

Lessons from the Greek Crisis

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Key points*

- The Greek crisis has had a devastating economic and social cost.
- The economic warning signals were to a great extent ignored, not only domestically, but also by international markets, rating agencies and European official institutions, due to myopic behavior, misperceptions concerning the cohesion and solidarity within the union, political tolerance and institutional shortcomings, in addition to Greek "fake" statistics.
- Ten major policy mistakes were made either by Greece or by the official creditors that unnecessarily exacerbated and prolonged the cost and duration of the adjustment
- Eleven key obstacles and delays to reforms continue to inhibit and undermine a faster and more sustainable economic growth rate.
- It would take strong and sustainable growth rates of exports and investment for at least 10 years for delivering annual GDP growth in excess of 3%. Achieving these ambitious targets will require continued and deep pro-growth reforms, as well as commitment to fiscal, financial and institutional stability.
- The strong political ownership of the reform process, the front-loading of reforms, the timely reaction to problems and the avoidance of their spill over into other economic sectors and activities are key to effectively addressing macroeconomic imbalances and securing the conditions for strong future growth.
- The policy mistakes that led to the severe Greek crisis and hindered its efficient management must not be repeated, or else Greece risks finding itself in the same – or even worse – position again in the future.

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The Greek economic crisis has been a painful experience for society. It had been brewing for years before erupting in 2009 and continuing for eight long years (2009-2017). Its depth, duration and intensity were unprecedented and far worse than the initial expectations of creditors, the experience of any other European country that received official financial support, or any other sovereign crisis in the developed world. The Greek crisis came to jeopardize the cohesion of the European Union itself.

Greece, having exited its 3rd Economic Adjustment Programme, is now at a crucial juncture. The country is gradually moving to the right direction: economic and financial conditions are improving, the macroeconomic imbalances have been corrected, unemployment is receding, and the economy is gradually recovering.

Yet, Greece is still facing critical economic challenges, mostly inherited from the prolonged crisis. The unemployment rate is still above 18%, income and productivity growth remain sluggish, poverty levels are among the highest in the Eurozone, the high level of NPEs in the banking sector is a drag on the economy, capital controls have not been fully lifted and, while access to the financial markets is improving, there are still constraints to it. Over-taxation, under-investment, high risk premia, capital and energy costs, are also keeping a lid on economic growth.

Greece has now the opportunity – and the responsibility – to design and implement the necessary policies and growth-friendly reforms that will deliver stronger and more sustainable growth. And it should do so while still preserving fiscal and financial stability and fully restoring policy credibility and market trust.

Faster and more sustainable economic growth is a key prerequisite for healing the deep wounds inflicted by the crisis. Faster growth will improve income and wealth prospects, bolster economic confidence, strengthen social cohesion and restore economic, financial and social normality to the country. At the same time, it will upgrade Greece's position in global markets and its reputation as a respected nation in the developed world.

This study aims to shed light on a series of key economic policy issues surrounding the Greek crisis. From these, useful conclusions and lessons can be drawn about economic policy and the avoidance of unnecessary tergiversations with economic and social cost.

From the outset, let us clearly state that the Greek Adjustment Programmes were a net positive for the Greek economy. Austerity policies aiming to control fiscal profligacy and rampant wage increases were necessary, along with market and institutional reforms. Both are prerequisites for sustainable growth in the long-term and there is no way around it.

The Greek economy today is more open and competitive, macroeconomic imbalances have been corrected, labour costs are under control, markets are more efficient, and export and manufacturing activities are recovering.

Nevertheless, our position is that if the Greek state and society were from the beginning more focused at finding a solution to the problem rather than bypassing it and under a different economic policy mix, the cost of the economic adjustment would have been less and the duration of the crisis shorter while its economic, financial and social impact would have been milder.

This study examines a number of crucial issues related to the management of the Greek crisis and challenges going forward. The main themes and relevant conclusions are as follows:

First, the study provides a quantitative and qualitative overview of the crisis to demonstrate both its severity and devastating social cost through its impact on key macroeconomic, financial and social indices.

Over the duration of the downturn, the country lost more than ¼ of its GDP, the unemployment rate skyrocketed to 27.7%, private investment collapsed to 7.7% of GDP, or 1/3 of the European average, property prices dropped by 42.4%, the yield on Greece's 10-yr government bond reached an astronomical 37%, and the ASE general index collapsed by 89%. The depression led the public debt-to-GDP ratio to increase to 178%, despite the PSI, a ratio substantially higher than pre-

crisis levels. In addition, the banking system was ravaged by the impact of the severe economic downturn, enormous uncertainties, closed markets and the PSI; a huge stock of NPEs (€ 107bn) piled up and three recapitalizations totaling € 64bn were required; half of private deposits (€ 117 bn) left the banking system at the peak of the crisis and capital controls were imposed.

Second, the study reviews the root causes of the Greek crisis.

The crisis started in late 2009 when the country gradually lost access to international markets. A full-blown bankruptcy was only avoided thanks to the financial assistance provided by European Partners and the IMF, with the three Programmes totaling € 289bn, and the steady liquidity provision to Greek banks by the Eurosystem (almost € 160bn at the peak), which prevented banks' collapse. This unprecedented financial assistance was conditioned on Greece implementing an extensive programme of structural reforms and fiscal adjustment.

The Greek crisis broke out in the wake of the 2008 global financial crisis and the consequent increase in risk aversion. This trend led to the markets scrutinizing the countries' macroeconomic fundamentals, but this was only the trigger; it brought to the surface the weaknesses of the Greek economy. Therefore, the main cause of the Greek crisis was the macroeconomic imbalances that had accumulated for years. The most important of these were: 1) the accumulation of substantial budget deficits, 2) the large current account deficits, reflecting the deterioration of the country's international competitiveness, 3) the frantic credit expansion (18% annually before the crisis), which was primarily directed to private consumption, imports and investment in real estate but less so to productive investments, and 4) nominal wage increases that steadily exceeded productivity gains.

Third, the study discusses the reasons why the warning signals that were transmitted by the indicators of the Greek economy were underestimated, not only domestically, but also by global markets, rating agencies

and European institutions, and why many appeared to be caught by surprise.

Since all these imbalances were building up over a long period and were not one-off events, warning signals were indisputable, despite being blurred by fake Greek statistics. Yet, the study documents how markets continued to finance the Greek economy without interruption and at extremely attractive interest rates, and rating agencies rated Greece at investment grade, even at end 2009. This happened on the false assumption that a sovereign default of a member country within EU, an exit from the Euro, or a system-wide crisis in the Eurozone were impossible, implying that a European official lender of last resort and/or monetary authority would intervene to rescue the problem country. Additionally, Eurozone institutions also displayed rather weak reflexes, discounting the warning signs. And while fake Greek statistics were indeed a real problem, the attitude of Eurozone policy makers was also influenced by other factors such as a climate of tolerance towards imbalances, the lack of an effective EU institutional framework for oversight and fiscal governance.

Fourth, the study analyzes the critical policy mistakes that led to the crisis lasting for so long and having such a catastrophic economic, financial and social impact.

Given that the size of initial macroeconomic imbalances was enormous and unprecedented, correction could only come at a cost. Yet, the study argues that the social and economic cost and the duration of the adjustment were unnecessarily magnified due to **ten major policy mistakes and gross misperceptions** made either by Greece or the official creditors:

- I. The absence of a credible political commitment to do "whatever it takes" to address the mounting problems. In fact, large parts of Greece's political leadership never really took ownership of the reform programme while at times they directly opposed to them but without proposing a comprehensive alternative plan for the return of the country to normality. Implementation was often reluctant while, in the first semester of 2015, the

- choice of open confrontation with the lenders was made, a choice that proved very costly. Political dialogue occasionally slipped into jockeying for short-term political advantage through populist, anti-reform policies. Citizens were led to believe that other, milder options are available with less social and economic cost. Such phenomena, led to serious delays and backsliding in the implementation of reforms and required measures, and undermined market confidence in the programme.
- II. Europe was unprepared to handle the Greek sovereign crisis as it lacked the institutional and legal framework as well as the mechanism and experience to effectively deal with sovereign and banking crises within the Union.
 - III. Economic models and assumptions employed by official creditors had in certain cases serious flaws: low fiscal multipliers were used which, combined with delays and loss of confidence resulted in a gross underestimation of the recessionary impact of austerity measures; the adopted fiscal mix further exacerbated the recessionary impact. In addition, the importance of political risk was underestimated in policy design. It was not properly taken in mind that the existence of a stable government, effectiveness and independence of institutions and clear direction of economic policy are important in investment decisions; disruptions led on elevated risk premia. Finally, poor coordination, tensions and disagreements among Greece's official creditors' also critically delayed decision making over key policy initiatives or led to inefficient compromises.
 - IV. The Greek government in H1 2015, but also the creditors in other occasions, resorted to playing a "game of chicken" over a possible Grexit disregarding the negative consequences of such a dead-end strategy. As a result, the country indeed came twice close to a catastrophic exit from the Eurozone which, especially in 2015, was avoided at the last hour. While 2014 started with economic indicators recording progress, the prospect of elections increased risks and uncertainties in the markets towards the end of the year. The confrontational approach of the Greek government in 2015 (to which creditors responded with a rigid position), led to a complete loss of market access, high interest rates, inflicted a strong blow to the confidence of depositors (bank run), investors and banking stability, and contributed to the return of the country to recession in 2015 and a deterioration in public debt sustainability. By contrast, the co-operative solution of the August 2015 agreement (with the consent of most political parties), brought back the country at a stabilizing course.
 - V. The adjustment programmes initially overlooked the need for front-loaded, growth-enhancing structural reforms. Measures to fight tax evasion, liberalize markets, - especially in products & services - and reform the public administration were delayed, a fact that exacerbated the social and economic impact of the austerity measures, mainly due to the fact that the fiscal adjustment relied excessively on tax rate hikes and horizontal wage and pension cuts. Additionally the privatisations programme started with a large delay and its results are still limited.
 - VI. The fiscal and current account crisis was not contained and dealt with effectively but was allowed to spill over to the banking sector, dissolving investment and depositor confidence and turning them into major crisis accelerators.
 - VII. Greece's unsustainable public debt was not restructured in the early phases of the crisis, an initiative that could have contained debt dynamics, thereby easing the required magnitude of austerity measures. This was done, not only on the fear of moral hazard, but also for protecting European banks, which were overloaded with Greek credit exposure, and for insulating the rest of the Eurozone from contagion effects.
 - VIII. The monetary policy transmission mechanism did not work for the Euro periphery, Greece in particular, due to rigid rules and Greece's failure to participate in ECB's QE programme. Tight liquidity conditions and very high interest rates prevailed, contrary to very favorable financial conditions in the rest of the Eurozone. As a result, the monetary policy amplified the recessionary impact of fiscal consolidation instead of containing it.

- IX. The adjustment programmes failed to properly account for the negative wealth effect for households and corporates that arose from slumping property, stock and bond prices and its impact on agents' expectations and economic confidence.
- X. The long-term repercussions of the crisis on potential GDP were underestimated. Greece's pre-crisis growth model was non-viable and it was mistakenly assumed that the correction of macroeconomic imbalances would suffice for the reversal of the recessionary impact of adjustment. Yet, mistakes in the design of the programmes, along with the loss of confidence, led to a lengthy depression and thus a longer-term depreciation of the capital stock, sharp reduction of the labour force (partly due to rising migration of young Greek workers and professionals abroad) and declining total factor productivity. All these factors decisively undermine long-term growth prospects.

Fifth, having described the perils of adjustment, we now turn to its positive effect on the Greek economy, along with the challenges ahead of us. Remaining problems, which act as obstacles to growth are analyzed; resolving them is a precondition for an accelerating growth path.

Today, after eight painful years, Greece has exited the Financial Assistance Programmes and has recorded progress in key areas: Growth has returned and leading indicators are positive; unemployment is declining; the macroeconomic imbalances that led to the crisis have been largely corrected; Greece has become a more open economy; FDI is on an upward trend; Greece is gradually regaining access to the international debt market; liquidity conditions are improving; capital controls have been partly relaxed; NPEs are on a declining trend and the Greek banks successfully passed the stress tests in June 2018.

Yet, the pace of economic recovery, the improvement in personal incomes, and the gains in employment are still relatively weak. This means that key obstacles remain in place impeding faster and more sustainable economic growth. These obstacles are a mix of legacy issues from the crisis and pre-existing structural shortcomings in the

economy, which were not sufficiently dealt with in the Adjustment Programmes. The study identifies **11 Key challenges** which, if dealt with efficiently, could fuel a virtuous cycle of growth, jobs and prosperity:

- Private investment remains subdued, close to 1/3 of pre-crisis levels, with no meaningful recovery so far,
- Unemployment is still at very high levels (18% in December 2018), the highest in the Eurozone, and largely of a structural nature (youth, women and workers from decaying sectors most affected),
- Extremely high tax rates, among the highest in the Eurozone, are killing the economy by reducing agents' incentives to work, save and invest,
- High primary surplus targets (3.5% of GDP) act as a major drag on the economy,
- Unprecedented levels of NPEs in the banking sector constitute another major drag; markets remain skeptical about the banks' capital adequacy and their ability to clean-up their balance sheets,
- The quality of public services remains low, welfare policies are inefficient and the ability of the public sector to facilitate foreign and domestic investment is weak. Further rationalization and reform of the public administration is needed,
- Key reforms necessary for the creation of a friendlier business environment, privatisations and the development of a plan to commercialize public assets, are all delayed or risk being annulled/reversed; conferment of justice is slow
- Risk premia, interest rates and borrowing costs are still among the highest in the Eurozone, 250bps above Portugal in March 2019. This reflects, not only delays in structural reforms, but also market concerns regarding policy credibility, political stability and adherence to prudent fiscal policies, macro stability and competitiveness; failure to participate in ECB's QE programme from 2015 onwards also weighs,
- GDP continues to rely excessively on private consumption, (ca 68% of GDP), which in turn is maintained at its current levels via dissaving, while improvement of incomes and productivity lags behind; this is unsustainable,

- Capital controls remain in force with respect to large, international transactions, and
- Longer-term public debt sustainability is still sensitive to macroeconomic assumptions.

Sixth, the study estimates the growth rates of exports and investment that are required to deliver GDP growth in excess of 3%. Subsequently, it outlines the main policy initiatives and reforms that are necessary to achieve this ambitious growth target.

Returning to economic and social normality will require rapid economic growth in excess of 3% for many years. The study argues that achieving such an ambitious growth target will require Greece to adopt a more aggressive export- and investment-led growth model. The country cannot return to its previous credit-fueled, consumption-driven model for several reasons. Firstly, private consumption's share over GDP remains the highest in the Eurozone. Secondly, the strict surveillance in order to avoid creating fiscal and external deficits and the commitment to maintain high fiscal primary surpluses for many years restrict the space available to expand domestic demand. Thirdly and most importantly, international capital markets would not be willing to fund a new consumption-driven expansion.

