



GREECE

SELECTED ISSUES

February 2017

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GREECE

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Approved By
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INSOLVENCY AND ENFORCEMENT ISSUES IN GREECE¹

A. Background

1. The crisis has had a lasting impact on private sector balance sheets and the ability to service debt.

As a result of the crisis, GDP contracted by 25 percent, and unemployment has risen sharply to a peak of close to 28 percent in 2013. Corporate turnover has collapsed by a third, property prices have halved, and disposable income has shrunk significantly. Consequently, the non-performing loan ratio (NPLs) has reached the second highest level in the Eurozone, and the amount of uncollected tax and social security claims, at 70 percent of GDP, represents the highest level in the Eurozone. Although private debt relative to GDP is low compared to other European countries, the debt-servicing capacity of businesses is severely constrained due to the collapse in turnover, and this results in severe liquidity constraints and, eventually, in insolvency.

2. The enforcement and insolvency system has been largely ineffective in responding to the needs of the economy. The Greek insolvency and creditor rights framework has improved since the onset of the crisis as a result of successive reforms. Nonetheless, it remains underutilized, fragmented, and distortive, and is not supported by an adequate institutional setting. This is because many of the reforms undertaken in recent years were not part of a coordinated and comprehensive NPL resolution strategy, but were instead piecemeal and taken without proper stakeholder consultation and impact analysis. Also, the frequent and uncoordinated reforms have undermined legal predictability and certainty. This situation of distress, if left unaddressed, affects enterprises, households and also financial and public creditors, in that it prevents investment, credit, and consumption from recovering, threatens financial stability with consequences for the public finances.

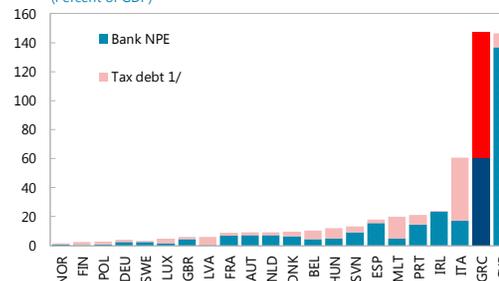
Non-Performing Loans
(Percent of total loans)



Sources: Bank of Greece; and 2015 EBA report.

Note: Data for Greece as of March 2016, data for others as of June 2015.

Private Sector Arrears
(Percent of GDP)

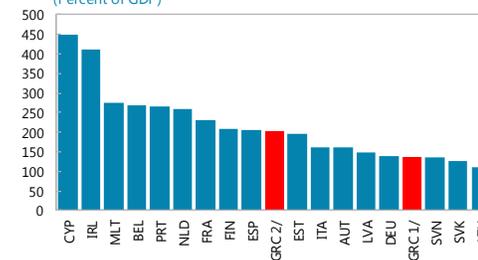


Sources: EBA 2015 June Report; Eurostat; OECD; and IMF Staff Calculations.

1/ For Greece, the figures are estimates at end-September 2016 and include social security contribution debt.

Private Debt, 2016:Q2

(Percent of GDP)



Sources: Bank of Greece; Eurostat and IMF staff calculations.

Note: Private debt includes outstanding debt, loans, and other accounts payable for nonfinancial corporations and households.

1/ As reported by Bank of Greece.

2/ Adjusted for tax debt and SSC debt.

¹ Prepared by Wolfgang Bergthaler and José Garrido (all LEG).

3. This paper aims at providing an analysis of the evolution, current status, and remaining challenges in the regulation of insolvency and enforcement in Greece. The paper identifies the issues and required actions to achieve a functioning insolvency and debt enforcement system that could contribute to the economic recovery by enabling the restructuring of enterprises and households and by liquidating non-viable enterprises. The remainder of the paper is structured as follows. Section B presents a summary of the reforms and the evolution of the insolvency and enforcement system in Greece. Section C outlines the main challenges for the functionality of the system as it stands today. Finally, Section D concludes with a discussion of recommendations for the improvement of the system.

B. Insolvency and Enforcement in Greece: A Succession of Reforms without the Intended Effects

4. The Greek insolvency and enforcement regime has undergone a series of reforms. It is useful to look at these reforms from a thematic point of view: first, we examine the changes introduced in the business insolvency framework; second, we analyze the adoption of the personal insolvency law and its reform; third, we look at the reform of the individual enforcement regime. Other reforms have also been legislated, seeking alternative and complementary solutions to the over-indebtedness problem: the out-of-court debt restructuring framework represents an alternative to the formal insolvency and enforcement system; and the framework for the sale of non-performing loans by credit institutions must be understood in the context of the current insolvency and enforcement regime, as complementing the NPL resolution strategy.

