9f09-e1b26a1c6f1b)

World Bank (2018), Doing Business 2019: A Year of Record Reforms, Rising Influence, 31 October. [www.worldbank.org/en/news/immersive-story/2018/10/31/doing-business-2019-a-year-of-record-reforms-rising-influence](http://www.worldbank.org/en/news/immersive-story/2018/10/31/doing-business-2019-a-year-of-record-reforms-rising-influence)

World Economic Forum (2018), The Global Competitiveness Report 2018.

[reports.weforum.org/global-competitiveness-report-2018/?doing\\_wp\\_cron=1553010986.3554461002349853515625](http://reports.weforum.org/global-competitiveness-report-2018/?doing_wp_cron=1553010986.3554461002349853515625)

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<sup>1</sup> For example, in the US 80% of the adjustment to asymmetric shocks is taken care of by private market flows, with the remaining 20% of the adjustment coming from fiscal transfers from the federal government.