The study presents a number of scenarios under which the contribution of investment and exports to GDP converges towards Euro Area averages over a 10-year time horizon. Assuming real private consumption growth of 0.5%, 1% or 1.5% per annum, exports will have to grow at a real annual rate of between 6.7-7.8%, and fixed investment at a real annual rate of between 8.4-9.5%, over the next 10 years. This would yield real annual growth in Greek GDP of 2.8-3.9%. Achieving such growth rates for exports and investment for 10 years in a row is a very demanding target if one considers the historical performance of the Greek economy. This will require bold and consistent implementation of reforms.

The goal of faster economic growth should supersede any other policy objective as faster growth is a prerequisite for creating jobs, raising incomes, creating wealth, augmenting tax revenue, funding social cohesion policies and supporting the financially weak.

The study proposes a set of policy initiatives that will contribute to this:

- Political resolve to do “whatever it takes” and support thereof with the broadest possible social and political consensus in order to achieve double-digit annual increase in gross capital formation over the next 10 years by: reducing tax rates and energy costs, improving the allocation of EU structural funds, simplifying investment licensing, accelerating privatizations, reforming public administration, accelerating justice and safeguarding political and institutional stability. The same holds for exports.
- Design policies to attract foreign direct investment and capital inflows to close the substantial gap in domestic funding and required investment,
- Fix the banking problem by rapidly resolving NPEs, restoring the confidence of depositors and investors and accelerating the return of deposits,
- Lift capital controls, by building conditions of restoration of trust,
- Implement productivity-enhancing structural reforms (boost competition, open up markets, reduce administrative burden to firms, improve zoning and land uses),
- Pursue rigorous but growth-friendly fiscal policies: lower tax rates, streamline public spending, restructure inefficient and loss-making state-owned enterprises, increase penetration of e-payments to crack down on tax evasion, broaden the tax base, accelerate privatizations and outsource selected public services where possible,
- Ease fiscal primary surplus commitments in cooperation with official creditors. This implies that the country will first demonstrate in a measurable manner its commitment to pro-growth reforms and fiscal prudence,
- Improve economic policy credibility by establishing mechanisms (e.g. constitutional provisions) to secure national fiscal and macroeconomic goals,

Seventh, the study reviews the progress that has been recorded in setting up mechanisms for the prevention and management of crises and what remains to be done institutionally at EU level.

The institutional changes that were introduced after the outbreak of the crisis (Euro Plus pact, creation of the ESM, SRM and SSM, introduction of the BRRD, initiation of a European banking union) have rendered Europe better prepared to deal with future crises. Yet, important bits are still missing: a permanent mechanism for fiscal transfers is absent, the SRF will not be fully funded before 2023, the transformation of ESM into a European IMF (mandate and tools for bailing-out both sovereigns and failing banking sectors) is still under discussion. More importantly, the common deposit guarantee will not be fully financed by the European deposit insurance scheme (EDIS) before 2024. Finally, while the EU is now better equipped to cope with crises in member-states with smaller economies, its readiness to deal with a crisis in a major economy such as Italy remains questionable, which makes markets skeptical.

To ensure the long-term stability of the single currency, the Eurozone must, not only shield itself from internal or external shocks, but also offer the prospect of growth to all its member-states and improve its cohesion.

Eighth, the study sums up the lessons learnt from the management, or rather mismanagement, of the Greek crisis.

Greece has exited the last of its bailout programmes, but it has not left all the legacy problems from the crisis behind. Decisive and timely action is required, else the country risks entering longer-term stagnation. Yet, markets remain skeptical as to the extent to which a political and social consensus has developed in Greece around a new pro-growth reform agenda. They doubt that the country has abandoned the practices of populism, nepotism, state-directed capitalism or an ideological opposition to a market-oriented economy. This concern is reflected in the risk premia the country pays today to borrow internationally. Doubts remain about whether, or whether powerful vested interests will continue to resist those reforms.

Populism, by painting an idyllic, effortless path to a successful future, delays the adoption of necessary reforms, strengthens resistance by vested interests that favour closed markets and opacity in the public sector

and increases the economic and social cost of adjustment. By contrast, strong political ownership of the reform process, front-loaded implementation, a broad social and political consensus, the education of the public about the necessary reforms and the creation of alliances of those who will benefit from them – and they are many – are key for restarting the economy, enhancing access to markets and private sector financing and consolidating the credibility of economic policy.

Utilizing lessons learned from the crisis is critical to forming policy and therefore to the future of the Greek economy within the Eurozone. Policymakers, both within Greece and in Europe, should be alert. The mistakes that led to the crisis and hindered its efficient management must not be repeated, or else Greece risks finding itself in the same - or even worse - position again in the future.

2. Greece in a nutshell

The negative publicity that Greece received in recent years due to the economic crisis has contributed to overlooking some positive fundamental characteristics of the country. Greece is a modern parliamentary democracy with a rich culture, strong traditions, history and human values. It is a member of most important international and regional organizations.

It is also a safe country with excellent climate, hospitable and friendly people. Despite its recent adventures, Greece is still a country with relatively high

per capita GDP, adequate infrastructure and, most importantly, a well-educated and multilingual workforce. Economic and geopolitical fundamentals attest that, under certain conditions, Greece has the potential to achieve rapid economic growth rates and regain its position as a significant country in the developed world. A constructive usage of lessons derived from the Greek crisis can decisively help in materialising this potential.

Table 1: Greece at a glance

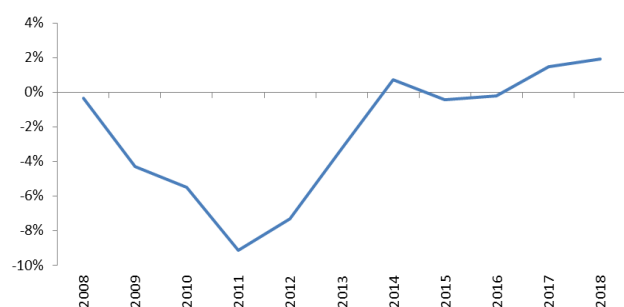
Political system: Parliamentary republic
Population: 10,677,013 (2018 estimate)
A country of significant geostrategic importance , due to its political and geographical proximity to Europe, Asia, the Middle East and Africa. Greece has a total area of 131,957 km ² and a 13,676 km of coastline (11 th largest globally); it features a vast number of islands , between 1,200 and 6,000, depending on the definition, 227 of which are inhabited.
Member of: European Union since 1 January 1981, Euro area since 1 January 2001 and Schengen area since 1 January 2000. Also a member of numerous other international institutions, including the Council of Europe, the North Atlantic Treaty Organization (NATO), the Organization for Economic Co-operation and Development (OECD), the World Trade Organization (WTO), the Organization for Security and Co-operation in Europe (OSCE), and the Organisation internationale de la Francophonie (OIF).
Current GDP: €184.7bn.
Gross National Income per capita: €16,769.
Exports of Goods and Services: €66.7bn, or 36.1% of GDP. Imports of Goods and Services: €67.2bn, or 36.4% of GDP.
Private consumption: €125.6bn, or 68% of GDP. Private Investment: €15.4bn, or 8.5% of GDP.
General Government Revenues: €86.7bn, or 48.1% of GDP (of which €70bn tax revenues). General Government Expenditure: €85.3bn, or 47.3% of GDP (of which €5.6bn interest).
Unemployment rate: 18%, or 852,000 people currently unemployed. Poverty level: 34.8%, or 3.7mln people at risk of poverty or social exclusion.
Well educated and multilingual people: University or Higher Technical School degree: 1.88mln, or 39.4% of active population (2017 data).

3. Greece: A Crisis of Unprecedented Depth, Length, Economic and Social Cost

Greece experienced an unprecedented crisis, which started in 2009 and lasted for 8 years (2009-17), challenging Greece's place in the Eurozone, as well as Eurozone's cohesion in a few occasions. The crisis resulted in devastating economic, social and financial costs for Greece. Most specifically:

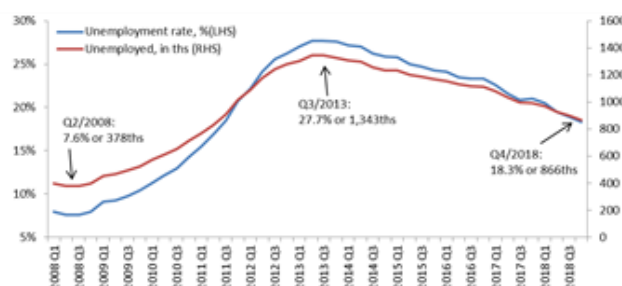
- Real GDP dropped by -26.3% cumulatively, from 2008 to 2013 (peak-to-trough), see Figure 1
- Unemployment rate increased sharply to 27.7%, from 7.6%, i.e. a cumulative increase of 20.1 pps, or 965,000 additional people unemployed, between Q2/2008 - Q3/2013, see Figure 2
- Population declined, mainly due to migration abroad (ca 500,000 people in gross terms are estimated to have fled the country in crisis years) and a low birth-rate, while poverty rates have increased, see Figure 3
- Private Investment collapsed, from 18.2% of GDP at the peak (2008), to 7.7%, at the trough (2015) i.e. down by 10.5 pps of GDP, see Figure 4
- Housing prices cumulatively declined by 42.4% between Q3 2008 – Q3 2017 (Figure 5), due to the contraction in disposable incomes, the increase in unemployment, limited access to credit, wealth effects from the decline stock and bond prices, and excess supply of residential properties; the latter was reinforced by the sharp rise in NPEs, which led to liquidations.

Figure 1: Real GDP, YoY %, 2010 constant prices



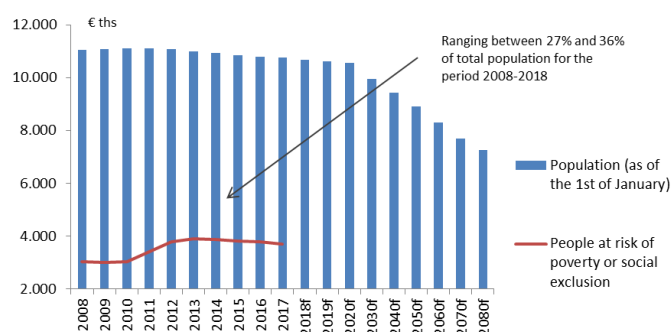
Sources: Elstat, Eurobank Research

Figure 2: Unemployment rate, seasonally adjusted data



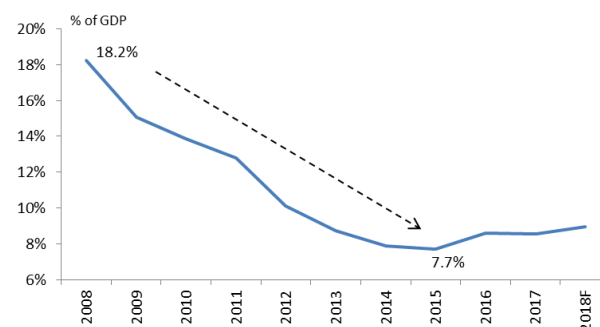
Source: Elstat

Figure 3: Population & Poverty rate



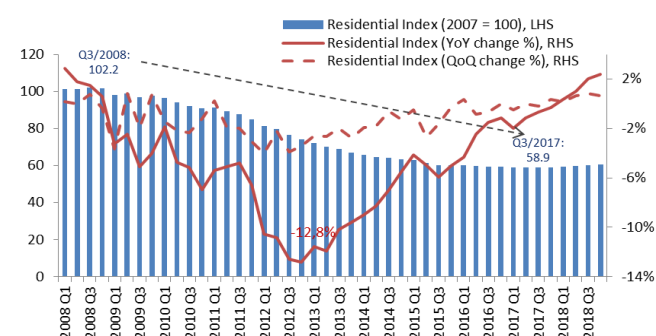
Source: Eurostat

Figure 4: Private Investment, as % of GDP



Sources: Ameco, Eurobank Research

Figure 5: Residential Property Prices Index, 2007=100

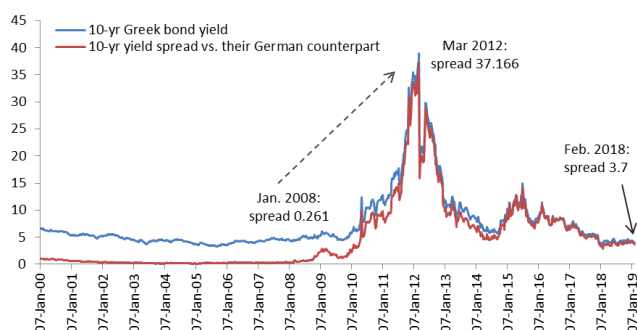


Sources: Bank of Greece, Eurobank Research

Loss of market trust and wealth effects: recurrent uncertainties and risks and the talk of a Grexit in particular, exacerbated the economic climate beyond what could be deemed unavoidable given the deterioration of fundamentals. This augmented the decline of investment and consumption, cut off access to markets, caused waves of deposit outflows and a skyrocketing of interest rates. Regarding the stock market and the funding cost of the sovereign in particular:

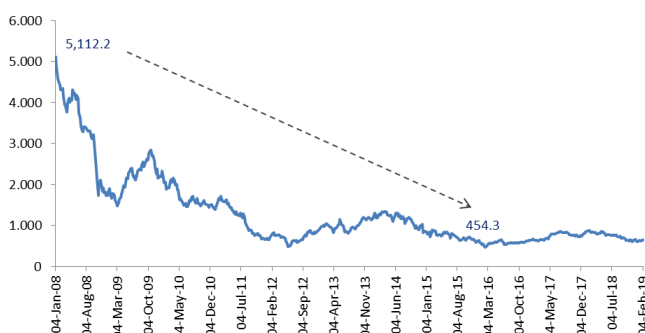
- 10-yr Greek Government Bond risk premia spread vs German Bonds skyrocketed to 37%, i.e. from 26bps in 01/2008 (pre-crisis) to 3,710bps in 03/2012 (peak), see Figure 6
- ASE General Index collapsed by 89%, or 4,658 points from 01/2008 (pre-crisis) to 02/2016 (trough), see Figure 7

Figure 6: 10-yrs Greek Government Bond yield and risk premia spread vs German bonds, Weekly data



Source: Thomson Reuters

Figure 7: Athens Stock Exchange General Index, Weekly data



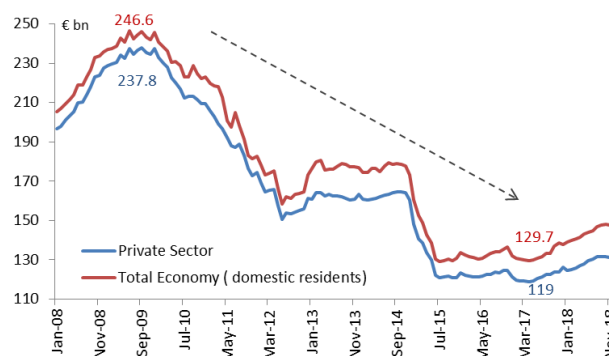
Source: Thomson Reuters

These developments caused strong negative wealth effects and massive down pricing of real assets and, hence, a deterioration in the level of economic activity (second-round effects), thereby exacerbating the crisis. The loss in market trust is a difficult to quantify factor, yet it produces real repercussions that exceed the duration of the crisis.