The reforms of the business insolvency framework

5. The business insolvency law was reformed several times over the last ten years. A major change in orientation in Greek law occurred in 2007, with the passing of the business insolvency law, Law No. 3588/2007. This reform signaled a deep change from a system based on the ancient French *Code de commerce* to a more modern legal framework for business insolvency, based on two basic procedures: a bankruptcy procedure along the lines of the German *Konkurs*, and a restructuring procedure, modelled on the *conciliation* procedure in French law. The law was subsequently reformed in 2010, 2011, 2012, and 2015, as follows:

- In 2010, Law 3858/2010 incorporated the UNCITRAL Model law on *cross-border insolvency*, providing a recognition and cooperation mechanism for international insolvencies, according to best international practice.
- In 2011, Law No. 4013/2011 introduced the *rehabilitation procedure as a preventive mechanism* for the insolvency of distressed businesses. The process is initiated by the debtor and is designed to address situations of illiquidity by means of a restructuring agreement subscribed by a majority of creditors. The law also included a *special liquidation procedure*, consisting of a pre-insolvency procedure, designed for large enterprises, which allowed for the sale as a going concern of the distressed enterprise. The special liquidation procedure was barely used at all in practice.

- In 2012, Laws No. 4055/2012, and No. 4072/2012 introduced significant changes to the structure of the insolvency process: the reforms eliminated the conciliation procedure –which was not effective in providing an alternative to bankruptcy due to its reliance on purely consensual solutions and the opportunities it offered for debtor abuse. A *new rehabilitation procedure*, including the expedited confirmation of debt restructuring arrangements, was introduced, along with a *new procedure for special liquidation*.
- The reforms of the commercial insolvency framework in 2015 (Law No. 4336/2015) streamlined some aspects of the rehabilitation procedures:² the deadlines to submit claims, verify claims, and object to decisions on recognition of claims were all reduced significantly. The reform also opened the reorganization procedures to debtors likely to become insolvent (without proof of actual or imminent insolvency), and introduced significant changes in the regulation of the *automatic stay* of creditor actions, limiting its scope and effects.³ In addition, the reform introduced the requirement for the participation of qualified *insolvency professionals*. However, the regime of insolvency professionals is yet to be developed and implemented via secondary legislation. The law also prohibited automatic termination clauses in contractual relationships in case of debtor insolvency.⁴ In the approval of reorganization plans, the reform emphasized the importance of the analysis of the compliance of plans with the best interest of creditors’ test (i.e., determining whether all creditors receive, under the plan, at least what they would have received in the potential liquidation of the debtor), rather than focusing on the feasibility of the plan, which depended on the judges’ ability to assess those economic aspects. The protection of new financing was enhanced, including in cases where the restructuring plan is not successful. Finally, the reform of the Code of Civil Procedure had a crucial impact on the insolvency regime, since the *ranking of claims* applicable to insolvency is the same that applies in civil procedure legislation.

6. The Parliament has approved a new set of amendments in December 2016. The authorities have been aware that the insolvency system can be further improved, and a committee was formed (the “Law Reform Committee”) with the aim to study and provide proposals to improve the law along the following lines:

² The authorities commissioned multiple studies to review the deficiencies of the framework and proposed changes which culminated in the 2015 amendments. However, no impact analysis or comprehensive stakeholder consultation was conducted. An analysis of the insolvency regime, with proposed adequate amendments to the insolvency framework had been part of the Fund supported program as early as 2013.

³ The stay of creditor actions can be granted for a 4-month period. In the rehabilitation procedure, the stay is automatically granted when 30 percent of creditors, including 20 percent of secured claims, support the petition.

⁴ These clauses create insurmountable obstacles for the reorganization of enterprises, since they may imply the loss of services, supplies, or intellectual property rights which are necessary for the continuation of business operations.

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- Revision of the preventive restructuring procedure, in order to enhance its potential to rescue viable enterprises, facilitate the continuity of the labor force, and address the abuse of the law by non-viable enterprises.
- Amendments to the reorganization plan, with a view to increase its effectiveness, mainly by eliminating the initial stage, which consists of an initial examination of the plan.
- Revisions of the bankruptcy procedure to reduce the time needed for its completion, including a whole reassessment of the timeframe for the process, its multiple steps and ancillary proceedings, and the functions of the court and the rapporteur (delegate judge).
- Coordination of the law with the projected regime for insolvency administrators.
- Reform of the provisions of the commercial insolvency law to achieve alignment with the provision establishing discharge of natural persons no later than three years after the date of declaration of bankruptcy.
- The issue of the obstruction of corporate restructuring by shareholders was also included in the scope of the reform.