Banking sector: in contrast to what happened in other countries, the crisis in Greece did not stem from the financial sector, but rather from unprecedented fiscal and external imbalances. Therefore, the financial sector initially remained relatively unscathed. However, the multi-year recession contributed to the spillover of the crisis to the financial sector via (1) the decline of disposable incomes, (2) the increase of unemployment, (3) the loss of confidence and Grexit-related fears and (4) losses incurred by the PSI. Therefore, the banking sector eventually became part of the problem, further magnifying the recession:

- Massive deleveraging and loss of deposits; private sector total loans declined by € 83bn, almost half of total deposits left the banking system, and interbank and capital market access was also completely lost. More specifically, total deposits cumulatively declined by 47.4% (€117bn) from peak (06/2009) to trough (04/2017), while private sector deposits declined by 50%, from peak (09/2009) to trough (04/2017), see Figure 8

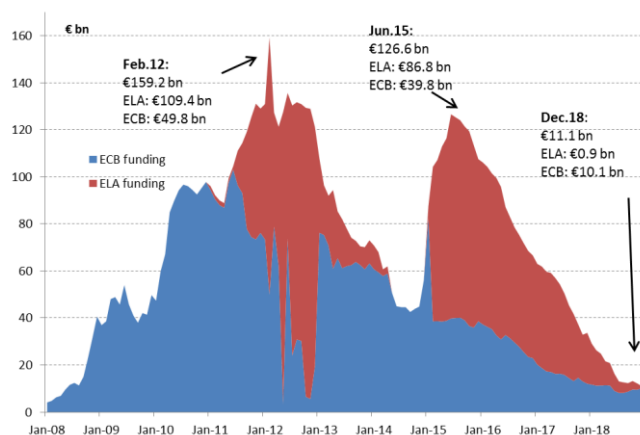
Figure 8: Deposits, Total economy & Private Sector



Source: Bank of Greece

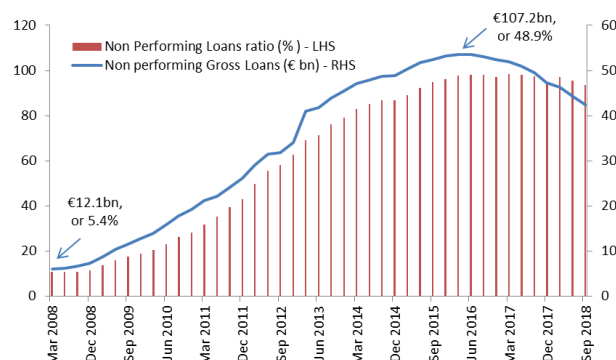
- Eurosystem funding reliance (ELA+ECB) reached unprecedented levels of almost €160bn (over 80% of GDP) at the peak of the crisis, see Figure 9
- NPLs¹ of the Greek banks increased by €95,1bn or 788.3% from March 2008 to March 2016, to reach at peak a record €107.2 bn or 48.9% of total loans, by far the worst performance in the Eurozone, see Figure 10
- The four systemic banks underwent four stress tests and three rounds of recapitalization since 2010 (in April 2013, April 2014 and November-December 2015), to cover losses of € 28.2bn from Greek Sovereign bonds write-down (the PSI) and loan losses from the depression. Capital injected in the four significant banks totaled € 50.6bn; including non-core banks of the first recapitalization, total capital raised stood at €64bn, see Figure 11. Previous shareholders were wiped out but also private sector contribution of the first two recaps (€13.3bn) was heavily diluted by subsequent capital increases.
- Market capitalization of the banking sector decreased by 98.9%, cumulatively from Nov. 2007 (peak) to Dec. 2015 (trough), see Figure 12

Figure 9: Dependency on the Eurosystem (ELA+ECB) for Liquidity



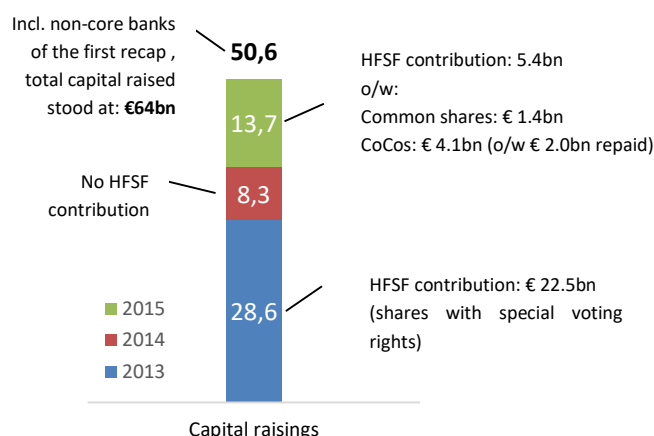
Source: Bank of Greece

Figure 10: Evolution of Non Performing Loans (Gross) of Greek Banks, quarterly data



Source: Bank of Greece

Figure 11: Capital raisings of the 4 Greek Significant banks (€ bn)



Sources: Bank of Greece, HFSF Annual Financial Report for 2013

Figure 12: Greek banking sector's market capitalization



Source: Bloomberg

¹ NPEs, which have a broader definition than NPLs, only started being reported in 2016.

4. The Causes of the Greek Crisis

The turmoil in global financial markets in the aftermath of the global financial crisis of 2008 increased nervousness and motivated market participants to scrutinize countries' fundamentals. In such an environment, Greek vulnerabilities, which were not dealt with effectively and timely, were exposed. In other words, co-ordination of markets on the bad equilibrium due to the global risk aversion was only the trigger; the underlying causes of the Greek crisis were macroeconomic imbalances, which were building up for years in Greece after Euro adoption. These underpinnings are briefly reviewed in this section.

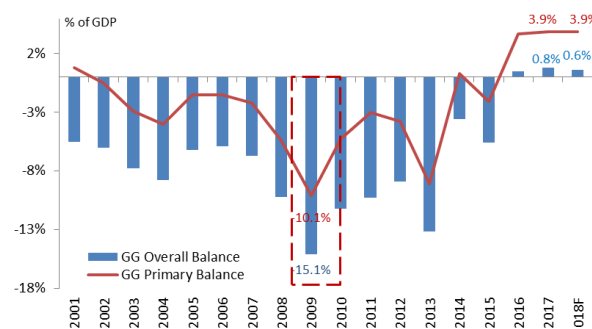
4.1. Sizable fiscal imbalances

Sizable fiscal imbalances were accumulating in the years before the crisis, with fiscal spending growing out of control. A huge deterioration of the general government overall and primary balance was recorded since the adoption of the Euro and culminated in 2009 (see Figure 13):

- The GG Overall Balance deteriorated by 9.6pps of GDP (from -5.5% to -15.1% of GDP)
- The GG Primary Balance deteriorated by 10.9pps of GDP (from 0.8% to -10.1% of GDP)
- The cyclically adjusted Balances (based on full employment GDP), overall and primary, deteriorated by 8.7pps and 10.4pps of GDP, accordingly. This shows that, overall, the fiscal derailment was not the result of a stagnating economic environment

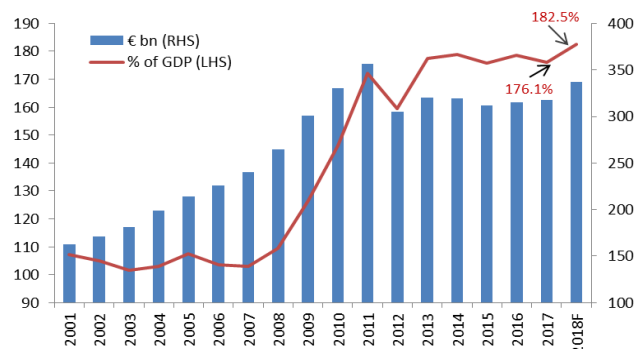
As a consequence, the GG gross public debt rose sharply from 2001 to 2011,² with a cumulative increase by €193.3bn, or by 118.6% (or by 65pps of GDP); most of the deterioration was recorded in the period 2006-2011 (see Figure 14).

Figure 13: General Government overall and primary fiscal balances as % of GDP (in ESA-2010 terms)



Source: Ameco

Figure 14: General Government Gross Debt, as % of GDP (in ESA-2010 terms)



Source: Ameco

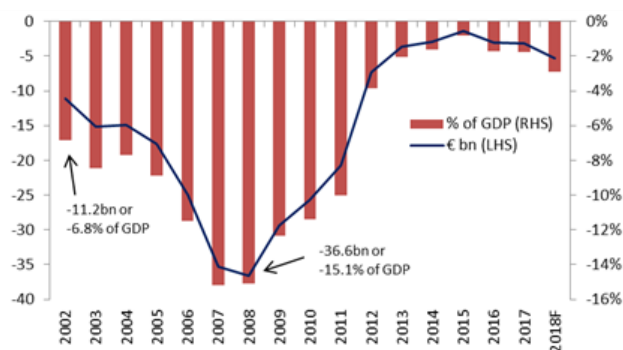
4.2. Huge Current Account imbalances and deterioration in international competitiveness

In parallel to the accumulation of fiscal deficits, huge Current Account imbalances of comparable size were also accumulating, sketching a picture of twin deficits. In this sense, the Greek crisis can be viewed as a story of loss of international competitiveness, which was building up for years, with the negative contribution of the external sector being compensated for by fiscal expansion. The latter fuelled further competitiveness losses and external deficits and so on. The current account deficit reached 15.1% of GDP in 2008, with a cumulative deterioration from 2002 to 2008 of €25.4bn or 8.3pps of GDP (see Figure 15).

² Although in volumes public debt peaked in 2011, before the PSI, as a percentage of GDP it continued to rise, mainly due to the collapse

of the denominator of the ratio (GDP) and the still negative overall balance.

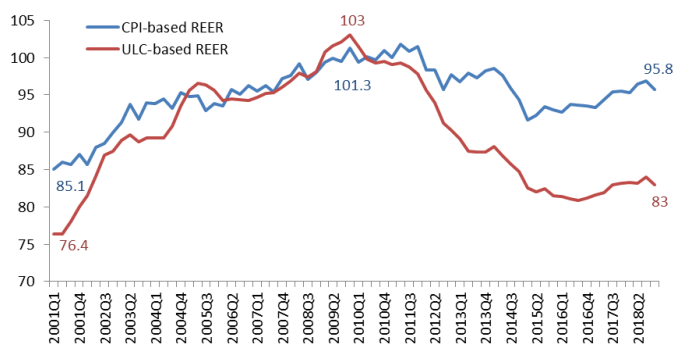
Figure 15: Current Account



Sources: Bank of Greece, Ameco (for 2018 estimation)

Figure 16: CPI- & ULC-based REER vs. 37 Trading Partners

Index decline (increase) signifies improvement (deterioration), 2010=100



Source: Eurostat

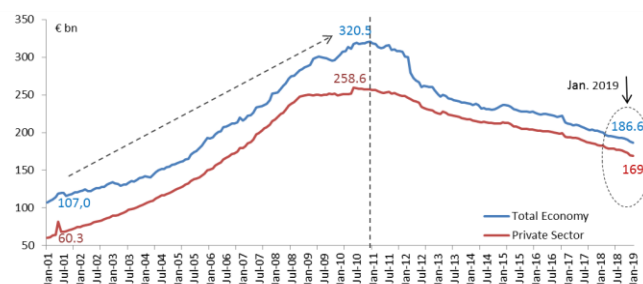
Competitiveness was steadily deteriorating in those years (see Figure 16). While the measure based on CPI (vis-à-vis 37 main trading partners) recorded a cumulative deterioration of 19.1% (from 85.1 to 101.3) between Q1 2001-Q4 2009, the measure based on unit labour costs deteriorated by 34.8% (from 76.4 to 103). In other words, labour costs were rising more rapidly than prices in comparison to peers.

4.3. Rampant credit expansion fueled domestic demand

Credit expansion was growing at 18% annually before the crisis, thereby fueling consumption, imports and wage increases. At the same time, labor productivity was lagging behind, growing less quickly than compensation per employee. More specifically (see Figures 17, 18 & 19):

- Cumulative total credit expansion of €213.5bn, or 200%, was recorded from 01/2001 to 12/2010 (peak)
- This mainly concerned the private sector (as the Sovereign's borrowing was mostly external): the cumulative private sector credit expansion was €198.3bn, or 329%, from 01/2001 to 07/2010 (peak)
- Cumulative increase in real compensation per employee (based on persons) from 2001 to 2007 (peak) was 20.6%
- This exceeded the cumulative increase in real labor productivity index per person, which was 14.5% from 2001 to 2007 (peak). Even that productivity increase was, to a great extent, not genuine, but due to an increase in the nominal value of the production of the non-tradables sectors (Balassa-Samuelson – type effect), which in turn was related to the credit expansion itself
- This upsurge of non-tradeables was evident in the high and increasing shares of imports and total consumption over GDP: from 29.2% in 2004 to 36% in 2008 for imports, and from 83.2% in 2004 to 91.4% in 2009 for total consumption.

Figure 17: Credit Expansion, Total Economy and Private Sector



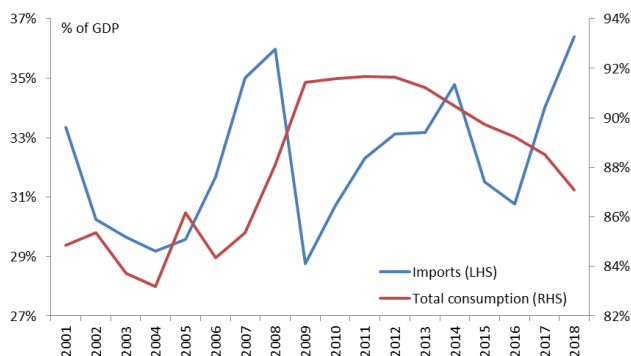
Source: Bank of Greece

Figure 18: Real Labour Productivity per person and Real Compensation per employee Index, 2001=100



Sources: Eurostat, Eurobank Research

Figure 19: Imports and total consumption, as % of GDP



Sources: Ameco, Eurobank Research

A large part of this expansion was funded by international capital markets. It is estimated that in the period 2001-2009, ca €400bn of capital inflows took place in Greece. This amount was borrowed at an amazingly low cost, only a few bps spread over Germany's respective costs. Out of these ca €400bn:

- ca €200bn went to the State to finance fiscal deficits and substitute domestic funding with international sources
- ca €80bn went to banks to fund the difference between total loans and deposits; this amount, in turn was mostly directed to finance private spending and credit expansion (given that the State was largely financed internationally) and,

to some extent, expansion of the Greek banks to Southeastern Europe

- ca €80bn concerned stock market capital raising by Greek firms,
- ca €40bn concerned corporates' direct borrowing from international capital markets

The aforementioned analysis shows that the lion's share of this €400bn was directed to domestic demand (consumer lending, imports and real estate funding in particular) and not to uses that expand productive capabilities. It is indicative³ that, between 2001-2009:

- private consumption grew by €61.1bn
- imports increased by €17.5bn
- public consumption increased by €26.9bn
- Residential real estate increased by €3.5bn⁴ but,
- investment in equipment increased by only €5.2bn and
- investment in non-residential construction increased by only €1.4bn

Therefore, Greece lost a unique historic opportunity in the previous decade to utilize this uninterrupted and low-cost access to international capital markets in a way that would have transformed its potential GDP in the long-term, creating sustainable jobs, income and wealth.

5. Should the Greek crisis be a surprise? Not really...

As explained, the realization by international markets of imbalances in the Greek economy during 2009, led to an increasing anxiety in the last part of the year. However, and while macroeconomic numbers continued to deteriorate and imbalances to grow, the full magnitude of the crisis was not comprehended domestically and its impact was underestimated. Hence, proposed policy measures fell short compared to what was required in order to reverse mounting market expectations of an

³ There is not an 1-to-1 relationship obviously as: (1) foreign borrowing is a cumulative size and increases in macroeconomic measures are repeated annually and (2) part of the increase in domestic demand was financed by domestic resources. The comparison is intended as an illustration of underlying trends.

⁴ But from an already high basis as residential real estate's share in the GDP in Greece in 2001 was already 2pps higher than the Eurozone average (7.9% vs 5.9% respectively).

imminent collapse. Furthermore, domestic policy responses were delayed until GGB spreads skyrocketed in late 2009.

Finally, in the 2nd quarter of 2010, market funding dried out. Greece was left with no choice but to seek official financial support in return for committing to implementing far reaching structural reforms and measures of restoring fiscal and macroeconomic stability. Three financial assistance programs were required since 2010, entailing official sector financial assistance, namely loans of total value of €288.7bn (127.7% of GDP²⁰¹⁰ or 160.2% of GDP²⁰¹⁷), see Table 2. Official loans allowed the economy to avoid a collapse and a potential disorderly exit from the Euro, with conceivably even more catastrophic - and irreversible - consequences.

In addition to the official loans to the Greek state, the Eurosystem provided liquidity assistance to Greek banks in order for them to deal with the repercussions of deposit flight and loss of access to the interbank market. The combined exposure to the ECB and BoG's ELA⁵ culminated at €159.2bn in 2012 and again at €126.6bn in 2015. An aspect less appreciated about the Eurosystem's liquidity assistance is that its liquidity support was provided with loan collateralization for covering Target II liabilities' gap. A collapse of the country could have led to a massive transfer of control of corporate and mortgage loans to the Eurosystem with obvious devastating implications for the country. If one considers the Eurosystem's liquidity assistance along with official loans, Greece benefited from ca €448bn of official assistance at peak, an unprecedented amount for an economy of this size.

A crisis of such proportions, both in terms of its economic and social cost, as well as of the size of required assistance, raises the question of whether it could have been foreseen, and thus dealt with in early stages, in order to limit related costs.

Table 2: Euro Area, EFSF/ESM and IMF assistance for Greece

Financial assistance programmes for Greece	Disbursed (€ billion)	
1st programme	GLF (euro area)	52.9
	IMF	20.1
	Total	73.0
2nd programme	EFSF	141.8
	IMF	12.0
	Total	153.8
3rd programme	ESM	61.9
Total from euro area, EFSF and ESM		256.6
Total from IMF		32.1
Total loans disbursed		288.7

Source: European Stability Mechanism (ESM)

5.1 The bubble had been growing for years

It is evident from the aforementioned analysis that economic imbalances in Greece had been growing for years. Large fiscal imbalances and current account deficits, rapid credit expansion, nominal wage increases consistently exceeding productivity gains, consumption and imports' rapid growth, were all building up over time, rather than being one-off events.

Many analysts warned about the risks these entailed, Eurobank Research being among the first ones. Anastasatos (2008)⁶ documented the non-sustainability of the current account deficit, estimated the size of the required adjustment in competitiveness and in the structural current account, and warned of the possibility of a "sudden stop" in case of failure to act. The quantification of the recessionary impact of the adjustment proved pretty accurate, if only slightly more lenient in comparison to what actually happened in later years. Karamouzis (2009)⁷ argued for the need to change our growth model from being consumption driven, which was unsustainable, to an export and

⁵ Granting of ELA too is subject to ECB's approval if exceeding a certain limit in order to contain systemic risk.

⁶ Anastasatos, T.G., (2008), The Deterioration of the Greek Current Account: Causes, Consequences and Adjustment Scenarios, Economy & Markets (Eurobank research) Vol. III, No 6, June.

⁷ See:

<https://www.eurobank.gr/Uploads/pdf/%CE%9D%CE%AD%CE%B5%CF%82%CE%A0%CF%81%CF%89%CF%84%CE%BF%CE%B2%CE%B5%CF%85%CE%BB%CE%AF%CE%B5%CF%82EurobankEFG.pdf>

investment driven-one, in order to secure a sustainable growth path.

So, the risks should have been foreseen by markets and policy makers alike. But they were not.

5.2. The markets and rating agencies did not provide any early warning signals

Markets continued to fund the Greek economy with billions of Euros at competitive rates until late 2009, thereby facilitating the explosive increase in Greek consumption, imports and the wage boom. As evident in Figure 6, risk premia were very tight, even during 2009, when imbalances had become apparent.⁸ A possible explanation for this oxymoron is that markets were operating under the false assumption that a sovereign default within the EU, an exit from the Euro or a system-wide crisis in the Eurozone were not possible. They perceived Eurozone as a risk-free area, where a lender of last resort would always be available and therefore charged approximately the same, low risk premia to all its member-states.

In addition, rating agencies acted in a similarly myopic fashion and never alerted investors; for instance, Moody's rating for Greece was A2, investment grade, even on 22 Dec 2009 (see Table 3 for full credit rating history of Greece).

Table 3: Greece credit rating history (1999-2010)

Moody's	S&P	Fitch
16/12/2010 Ba1	2/12/2010 BB+	21/12/2010 BBB-
14/6/2010 Ba1	27/4/2010 BB+	9/4/2010 BBB-
22/4/2010 A3	16/3/2010 BBB+	8/12/2009 BBB+
22/12/2009 A2	16/12/2009 BBB+	22/10/2009 A-
29/10/2009 A1	7/12/2009 A-	12/5/2009 A
25/2/2009 A1	14/1/2009 A-	20/10/2008 A
11/1/2007 A1	9/1/2009 A	5/3/2007 A
4/11/2002 A1	17/11/2004 A	16/12/2004 A
	13/9/2004 A+	28/9/2004 A+
	10/6/2003 A+	20/10/2003 A+
	13/3/2001 A	23/10/2001 A
	24/11/1999 A-	20/6/2001 A
		21/9/2000 A-
		27/7/2000 A-
		13/3/2000 BBB+
		25/10/1999 BBB+
		10/8/1999 BBB

Sources: Rating agencies, Eurobank Research

5.3. Why did Eurozone institutions also tend to ignore the warning signals?

On the question why EU officials failed to act, the usual explanation is that of inaccuracies in reported Greek fiscal statistics. Europeans claim that they simply did not know the true magnitude of the problem. False or fake Greek statistics were indeed a real problem, yet this is only part of the answer. The warning signals of chronic imbalances, although blurred by fake statistics, were unmistakable. So, why did Eurozone officials tend to ignore them? A number of other factors also played a key role in their position:

- Political myopia in the Eurozone and a climate of tolerance towards budget deficits and deteriorating external competitiveness. It is indicative that the infringement procedure for Greece for violation of SGP rules, which was opened in 2004, closed in May 2007!
- Lack of a consistent European surveillance framework to closely monitor macroeconomic and fiscal developments. The Stability & Growth Pact

⁸ Even if one admits that fake Greek statistics masked to some extent the size of the fiscal imbalance, all remaining imbalances were out in the open.

and the Excessive Deficit Procedure failed to ensure fiscal discipline. This was not only due to shortcomings in the monitoring process, but also due to customization of rules. It is worth reminding that the first offenders of the SGP were Germany and France, and that rules were watered down at their request in March 2005

- Lack of a European fiscal governance framework, which was only put in place in 2011 as a result of the crisis (Euro Plus Pact: general framework for the implementation of structural reforms to improve competitiveness, employment, financial stability and the fiscal strength in EU countries)

6. What went wrong in the Greek case?

The cost of the Greek crisis has been grave by any metric, including a depression of epic depth and duration, unusual for any developed country in peacetime, the acute increase of unemployment and severe stress on the financial system and the social fabric. Hence, the question that is repeatedly being asked is whether this huge cost was unavoidable.

It is true that the size of initial imbalances was large and unprecedented. This meant that correction could only come at some cost whatever the policy selection. Greece was asked to simultaneously implement a very large and front-loaded fiscal consolidation, to improve competitiveness by internal devaluation, and structural reforms to open up markets, to restructure the public administration and to preserve financial stability. The internal devaluation, in the absence of an exchange rate policy tool, was necessary for the country to reclaim its price competitiveness and thus to restore viability within the single currency, in which a depreciation is not an available option. In that sense, adjustment, as painful as it was, comprised a better alternative compared to Grexit.⁹ An exit from the Euro would entail far worse – and difficult to limit or reverse – social, economic and financial disruptions and costs in the long term. These

include, not only costs of an economic nature, but also uncalculated political and geostrategic risks, as well as serious institutional and cultural setbacks. Yet, it can be argued that the costs of adjustment of the Programme were unnecessarily augmented by policy mistakes by both Greece and the official creditors, which prolonged and deepened the crisis. In this section we attempt to highlight the 10 most serious such mistakes.

(I) Low ownership of reforms in Greece led to delays and backtracking

The crisis exposed Greece's shortcomings in the institutional framework and the policymaking process, as well as the limited capabilities of the public administration to implement radical policy schemes. Yet, a factor deeper and, possibly, even more essential has been the lack of political and social resolve in Greece to take ownership of adjustment programmes and to "do whatever it takes" to exit the crisis. This lack of political will was manifested in many occasions and reflected in delays and backtracking in the regular Adjustment Programme reviews. Box 1 shows that in the three programmes, hardly any review was ever completed on time. These delays were in sharp contrast to what was observed in other Eurozone countries that went through an Adjustment Programme, a fact that seriously undermined creditors' confidence and market trust. It has to be pointed out that the creditors' side also contributed to this phenomenon with what at times seemed as a ritualistic approach to the Adjustment Programme compliance. While some think this was intended to send a message to other Eurozone countries, creditors' institutions were at times accused of not being immune to political considerations themselves. Yet, domestic factors played a critical role. Aspects of this include:

- Political and social denial of the problem in the early stages of the crisis.

⁹ For information on the Grexit: https://www.eurobank.gr/Uploads/Reports/Greece_Macro_Focus_05052015.pdf

- Fierce resistance to reforms by vested interests, especially in the implementation of privatizations and in fighting tax evasion.
- Rise of populist and short-sighted politics.
- Reluctant implementation of reforms by large parts of the political system or even open opposition to them.
- An unsuccessful confrontational negotiating stance, in the hope of a better deal, as experienced in H1 2015, which proved very costly and contributed to the country dipping into recession for the second time.
- Absence of a national reform plan that could have enjoyed broad social support.

Box 1: Delays and backtracking in programme reviews

(a): First Economic Adjustment Programme (May 2010)

	1 st review	2 nd Review	3 rd review	4 th review	5 th review
Scheduled date	In the course of Q3/2010	In the course of Q4/2010 (October)	In the course of Q1/2011	In the course of Q2/2011 (May)	In the course of Q3/2011 (August)
Realized date	August 2010	November 2010	February 2011	July 2011	October 2011

(b): Second Economic Adjustment Programme (March 2012)

	1 st review	2 nd Review	3 rd review	4 th review
Scheduled date	By end-June 2012	By end-September 2012	May 2013	By end-September 2013
Realized date	December 2012	May 2013	July 2013	April 2014

(c): ESM Stability Support Programme (August 2015)

Source: European Commission, Economic Adjustment Programmes

(II) Europe was unprepared to deal with sovereign and banking crises effectively.

When the Greek crisis erupted, no EU institutional framework was in place to deal with such a phenomenon of systemic scope. Europeans, especially Germany, reached the conclusion that Brussels had no experience in handling such a far reaching crisis and the IMF was invited to provide funding, expertise and an external validation of the Adjustment Programme.

Furthermore, a significant part of initial efforts was mainly directed towards ring fencing the rest of the Eurozone and the European banking system. In addition, building a long-term prevention framework was prioritized over dealing with the immediate repercussions of the crisis and the institutional reforms required to this end (re-organizing the fire brigade instead of putting the fire down). Box 2 illustrates that all new significant institutions and mechanisms for monitoring, support and resolution were created after the Greek crisis (and largely because of it).

Box 2: Dates of establishment of EU/EA Institutions & Mechanisms for crisis prevention and management

Institution/Mechanism	Date of establishment/implementation
European Financial Stability Facility (EFSF)	Created as a temporary crisis resolution mechanism by the euro area Member States in June 2010 .
European Stability Mechanism (ESM)	Was set up in October 2012 as a successor to the EFSF.
Single resolution mechanism (SRM)	The central institution for bank resolution in the EU, and one of the pillars of the banking union. It entered into force on 19 August 2014 , but became fully operational on 1 January 2016 .
Single Supervisory Mechanism (SSM)	One of the two pillars of the EU banking union, along with the Single Resolution Mechanism. Its main objectives are to: <ul style="list-style-type: none"> • ensure the safety and soundness of the European banking system, • increase financial integration and stability, and • ensure consistent supervision. It commenced operations on 4 November 2014 .
Bank recovery and resolution directive (BRRD)	Was adopted in spring 2014 to provide authorities with: <ul style="list-style-type: none"> • comprehensive and effective arrangements to deal with failing banks at the national level. • cooperation arrangements to tackle cross-border banking failures.
Framework for completing Banking Union in Europe	<ul style="list-style-type: none"> • Three pillars: Single Supervisory Mechanism (SSM), Single Resolution Mechanism (SRM) and the European Deposit Insurance Scheme (EDIS). • As mentioned above SSM and SRM are already in place. • Third pillar (EDIS) has yet to be fully implemented – conditional on asset quality improvement of the Eurozone banking sector.

(III) Flawed economic modelling and assumptions about political risk; internal conflicts and frictions among creditors

The modelling approach adopted by the IMF and the European Commission in the three adjustment programmes was based, in certain cases, on false assumptions. In particular, very modest fiscal multipliers were assumed in order to forecast the fiscal drag. These assumptions might have been appropriate for an open economy with flexible institutions that allow seamless transfer of resources among activities in response to changing supply and demand conditions. Yet, they were inappropriate for a relatively closed economy, as Greece was at the time, and an environment of sharply declining private economic activity, a troubled financial sector and collapsing private investment. Hence, the impact of tax increases and spending cuts on the levels of

economic activity was grossly underestimated. Box 3 shows that actual real growth in Greece during the implementation of the adjustment programmes consistently undershot creditors' initial projections. In reality, they missed the devastating impact of the austerity programme on the financial sector, liquidity and investment confidence, which amplified the negative impact of the fiscal measures, although delays in the implementation of reforms are also to blame.

In addition, the fiscal policy mix that was deployed relied too heavily on tax hikes and too little on streamlining and reducing public expenditure, privatizations, fighting tax evasion, broadening the tax base and expanding public investment to mitigate the negative impact of fiscal austerity. This further magnified the fiscal drag¹⁰ and also allowed a very slow

¹⁰ For more information see

<https://www.imf.org/external/pubs/ft/wp/2013/wp1301.pdf>

implementation of fiscal management reforms, which are crucial for the country's long-term stability.

The importance of political risk was also underestimated in policy design. It was not properly taken in mind that the public administration's capacities to implement policies were subject to constraints. Equally importantly, the pace and allocation of requested measures often exhausted the political capital of governments. The process illustrated that the existence of a stable government, effectiveness and independence of institutions, as well as a clear direction of economic policy are important in investment decisions; disruptions in those led in elevated risk premia.

Another aspect of the programme design process that has to be highlighted pertains to the repeated policy

conflicts between creditors' institutions, namely the EC, the ECB and the IMF. Their differing methodological approaches and political economy considerations resulted in - often-public - disagreements, which contributed to delayed or compromised decision-making. The involvement of too many decision makers proved to be counterproductive.

Typical examples of such differences between the European Commission / ESM and the IMF are the different public debt sustainability analyses, the required size of the banks' recapitalization, different emphasis on labour market reforms, different estimates of the fiscal gap in several programme reviews and of long-term potential growth.

Box 3: Real growth, Realizations vs Targets *

% change	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019f	2020f	2021f
First Economic Adjustment Program (1st Review, August 2010)		-4	-2.6	1.1	2.1	2.1							
Second Economic Adjustment Program (1st Review, December 2012)			-7.1	-6	-4.2	0.6	2.9	3.7					
Third Economic Adjustment Program (1st Review, June 2016)							-0.2	-0.3	2.7	3.1			
Realization	-3.1	-4.9	-7.1	-7	-3.9	0.7	-0.3	-0.2	1.4	1.9	2.3	2.2	1.6

*For comparison reasons: Realizations from 2009 to 2013 are in ESA-95 terms, while from 2014 onwards to ESA-2010 terms

Source: European Commission, Economic Adjustment Programmes

(IV) Grexit talk and collapse in market confidence and investment

The insinuation that Grexit was among the possible options in case of no agreement with the creditors was used as a tactical weapon by the Greek government in H1 2015 but also by the creditors in other occasions, with public statements to that effect. These tactics resulted in a rising fear of Grexit, which destabilized expectations and fueled uncertainties and risks, thereby exacerbating the economic, social and financial costs. The country came twice very close to Grexit indeed, especially in 2015 that eventuality was avoided at the

last hour. While 2014 started with economic indicators recording progress, the prospect of elections increased risks and uncertainties in the markets towards the end of the year. The confrontational approach of the Greek government in 2015 (to which creditors responded with a rigid position), led to a complete loss of market access, high interest rates, inflicted a strong blow to the confidence of depositors, investors and banking stability, exacerbated debt sustainability, and contributed to the return of the country to recession in 2015. By contrast, the co-operative solution of the

August 2015 agreement (with the consent of most political parties), brought back the country at a stabilizing course.

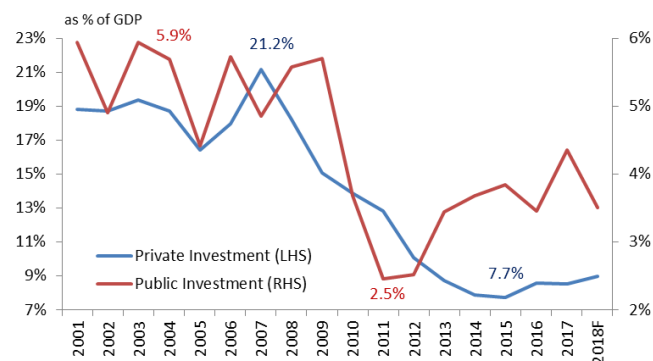
Grexit fears and the loss of market confidence contributed in the deterioration of macroeconomic and financial variables, namely the collapse of the ASE General Index, which recorded a cumulative loss of 89% from 01/2008 to 05/2012, recovered after the election of 2012 and dipped again as the election of 2015 was approaching; the 10-yr Greek Government Bond spread's increase by 36.9 percentage points from 01/2008 to 07/2012 (and again in 2015); and the loss of private deposits of € 117bn at the peak of the crisis. The fear of a Grexit culminated in H1 2015 and resulted in a bank run that necessitated the imposition of capital controls.

The loss of market trust contributed to the increase in the cost of capital (sharp increase of interest rates) and squeezed liquidity conditions, which accelerated the collapse of investment and economic activity in general. Private Investment recorded a cumulative loss of -13.4bps as a percentage of GDP from 2007 to 2015. Public investment did not compensate for the collapse of private investment, but instead it recorded a cumulative decrease of -3.4 bps (as % of GDP) from 2003 to 2012 (Figure 20), as it was not excluded from fiscal consolidation cutbacks.

This loss of investor confidence exacerbated the recessionary impact of fiscal and wage austerity measures. This is not to say that such a gigantic fiscal and external adjustment could have been achieved without a recessionary impact. Yet, the part of these developments that was attributable to confidence effects, could have been avoided.

Finally, Grexit talk led to a decline in the acceptance of the programmes by the Greek public due to the destabilization of expectations and the rise of populist views that a milder solution to the problem was available.

Figure 20: Private and Public Investment, as % of GDP



Source: Ameco

(V)_Programmes initially overlooked the need of front-loaded, growth-enhancing structural reforms

While the creditors' side insisted on expenditure cuts and – mainly – tax rate hikes for safeguarding the achievement of fiscal targets, structural reforms in the supply side of the economy and privatizations were initially neglected, taking the back seat in programme conditionality. Yet, such reforms would have been critical for boosting investment and exports and thus for mitigating the impact of fiscal and wage austerity. Even when labor market reforms were launched, product & services market reforms were delayed, especially the opening-up of markets to competition. This resulted in a substantial reduction in households' disposable incomes, efficiency losses and the alienation of the population from the notion of reforms. At a later stage, when internal devaluation was prioritized over speed of fiscal consolidation, this was done again via suppression of demand and not primarily via productivity-enhancing measures that would boost exports and investment. Finally, improvement in wage costs was partially cancelled out by increases in non-wage costs, which undermined competitiveness gains.

As far as privatizations are concerned, in the initial year of the Adjustment Programme no privatizations were scheduled; these were introduced only in the 2nd programme. Since then, several privatizations have been launched and some completed, yet even today the process encounters delays and setbacks.

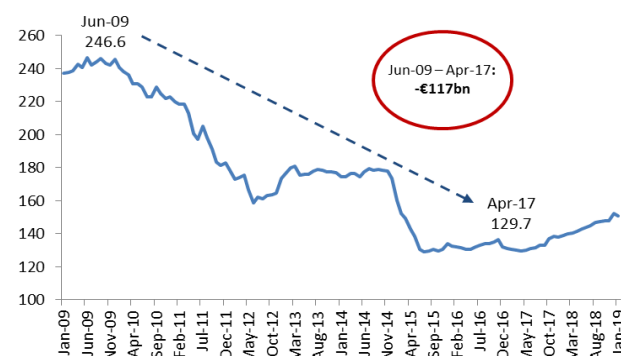
(VI) A fiscal and competitiveness crisis was allowed to spill over into the banking sector, turning it into a crisis accelerator

Financial mismanagement of the banking system allowed a fiscal/competitiveness problem to turn into a huge banking confidence problem. As a result, the banking system collapsed during the crisis and became part of the problem instead of part of the solution. Thus, fiscal austerity and wage cuts were combined with higher interest rates, negative credit expansion, tight liquidity conditions, rising NPEs and increased uncertainties and risks, all additive recessionary factors. Private investment in particular was the macroeconomic measure that was affected the most by the banking crisis.

To recap, in the course of the three Adjustment Programmes, three re-capitalization rounds of the banking system of approximately €64bn were implemented to maintain banks' stability and capital adequacy, which were adversely affected by the impact of the PSI and the huge accumulation of NPEs. System deposits dropped by ca. €117bn from peak to trough, possibly a world record, and culminated in the bank run of H1 2015. Despite improvement in recent quarters (see Figure 21), deposits remain significantly below pre-crisis levels. In addition, access to the international interbank markets was limited (albeit improving considerably recently). The combined effect of the latter two factors has been the sharp increase of the reliance of Greek banks to the Eurosystem (ECB+ELA) for liquidity, which reached € 160 bn in early 2012, improved drastically afterwards but increased dramatically again in early 2015, reaching € 126.6 bn.

The gravest legacy of the crisis for Greek banks has been the high stock of NPEs (€88.6bn in 2H18, down from €107bn at the peak) and dealing with it will require a multi-year effort. These conditions have resulted in private sector credit expansion turning negative for years (-€77bn since 2009). Deleveraging continues today; this is one of the major obstacles to growth. Cases of countries that have grown for long periods of time with negative credit expansion are very limited worldwide.

Figure 21: System deposits evolution (€ bn)



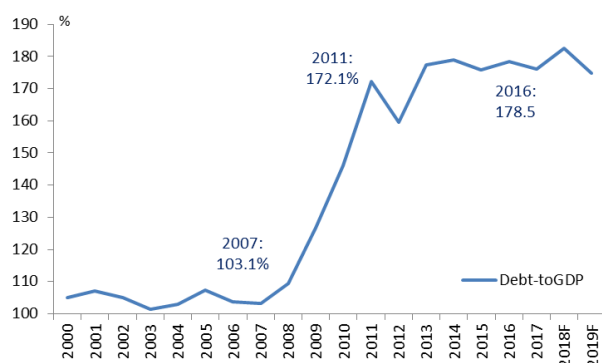
Source: Bank of Greece

(VII) No early public debt restructuring

An early public debt restructuring would have alleviated the fiscal burden, calmed market uncertainties and risks and softened the required size of fiscal and economic adjustment via the reduction of country risk. However, it was delayed until 2012. The reasons invoked for this included fears of moral hazard and maintenance of motives for Greece to comply with the structural reform agenda. Yet, it also concerned fears about European banks' ability to withstand related losses and to contain contamination from spreading to Eurozone. European banks were allowed to contribute to the crisis by financing Greece's consumption boom and a real estate bubble. Yet, they were saved from its repercussions by European policymakers delaying debt restructuring in the early parts of the crisis in order to give European banks time to reduce their exposure to Greek risk smoothly and over time. This transferred a higher adjustment cost to the Greek people.

Public debt as a ratio over GDP today is higher compared to pre-crisis levels (180.4% of GDP in 2018 vs. 103.1% in 2007, see Figure 22). Of course, this is also related to the size of initial fiscal deficits to be corrected, as well as to the decline of GDP, which reduced the denominator of the ratio (in absolute volumes debt peaked in 2011 before the PSI at €356.2bn). Yet, debt dynamics were also affected by the delay in the restructuring.

Figure 22: Evolution of General Government gross public debt, as % of GDP (ESA-2010)



Source: Ameco

(VIII) Broken monetary policy transmission mechanism

Effectively, the sharp increase of country risk and liquidity squeeze resulted in fiscal consolidation taking place in an environment of very restrictive monetary policy, despite ECB's ultra-accommodative stance for the rest of the Eurozone. Fiscal austerity was unfortunately combined with *de facto* tight monetary policy, thereby magnifying the negative economic impact. This is a recipe known to aggravate the recessionary impact of fiscal consolidation. While the ECB assisted greatly in the provision of liquidity to the Greek banking system, initiatives undertaken to tackle liquidity's cost and scarcity proved inadequate. Possibly, the impact of deposit outflows due to loss of confidence and strategic default behavior by debtors were underestimated; NPEs at the end skyrocketed. In addition, Greece was excluded from the QE, although it was the country that needed it the most. This was partly due to the Greek government's delays in complying with conditionality and partly due to the rigidity of ECB rules.

(IX) Sharp decline in Real Estate stock and bond prices exacerbated the recessionary impact

The sharp decline in real estate, stock and bond prices shrunk personal wealth and collateral values in the banking loan book, thereby magnifying NPEs and the decline of GDP (negative wealth effect). The impact of

the sharp decline in real estate prices was underestimated. To recap, between Q3 2008-Q3 2017, housing prices declined cumulatively by 42.4%. The decline was mainly due to the contraction in disposable incomes, the increase in unemployment, the limited access to credit, and the excess supply of residential properties, while property tax hikes also contributed to this negative outcome. The recovery in residential real estate prices from Q1 2018 is mainly due to tourism rental demand and golden visa schemes, along with the incipient pick-up in economic activity.

Again, the impact of wealth effects was underestimated when modeling adjustment measures. The part of these developments that was attributable to confidence effects could have been avoided.

(X) Underestimation of Long-term repercussions on potential GDP

Notwithstanding mistakes in modelling the recessionary impact from the fiscal drag, an even more serious policy mistake concerns the fact that this impact was assumed to be short- to medium-term. It was thought that, once disequilibria were restored, the economy would again run using its idle productive capacity and cover the distance, i.e. close the output gap, this time with exports and investment as its main drivers instead of consumption. What was not borne in mind however was that the length and depth of the depression would cause a longer-term degradation of these productive capacities. If one recalls that the three determinants of long-term growth are the amount of labour (L), capital (K) and the productivity with which these are combined (TFP), all three were degraded as a result of the crisis:

- (a) The capital stock declined by ca €70bn in constant prices between 2010-2017 due to disinvestment. In addition, the bulk of idle productive capacity lies in sectors serving the domestic market, whose prospects for recovery are not dynamic anymore
- (b) The labour force declined by ca 170mn people (net) between 2010-2017 due to the migration

of people abroad in search of better prospects and the departure from the labour force of people that lost hope of finding a job

- (c) TFP also declined, as a result of reduced spending on R&D, the brain drain, and skill downgrade from long-term unemployment

Hence, the output gap is not closing with a dynamic rise of actual GDP but with a decline of potential GDP. This phenomenon, if not reversed soon, will have grave repercussions for long-term growth and fiscal stability.

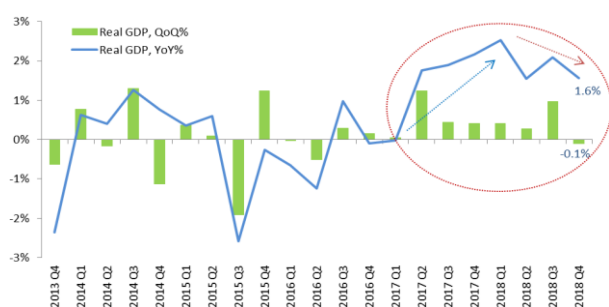
7. The picture in Greece today: a gradual exit from the crisis

Today Greece is gradually exiting the crisis. Economic and financial conditions are improving, and growth has returned. Yet, challenges remain.

Economic activity is picking up, while unemployment is falling:

- Q4 2018 was the 7th quarter in a row with a positive YoY real GDP growth rate (1.6%). Cumulative improvement in real GDP from Q3 2015 to Q4 2018 is 4.8% (see Figure 23).
- Unemployment has cumulatively decreased by -9.4 pps from Q3 2013 to Q4 2018 (see Figure 2). Even though a significant portion of new jobs is low-skills or part-time, the decline is notable.

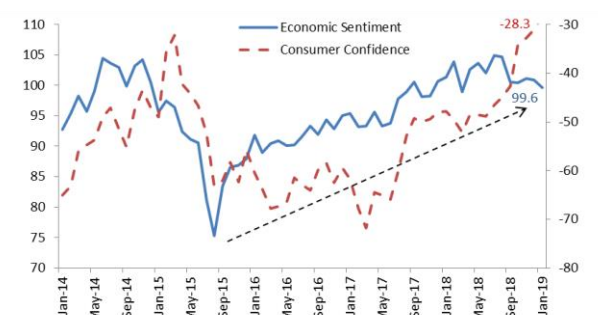
Figure 23: Real GDP, QoQ & YoY changes (%), 2010 constant prices



Source: Elstat

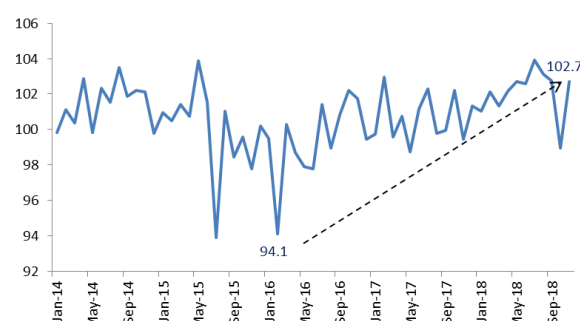
Leading indicators, such as economic sentiment, consumer confidence, retail trade volume index and PMI are on an uptrend, despite some deceleration lately, and are consistent with a continuation of economic recovery (Figures 24-26). Annual GDP growth close to the area of 2% is expected for 2019.

Figure 24: Economic Sentiment & Consumer Confidence



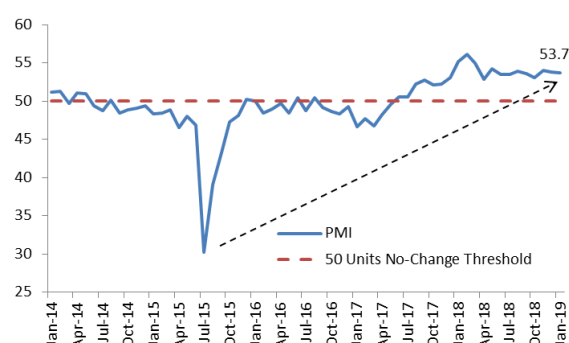
Source: European Commission

Figure 25: Volume Index in Retail Trade, Seasonally Adjusted, 2015=100



Source: Elstat

Figure 26: PMI



Source: Markit

Moreover, fiscal and external imbalances have been corrected and price competitiveness has been largely restored. More specifically:

- General Government overall and primary fiscal balances: Greece has achieved an almost balanced budget, with primary surpluses close to 4% annually. The cumulative improvement from 2009 to 2017 is of +15.9pps of GDP for the overall balance and +14pps of GDP for the primary balance (Figure 13); a painful, yet impressive achievement
- Current Account almost balanced: Cumulative improvement from 2008 (trough) to 2017 was €33.4bn or 13.4 pps of GDP, almost equal to the fiscal adjustment, so that the twin deficits are largely corrected (see Figure 15). Yet, some widening is observed as of recently (a deficit -5.3 bn or -2.9% of GDP in 2018) along with the pick-up in economic activity, which underlines the need for sustained export growth.
- Competitiveness improved significantly: ULC-based REER vs. 37 trading partners recorded a cumulative improvement (Q4 2009-Q4 2018) of -19.4% (from 103 to 83), while the CPI-based REER corrected by -5.5% (from 101.3 to 95.8), (Figure 16). The hysteresis of the latter is related to successive indirect tax rate hikes and a delay in products & services markets reforms, but prices continue to post negative differentials vs main trading partners, thereby further improving price-competitiveness. In addition, quality – or structural – competitiveness, as measured e.g. by the World Bank's Doing Business Index, improved significantly between 2010-2014, with relative stagnation thereafter. The standard still lags behind OECD-averages but further reforms that comprise part of the post-programme conditionality have the potential, if efficiently and swiftly implemented, to further improve the investment environment and the competitive position of the country.

Openness of the economy is improving. The gains in competitiveness, combined with increased external demand due to the economic recovery of main trading partners, resulted in exports rising with healthy rates (Figures 27 & 28). Real exports have an upward trend from 2009 until today. Exports' increase as a percentage of GDP has been even quicker (from 19% of GDP in 2009 to 36.1% in 2018) due to the fact that they performed better than other components of GDP. Imports have been restrained in crisis years due to suppressed disposable incomes and the collapse of investment but they are resuming an upward trajectory as the economy gathers pace.

Openness of the economy ($X+M/GDP$) still lags behind Euroarea averages by some 23ppts but its improvement is the first step for the gradual switch of the growth model towards extrovert and investment-led growth. Benefits are multiple, including better integration with global supply chains, greater penetration of technology, reduction in rent-seeking activities and efficiency gains from sectors' exposure to a more competitive international marketplace, a new culture of productivity.

Figure 27: Exports and Imports, as % of GDP

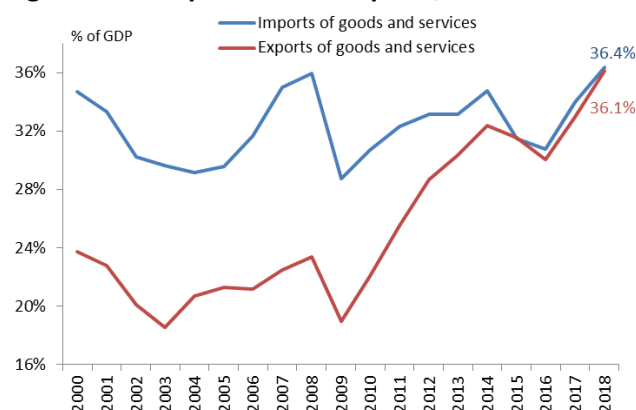
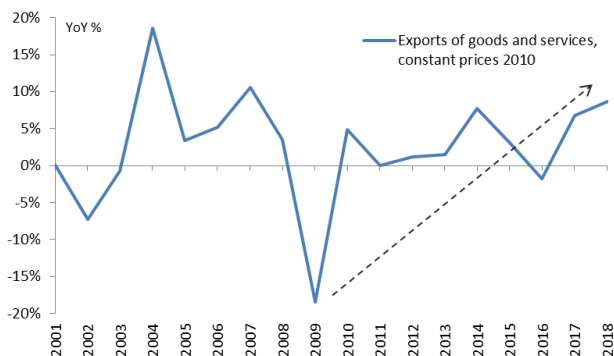


Figure 28: Exports of goods and services, constant prices 2010, YoY % change

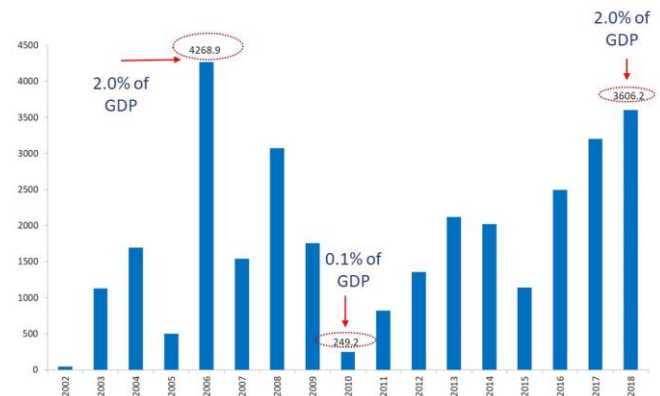


Source: Elstat

Foreign Direct Investment in Greece is increasing (Figure 29), reaching 3.6bn or close to 2% of GDP in 2018; yet, this is still half the Euroarea average. The increase is partly the result of some progress in the privatizations programme, which is the most important driver for FDI attraction in the shorter run. Investment flowing in due to NPE management processes in the banking sector also starts to increase in importance. Historically, Greece has had a poor track record in attracting FDI (as a percentage of its GDP), due to shortcomings in the investment environment. Yet, reforms undertaken as part of the three adjustment programmes have addressed many of those. While further reform is necessary to deal with remaining problems, the country now stands in a better position to attract FDI in comparison to the pre-crisis period. Success in this pursuit is critical for future growth prospects, especially due to the shortage in domestic resources (see below).

Access to market funding is gradually being restored, albeit not fully yet. The Hellenic Republic tapped the markets twice in 2019: a) for the first time after exiting the programme in January 2019 with a 5-yr issuance of €2.5bn (yield 3.6%, coupon of 3.45%), b) with the first 10-yr issuance after 9 years in 5 March 2019 (€2.5bn, 3.9% yield). However, yields are still a multiple of those of other ex-programme countries.

Figure 29: Foreign Direct Investment in Greece



Source: Source: BoG, ELSTAT, Eurobank Research

In addition, Greek banks improved their access to interbank funding with repos reaching ca €25bn at end 2018 vs. zero at the worst days of the crisis.

Progress has also been recorded in financial stability indicators. NPEs are being reduced with Greek banks overperforming targets agreed with the SSM (€88.6bn at Q2 2018 vs a target of €90.2bn for the respective period and a peak of €107bn in 2016). In addition, private sector deposits increased by €8.1bn or by 6.4% in 2018 and cash outside the Greek banking system has fallen by ca €20bn due to reduced uncertainty.

8. Challenges ahead

Despite the progress recorded so far, Greece's economy still faces critical economic challenges. These concern both legacy issues and pre-existing structural shortcomings of the economy, which were not dealt with sufficiently during the course of the adjustment programmes. Lack of ownership in dealing with these issues and concerns over the country's commitment to fiscal stability and macro prudence, are the main contributors to the still elevated country risk premia, as echoed in the GGB spreads. The latter, in turn, is a major obstacle in gaining markets' trust and reducing the cost of capital for productive activities, both factors being critical for the growth effort. Therefore, resolving these issues is both a prerequisite and an accelerator of a steeper –and sustainable– growth path.

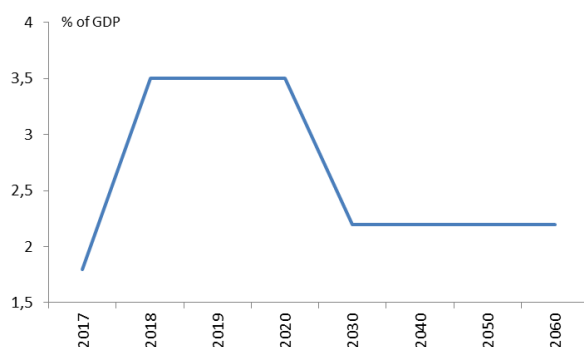
This section reviews the most important of challenges still in place.

(I) Fiscal Commitments: a tough deal

Greece has agreed in the context of the 3rd Adjustment Programme to very demanding primary surplus obligations. In particular, primary surpluses of 3.5% of GDP have to be achieved up to 2022 and 2.2% of GDP on average afterwards up to 2060 (Figure 30). These fiscal commitments require tight fiscal policy in the years ahead, thereby limiting social & economic policy options and acting as a serious drag on the economy and growth for the next many years.

It is very hard to find a historical precedent of any country to have achieved such primary surpluses for so long and, at the same time, to have managed to grow at respectable rates. Markets realize this and translate it into uncertainty about growth and fiscal sustainability prospects. The promise of the Eurogroup to revisit the issue of debt sustainability in 2032 if divergence from main macro assumptions is observed, helps in aligning expectations. Yet, a frontloading of more aggressive debt measures would have been a preferable solution as it would contribute to driving country risk and spreads down. This, in turn, is a prerequisite for more competitive cost of capital for Greek firms and banks, which is a crucial parameter in the reinvigoration of investment.

Figure 30: Primary Surplus* (as % of GDP)



* Targets specified in the Compliance report of ESM Stability Support Programme for Greece (3rd Review, March 2018), also used in the Debt Sustainability Analysis (baseline scenario)

(II) High tax-rates are killing the economy; a new, more balanced fiscal policy mix is needed

Not only are fiscal targets demanding, but their achievement so far is based on a policy mix that relies excessively on tax rate hikes. Greek tax rates are among the highest in the EU in almost all categories of taxation (see Table 4). The same holds for Social Security Contributions (SSCs), which almost act as taxation, given a relatively loose connection between SSCs and pension benefits until recently.

These high tax-rates are killing the economy and must be substantially reduced. A new, more balanced fiscal policy mix would need to encompass the following changes:

Table 4: Tax and SSC rates, Greece vs Selected EA countries, 2018

	Indirect Tax rate	Individual Income Tax rate*	Corporate Tax rate	Employer Social security rate	Employee Social security rate
Greece	24%	55%	29%	25.06%	16%
Spain	21%	45%	25%	29.9%	6.35%
Portugal	23%	48%	21%	23.75%	11%
Ireland	23%	48%	12.5%	10.85%	4%
Italy	22%	43%	24%	30%	9.49%
Cyprus	19%	35%	12.5%	7.8%	7.8%
EU average	21.46%	38.24%	21.29%	22.21%	14.09%

* Refers to the top marginal rate of income tax; in the case of Greece, the top tax rate is 45% plus an additional "Solidarity Surcharge" of 10%, which brings the top income tax rate to 55%.

Source: KPMG

- Lower taxes, with a priority in the ones with the higher multiplicative effect on GDP, i.e. income taxes on natural persons and firms, as well as SSCs. Between 2010-2016, total revenue increased by ca 9pps of GDP (Figure 31). Given a still mediocre ability to crack down on tax evasion, this revenue mostly came from heavy taxation on a narrow tax

base. This distorts motives for work and investment and further increases the motive for tax evasion.

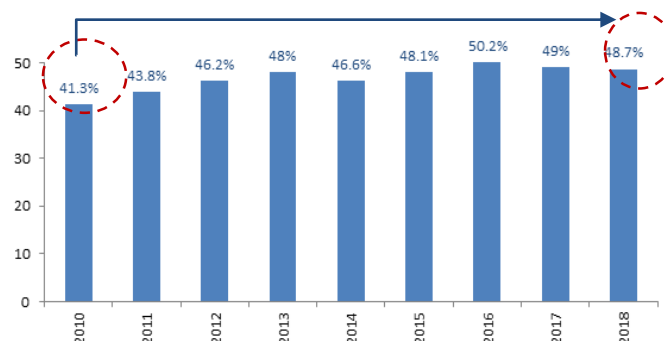
- Streamline expenditures, reform inefficient public entities and outsource certain public services. Between 2010-2018, public spending was reduced in absolute terms, but remained almost constant as a percentage of GDP (Figure 32). Even worse, it mostly concerned horizontal cuts and it was not accompanied by an increase in efficiency of spending. This resulted in a deterioration in the quality of public services, thereby causing a deterioration of the economic environment and a defamation of the notion of structural reforms among the population. Thus, an improvement in the quality of public services without increasing expenditure would require rationalization of processes and organograms, digitization (investment in technology), increased usage of PPI and BOT (both to increase efficiency and boost private and public investment). In addition, the strategy against tax evasion should be further strengthened, with the increase in the use of electronic means of payments, in order to broaden the tax base.
- Accelerate privatizations and commercialization of public property, for producing revenue to reduce the public debt, as well as for their growth contribution (attraction of capital & know-how). In the initial years of the program, revenue from privatizations was very limited (see Figure 33). That enlarged both the depth of the recession and the tax burden.

(III) Deal with the unprecedented levels of NPEs and the difficulties in funding the economy; fix the banking issue.

Despite progress achieved so far by Greek banks, NPEs (Non-Performing Exposures) continue to be almost half of total loans (see Figure 34). This legacy issue from the crisis poses a threat to financial stability, hinders the banking system's ability to fund growth, harms the efficiency of resources' allocation and

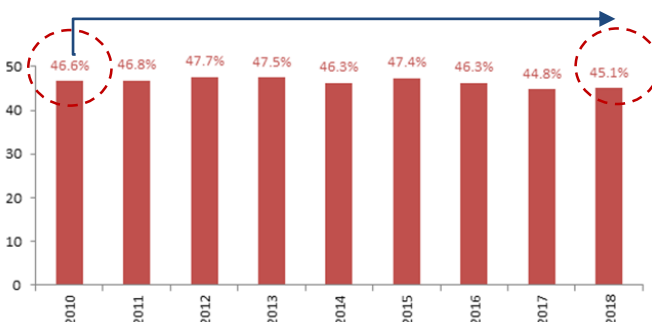
increases uncertainty. It is one of the most important drags on growth.

Figure 31: Total Revenues, as % of GDP



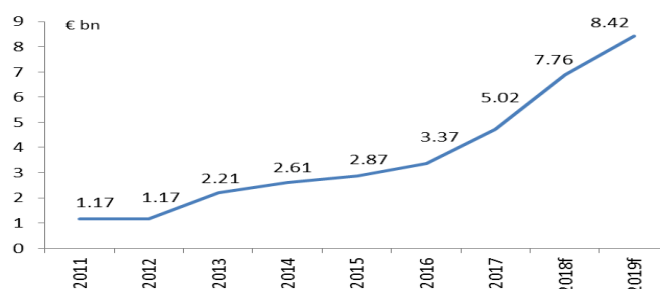
Source: IMF

Figure 32: Public Spending, excluding Interest, as % of GDP (in programme terms, excludes bank recap aid in 2013 and 2015)



Source: IMF

Figure 33: Revenues from privatizations (cumulative amounts)



Source: 2019 State Budget

At end-June 2018, the stock of NPEs, albeit decreased to €88.6bn, still comprised 47.6% of total exposures,

excluding off-balance sheet exposures, also due to the continued deleveraging (decline of the denominator of the ratio); In Q1 2019, NPEs are estimated to have fallen further to ca €81bn. According to a three-year plan that Greek banks have discussed with the SSM, their goal is to reduce the NPE ratio by approximately €55bn by 2021 (see Table 5). So far, Greek banks have been consistently over-performing NPE reduction targets.

Provision coverage of NPEs was at 48.6% in June 2018 from 49.0% in March 2018, mainly due to significant write-offs and sales performed in the quarter. The cure rate of NPEs remained at the same level as in the previous two quarters (1.8%), lower than the default rate of 2.1%, a fact that undermines the reduction of NPE formation.

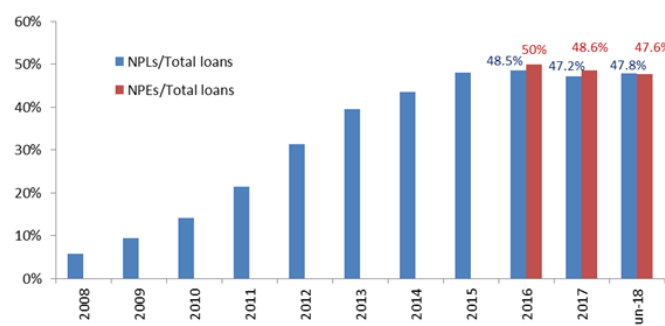
Banks have been working on market solutions for accelerating the reduction of NPEs by deploying all available instruments: securitizations, sales of NPEs, liquidations, curing and write-offs. Eurobank has announced a comprehensive capital strengthening plan and its merger with Grivalia, along with an accelerated NPE reduction plan via the securitization of €7bn NPEs. In addition, HFSF and BoG have proposed plans to assist further acceleration of NPE reduction, involving the establishment of NPE Asset Companies with some degree of government support with market terms.

Substantially reducing NPEs is a necessary – but not sufficient – condition for improving the Greek banking system's ability to fund the economy. Several other factors are at play:

- households' gross saving rates are negative and on a declining trend until recently,
- capital controls have not been fully lifted yet,
- liquidity conditions in the banking sector are still tight despite some relatively slow return of deposits and the reduction in the exposure to the Eurosystem for liquidity,

- market access continues to be limited for banks, corporates and the sovereign
- quality and quantity of demand for credit is still low, especially regarding households

Figure 34: NPLs and NPEs, as % of Total Loans



Source: Bank of Greece

Table 5: Greek banks' operational targets for non-performing exposures and actual figures

	Jun-16	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sept-18	Dec-18	2019	2021
NPE volume target in €bn			99.9	95.9	93.6	90.2	87.6	81.5	64.6	ca. 33
NPE ratio, target			49.9%	48.5%	48.1%	46.9%	45.9%	43.1%	35.2%	ca. 20%
NPE volume, actual in €bn	106.9	101.8	99.1	94.4	92.4	88.6				
NPE ratio, actual	50.5%	50.5%	50.1%	48.6%	48.5%	47.60%				

Source: Bank of Greece (Reports on Operational Targets for Non-Performing Exposures)

(IV) Public administration reforms must be accelerated

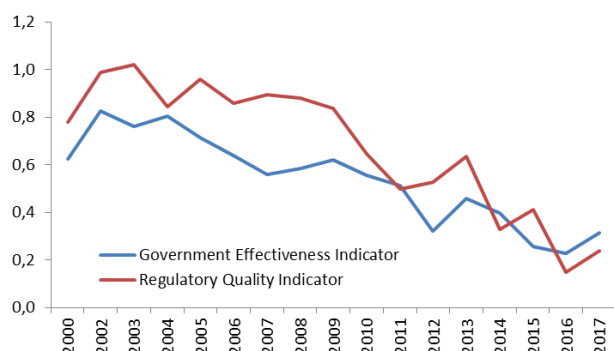
As explained above, across the board public expenditure cuts were not accompanied by an increase in efficiency in public administration but instead resulted in a deterioration of the quality of public services (see Figure 35). The reform of organizational structures in the public sector is still incomplete and inefficiencies exist in many General Government entities.¹¹ A particularly important aspect concerns the ability of public administration to support entrepreneurial activity. Yet, cost-efficiency of

¹¹ This has motivated some analysts to argue that wage cuts in the public sector should not have been horizontal but based on

performance evaluation in order to achieve the dual purpose of expenditure cuts and provision of incentives.

public services is equally important, both for growth and social cohesion purposes. Digitization, upgrade of skills and optimization of organigrams and processes are priorities in this pursuit.

Figure 35: The Worldwide Governance Indicators (WGI) - Greece



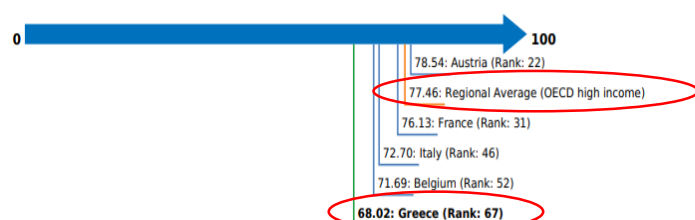
*Indicators range from approximately -2.5 (weak) to 2.5 (strong) governance performance

Source: World Bank

(V) A friendlier business and investment environment

Progress in the creation of a friendlier business and investment environment has been inadequate; WB's Doing Business ranking shows that Greece still lags behind OECD averages (see Figure 36).

Figure 36: Doing Business 2018 Distance to Frontier (DTF)



Note: The distance to frontier (DTF) measure shows the distance of each economy to the "frontier," which represents the best performance observed on each of the indicators across all economies in the Doing Business sample since 2005. An economy's distance to frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 is the frontier.

Source: World Bank

Table 6 shows that Greece still lags behind the OECD average score in almost all sub-categories of the DB quality competitiveness Index. The worst performance is noticed in the sub- categories Registering Property, Resolving Insolvency, Enforcing Contracts and Getting Credit.

Table 6: DB 2019 Ease of Doing Business Score*

	Greece	OECD Average
Ease of Doing Business Score	68.08	77.80
<i>consisted of the following topics:</i>		
Starting a Business	92.39	91.19
Dealing with Construction Permits	75.29	75.41
Getting Electricity	75.97	85.47
Registering Property	47.59	77.17
Getting Credit	50.00	64.12
Protecting Minority Investors	63.33	64.21
Paying Taxes	76.89	83.32
Trading across Borders	93.72	94.21
Enforcing Contracts	50.19	67.65
Resolving Insolvency	55.39	75.21

*An economy's ease of doing business score is reflected on a scale from 0 to 100, where 0 represents the lowest and 100 represents the best performance.

Further progress is necessary for making the legislative and administrative framework much more growth-friendly in order to attract private investment and FDI. Areas of priority include the clarifications in land uses and the cadaster, further simplifications in investment licensing, registration of property, reform of the energy market, completion of product & services markets openings, acceleration in the conferment of justice.

(VI) GDP continues to rely excessively on private consumption, which is based on dissaving; an unsustainable model.

Private consumption has declined in volumes during the crisis but as a share of GDP it is still ca 68%, some 15pps above the Euroarea average. This is the result of an even quicker collapse of other components of the GDP but also of the fact that current levels of consumption are supported by dissaving from households. The gap between private consumption and households' disposable incomes is large (€8.3bn in 2017, estimated to have shrunk a bit in 2018) and the saving rate of households is still highly negative (-€7.2bn in 2017); if continued, this poses risks for longer-term stagnation in consumption. A more dynamic - and sustainable - growth in disposable incomes of households, which is still sluggish (just +1% in 2017, estimated at +2% in 2018), is required. In turn, a sustainable increase in disposable incomes necessarily has to be based on an improvement in labour productivity, which is still sluggish too, and this requires an acceleration in private investment. Overall, the reliance of GDP on consumption has to decrease via an increase in exports and investment and not via a decrease in consumption as the latter would have a recessionary impact and would also negatively affect public revenue.

(VII) Private investment yet to recover

Private investment collapsed during the crisis and has yet to record a meaningful and sustained recovery. In 2018, GCF amounted to €24.2bn or 13.1% of GDP in

nominal terms (vs 20.6% EA avg) vs €60.5bn or 26% of GDP in 2007. GFCF, however, actually fell in 2018, mainly due to a reduction in ships' purchases. A consistent, strong uptrend in investment has not been recorded yet. A sustainable recovery of the economy requires a return of private investment to a ratio above 20% of GDP; this is one of the major challenges of Greek policy making.

(VIII) Unemployment still elevated

Despite declines, the unemployment rate is still the highest among the EU-28 countries (19.3% on average in 2018 vs 8.2% in EA and 7.0% in EU-28, 18% in December 2018), considerably higher among women and young people. In addition, more than 70% of those are long-term unemployed. NAWRU currently stands at 13.7%, vs a 8.1% EA average, mainly due to the structural decay of sectors serving the domestic market and the fact that the skills of respective workers become obsolete. This runs the risk of unemployment remaining elevated even when the economy picks up pace. Finally, job creation concerns, to a larger extent than in the past, low skill and part-time jobs.

(IX) Capital controls still in place

Capital controls are still in place, in their pillar concerning international transactions. Capital controls within a monetary union is a paradox. Despite the fact that businesses have learnt to operate in an environment of capital controls, the signaling effect of capital controls is one of abnormality. In addition, they have a detrimental impact on resource allocation and cause transaction costs. Lifting capital controls is a priority, yet it should be done under conditions of restoration of trust in order not to risk reversal of market confidence, which could be very detrimental.

(X) Risk premia still elevated, reflecting market concerns about policy continuity

Risk premia and interest rate costs are still elevated, while market asset valuations are still suppressed, despite the exit from adjustment programmes. In February 2019, the ASE Index hovered around 600-700 points, below the levels of the beginning of 2018, and the 10-yr GGB spread vs the Bund stood at around 3,7%, more than two times higher than that of Portugal and more than three times higher than that of Spain. These figures reflect market concerns about policy credibility, political stability and adherence to prudent policies after the expiration of the strict programme surveillance. The high country risk does not only concern the State's borrowing costs but is also passed on to firms and households via the funding cost of banks. Indicatively, the overall weighted average interest rate on new loans stood at end 2018 at 4.63%. Hence, the country operates effectively in an environment of monetary restriction, despite the ultra-accommodative stance of ECB policy.

(XI) Longer-term public debt sustainability is still sensitive to macroeconomic assumptions.

The decisions of the June 2018 Eurogroup improved the sustainability of GG public debt. These included the abolition of the step-up interest rate margin related to the debt buy-back tranche of the 2nd Greek programme as of 2018, the return of SMP/ANFA income equivalent amounts as of budget year 2017, the deferral of EFSF interest and amortization by 10 years and the extension of the maximum weighted average maturity by 10 years. Medium-term debt sustainability is enhanced by relatively low gross financing needs in the years ahead and the availability of a cash buffer of - at least - €26.5bn. Yet, debt sustainability analysis of both official institutions and private agents shows that the evolution of the debt-to-GDP ratio is sensitive to assumptions about nominal growth, re-financing rates and primary surpluses. In this respect, the commitment of the Eurogroup to re-visit debt sustainability in 2032 and take additional measures if necessary (and upon compliance with

Enhanced Post-Programme Surveillance conditionality) is a notable backstop. However, more upfront debt measures would have aligned market expectations more efficiently. This is the case since remaining uncertainty is reflected in a still elevated country risk. This, in turn, contaminates borrowing costs of banks and businesses, therefore exercising a restrictive impact on GDP.

9. What it would take to deliver GDP growth of >3%? A new export- and investment-led growth model

The return to economic and social normality, income and wealth generation and the curing of the legacies of the crisis, requires rapid and sustainable economic growth of 3% or higher. It is now understood that this necessitates the adoption of a more export- and investment-led growth model. The credit-fueled consumption driven model of the past is not sustainable and it cannot be repeated for many reasons. Firstly, private consumption's share of GDP, at 68%, remains the highest in the Eurozone. Secondly, Greece is now under stricter surveillance by official creditors in order to avoid the repetition of fiscal and external deficits. Thirdly, the most binding constraint is that now, in contrast to what was happening before the crisis, international capital markets are not willing to fund a new expansion of domestic demand. Market participants are now more alert to considerations of stability and they charge interest rates higher by hundreds of bps for lending that is directed towards consumption against the funding of mainly productive uses. Hence, a more extrovert and investment-led growth model is a necessity, not a nicety.

To this end, Greece needs to set quantitative targets for the increase of the contribution of investment and exports to the GDP and policy actions to support the achievement of these targets need to be clearly specified.

We attempt this quantification. The policy goal for paradigm change is set to be the convergence of the contribution of investment and exports to GDP at Euroarea averages. The distance to be covered is substantial:

- In 2018, investment was 12.4% of GDP in real terms in Greece vs a 21% Eurozone average

- In 2018, exports of goods and services were 33.9% of GDP in real terms vs a 49.1% Eurozone average

As a starting point, we calibrated scenarios of changes in investment and exports that would be necessary for their shares to GDP to converge towards Euroarea averages in 7 or 10 years, assuming the economy grows according to official estimations. In particular, the assumption was that GDP growth evolves according to Programme assumptions until 2022 and takes the value of 1.3% from 2022 to 2027; as modest as the latter seems, it is the estimate to which the IMF and EC converge in this period. However, our calculations showed that, the rates of growth for exports and GFCF necessary for their shares to converge to EA average shares in 7 or 10 years, along with the assumed GDP growth rates, imply that the real rate of annual growth of private consumption would be negative at (-1.6% in the case of convergence in 7 years, -0.7% in the case of convergence in 10 years). Obviously, this is not a desirable scenario.

In addition, the hypothesized average GDP growth rate would be moderate (1.7% in the case of convergence in 7 years, 1.6% in the case of convergence in 10 years) and thus inadequate for putting the country on a path of dynamic recovery to Euroarea living standards.

Hence, we calibrate a more ambitious eventuality: we assume that exports and GFCF have the real growth rates which are necessary for them to converge to EA shares in 7 or 10 years and, in addition, private consumption grows with modest but positive rates. Three variations are calibrated with private consumption growing with a real rate of 0.5%, 1% and 1.5% per annum respectively for the next 7 or 10 years. Results are presented in Box 4.

It can be seen that, in the case of convergence in 10 years, exports will have to grow at a real annual rate of between 6.7-7.8%, and fixed investment at a real annual rate of between 8.4-9.5%, over the next 10 years. This would yield real annual growth in Greek GDP of 2.8-3.9%.

Box 4: Calibration of Investment and Export Growth Rates

		C _g	C _p	GCF	CFCF	X	M
Shares in 2018 GDP (ratio of real figures)		21.5%	67.8%	11.5%	12.4%	33.9%	35.1%
Shares in 2025 or in 2028 GDP (ratio of real figures)		20.5%	53.8%	21.3%	21.0%	49.1%	44.7%
	Y	C _g	C _p	GCF	CFCF	X	M
Linear Convergence in 7 Years							
Average 2019-2025 Growth Rates							
Real Private Consumption 0.5%	3.9%	3.2%	0.5%	13.5%	12.0%	9.5%	7.5%
Real Private Consumption 1.0%	4.4%	3.7%	1.0%	14.0%	12.5%	10.1%	8.0%
Real Private Consumption 1.5%	4.9%	4.2%	1.5%	14.6%	13.1%	10.6%	8.6%
Linear Convergence in 10 Years							
Average 2019-2028 Growth Rates							
Real Private Consumption 0.5%	2.8%	2.4%	0.5%	9.4%	8.4%	6.7%	5.4%
Real Private Consumption 1.0%	3.4%	2.9%	1.0%	9.9%	8.9%	7.3%	5.9%
Real Private Consumption 1.5%	3.9%	3.4%	1.5%	10.5%	9.5%	7.8%	6.4%

Achieving such growth rates for exports and investment for 10 years in a row is a very demanding target if one considers the historical performance of the Greek economy. While such growth rates have been achieved sporadically, maintaining this performance for 10 consecutive years would require a herculean effort – and a revolution of structural reforms to support it.

In the case of convergence in 7 years, exports will have to grow at a real annual rate of between 9.5-10.6%, and fixed investment at a real annual rate of between 12-13.1%, over the next 7 years. This would yield real annual growth in Greek GDP of 3.9-4.9%. However, comparison with European experience shows that such growth rates of exports and investment are not realistic. They have been achieved by some emerging economies occasionally but not for so many years. For mature economies, they are very rare even for isolated years.

Thus, the target has to be set for changes in investment and exports necessary for convergence at Euro area averages in 10 years at the earliest. Even then, numbers are demanding. Policies to support their achievement should be the epicenter of public debate in the period ahead and prioritized over other policy goals as they comprise prerequisites for any other objective of social prosperity.

9.1 Policy goals

Considering the challenges the Greek economy still faces and the demanding arithmetic targets for investment and export growth in order to deliver over 3% annual GDP growth in the next years, the most important policy initiatives to enable this are the following:

1. Do “whatever it takes” to engineer an investment boom: delivering a strong and sustainable recovery of investment is required, which touches upon tax, energy and interest rate policies, political and institutional stability, the friendliness of the investment environment, progress in privatizations, and acceleration of justice.
2. Increasing exports of goods and services sharply, both in volumes and as a share of GDP, requires sustained improvement in domestic productivity and competitiveness (and it also depends on global growth).
3. Increasing FDI sharply to close the substantial national funding gap requires a new framework for attracting FDIs.
4. Ease the domestic liquidity squeeze via restoring confidence and competitive funding costs in the banking system.
5. Lift capital controls on conditions of restoration of trust.
6. Resolve the huge NPEs issue in the banking sector by strengthening investor and depositor confidence and trust in the sector.
7. Consistently implement productivity-enhancing structural reforms, including opening up markets to competition and simplifying investment licensing.
8. Implement rigorous, yet growth-friendly fiscal policies. A change in the fiscal policy mix is required to enable substantially lower tax rates, matched by more efficient public spending (including outsourcing and privatizations), broadening the tax base and cracking down on tax evasion mainly via larger penetration of e-payments and sharp reduction of cash usage.
9. Ease fiscal primary surplus commitments in cooperation with official creditors with steps taken to maintain trust in fiscal sustainability and commitment to deliver on all growth-friendly and market-opening reforms. This requires to first prove ownership of reforms before negotiating a change in fiscal targets.
10. Reforming a still inefficient and ineffective public administration, which still constitutes a major obstacle to growth.
11. Improving policy credibility by devising discipline mechanisms to nationally-owned policy goals (i.e. constitutional restrictions). This is essential for

regaining market trust and thus for lowering risk premia and funding costs.

10. Progress and to-do list in building a new Euro architecture

The global crisis of 2008 and its spillover in the Euroarea in 2010 found Europe unprepared to deal with it. The lack of effective crisis prevention and management mechanisms and the vicious circle between bank lending standards and the creditworthiness of sovereigns were exposed. In addition, the Euroarea lacked an automatic fiscal transfer mechanism to counter asymmetric shocks hitting particular countries, as the Stability and Growth Pact had an embedded no-bailout clause. The no-bailout clause was de facto abandoned in April 2010, yet a permanent such mechanism was not created.

The effort to break the banks-sovereign nexus started in 2012 with the creation of the ESM, as a more permanent scheme to succeed the EFSF. Steps were cautious due to the fear of generating moral hazard. Yet, it was made apparent that the survival of the Euro necessitated a full “banking union”, i.e. the centralization of bank supervision and resolution duties to the EA level, as well as a single deposit insurance scheme. Without such a framework, the movement of capital, which is an integral part of a common currency area, would continue to be subject to segmentation and reversals in risk sentiment, leading to scarcity and high cost of capital in particular countries.

The effort to build a banking union constitutes a tacit acceptance of the fact that a more fundamental reform of the Euro’s architecture was necessary. Europe realized that it needed more rigorous mechanisms for identifying and correcting macroeconomic and financial imbalances, as well as for ensuring efficient capital, labour and product markets. While the prospect of a deeper economic, financial and political integration is postponed, the development of particular policy tools is essential for

enhancing the Euro’s ability to create prosperity and stability for all its members and the viability of the Monetary Union itself.

The next important step in this direction was taken in 2014 with the creation of the SSM and the SRM:

- SSM assumed the centralized supervision of 118 significant EA banks (authorization, governance supervision, compliance with EU prudential rules, supervisory review, recovery plans, early intervention, macro-prudential risk)
- SRM, SRF, SRB assumed resolution / restructuring of failing significant banks
- Codification of legislation was done in the single rule book (CRD, BRRD)

Yet, the SRF will not be fully funded (by contributions of the banks themselves) before 2023. More importantly, the creation of the European deposit insurance scheme (EDIS) is still pending; the protection of deposits will not be fully financed by EDIS before 2024. Furthermore, European policymakers fear that the single guarantee may create motives for more risk taking; hence it has to be accompanied by a tightening in regulation. In practical terms, authorities deem the reduction of NPEs a prerequisite for introducing such a scheme. The discussion of extending the mandate of the ESM for it to be able to bailout a failing banking sector (and not a single bank, which is the mandate of the SRM) has not yet borne fruit.

To wit, Europe is now more prepared to deal with future crises, but important bits are still missing. The common guarantee of deposits is crucial for avoiding confidence shocks and capital scarcity to the Euro periphery. Countries, such as Greece, whose fundamentals are considered by markets to be more sensitive, are more vulnerable to sudden stops and high cost of capital.

The next step has to be the full transformation of ESM into a European IMF, with the funding abilities to rescue sovereigns and whole banking sectors under

carefully designed conditionalities. Furthermore, the regulatory framework should keep in mind that a more effective surveillance of fiscal and macro measures should go hand in hand with policies to address productivity divergences. The possibility of consistent divergence of per capita GDP across countries could put the sustainability of the Euro to the test.

11. Policy lessons

The Greek crisis was a traumatic experience for Greece and put Euro's architecture to the test. Yet, because of the crisis in several Eurozone country members, especially in Greece, Europe is today better prepared to handle banking and sovereign crises. New European institutions and a proper framework have been established (SSM, SRM, BRRD, ESM, the Banking Union process) to handle banking and sovereign crises in smaller Eurozone members. Still, Europe's preparedness to handle a crisis in a large economy like Italy remains doubtful.

The Greek crisis has taught us that recognizing the problem early on and committing to do "whatever it takes" to solve it is key. Delays in admitting the problem and in reacting decisively with proper and needed reforms and policy adjustments could turn out to be quite damaging. Timing is essential in containing the social and economic cost of the crisis. There are no magical solutions for eliminating the economic and social costs of fiscal consolidation and for correcting competitiveness. Yet, national ownership of reforms, the drafting of a widely accepted national plan and international co-operation are key for minimizing this cost and, most importantly, for creating the conditions for a quick and sustained recovery.

In this respect, front-loading reforms is essential for restarting the economy and mitigating the negative impact of necessary austerity measures. This was not the strategy pursued in the Greek crisis. Reforms should be designed and implemented with a view to earning market trust and establishing policy credibility, preserving market access and private

sector funding. Fiscal consolidation measures alone are not enough for preserving the sustainability of any country facing productivity challenges, let alone members of a currency bloc.

Lack of domestic political stability; lack of political resolve and social consensus; confrontational politics; populist policies presenting an effortless route to a rosy future, encouraging local resistance to reforms; the existence of strong vested interests; all tend to exacerbate the social and economic costs of a crisis and unnecessarily lengthen the duration of the crisis. By contrast, strong political ownership of the reform process early in the crisis can mitigate the cost of adjustments. Dealing with a multi-faceted crisis which goes beyond fiscal derailment to question the growth model, requires forging a broad social and political consensus, educating the population about the required reforms, and projecting the mentality of "doing whatever it takes" to solve the problems as a collective national target.

A crucial part of policy design when dealing with such a crisis is also to avoid spillovers of the crisis, not just internationally, but also within sectors in a country. Fiscal or current account crises, when they occur, should be contained and dealt with quickly, so as not to spill over to other sectors of the economy (banks, investment) or infect market and investor confidence and expectations on the currency arrangement's viability. This is even more the case when a country has to deal simultaneously with fiscal derailment and loss of competitiveness, which requires policies that work against debt sustainability. Then, the selection of policy instruments (fiscal, monetary, structural) and timing of deployment should be very careful not to end up working in tandem to create a recessionary spiral, as it happened in Greece, thus exacerbating the crisis.

Playing a "game of chicken" with creditors, constant confrontation with partners, and jockeying for short-term political advantage domestically, were all strategies that turned out to be catastrophic in recent European crises. A single national democratic

mandate is not all powerful against the interest of several other democratic countries organized together.

Growth in an open economy requires continued vigilance to avoid the build-up of fiscal and external imbalances and competitiveness losses. Furthermore, it requires that growth policies be prioritized over other policy goals as they comprise prerequisites for any other objective of social prosperity. Public debate in the period ahead should recognize this necessity.

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