These amendments have been included in the Law 4446/2016. The authorities have also passed a Presidential Decree for the regulation of insolvency administrators, and further regulatory instruments are in preparation (see below, section D).

Personal insolvency

7. The personal insolvency regime was established in 2010, and later reformed in 2013 and 2015. For historical reasons, most Southern European countries lacked a personal insolvency regime before the global financial crisis. In 2010, the authorities enacted the Law No. 3689/2010 ("Katseli Law"), introducing a personal insolvency procedure in Greek law for the first time. This law provided blanket protection to borrowers, including strategic defaulters. It also included a compulsory initial extrajudicial phase that complicated and extended the length of the process without producing any substantial benefit. The law was subsequently reformed as follows:

- In 2013, the reform *eliminated the compulsory extrajudicial phase* for personal insolvency. The authorities introduced a *forbearance scheme* for current debtors called the "Facilitation Program," (i.e., an extension of maturities for mortgages with minimum payments for four years for debtors who meet low income thresholds or who had suffered income reductions of more than 20 percent since January 2010). This scheme already expired: in any case, it was never used extensively, because banks provided much better restructuring and forbearance conditions than those included in the state scheme.

- The 2015 amendments⁵ expanded the scope of the *discharge* to include tax and social security debts, introduced *filters for strategic defaulters* by dismissing incomplete filings (if not remedied within a deadline), provided for short deadlines for procedural steps such as hearings, limited the *period of the stay* of creditor actions, required minimum reasonable payments during the period of the stay consistent with the proposed payment plan, and introduced a streamlined process for debtors with a limited amount of indebtedness and without mortgage debt. The reform also *introduced stricter criteria for the protection of primary residences*, and transitional provisions to migrate old cases to the revised regime within a short period of time.

8. The changes introduced in late 2015 generated a wave of personal insolvency filings to avoid the application and impact of the new legal regime. Numerous applications were presented in the transitional period, before the new amendments entered into force, due to the perception that the new rules would be more disadvantageous to debtors. This generated a considerable additional backlog of cases (of in total about 200,000 cases), which required the introduction of special measures, such as the increase of judges in charge of personal insolvency cases.

The reforms of the enforcement regime

9. Problems in the enforcement of claims have been a staple of the Greek legal system both before and during the crisis, severely undermining the payment culture. The Greek procedural regime for the enforcement of claims has been characterized by complication and lengthy delays. The basis of the procedural regime, the Code of Civil Procedure, was first adopted in 1967. There were numerous technical reforms of this text, but the legal regime remained inadequate when the economic crisis started. During the crisis, the lack of a robust social protection system prompted the authorities to introduce blanket moratoria on foreclosure to avoid any social consequences of the exercise of creditor rights. A first general moratorium on mortgage enforcement was introduced in 2008, banning home eviction for primary residence and property commercial value up to EUR 200,000. This applied until 2011 and was then extended in 2012. In 2013 (with effects as of January 1, 2014), the blanket moratorium was replaced by a relatively more targeted one, applying to primary residences with a taxable value of the property was below EUR 200,000, the annual net income of the debtor was below EUR 35,000, the total value household assets (including real estate and movable assets) was below EUR 270,000, and the total value of the debtors' deposits and other financial assets was less than EUR 15,000. The cumulative effect of the repeated and continuous use of broad moratorium schemes increased strategic defaults and undermined the payment culture (IMF, 2013b).

⁵ In a similar situation to that of the business insolvency regime, the authorities used several studies to propose changes, resulting in the 2015 amendments. Again, no impact analysis and comprehensive stakeholder consultation were conducted. An analysis with proposed amendments to the personal insolvency framework were part of the Fund supported program as early as 2013.

10. The reform of the Code of Civil Procedure (CCP) signaled a fundamental change. In August 2015 the civil procedure regime was overhauled through the Law No. 4335/2015.⁶ The new CCP, which entered into force on January 1, 2016, provides for the following changes to the enforcement of claims.

- Debt enforcement procedures have been streamlined in the new regime and made more efficient by eliminating possibilities for appeals and delays.
- Civil procedure has been transformed from an oral to a written procedure. The enforcement part of the process has been rationalized and simplified, with possibilities for the use of e-justice.
- Importantly, deadlines of the process are set from the beginning, which helps to improve the predictability of the duration of the process. The law also introduces changes in the rules regarding interim measures: the court can determine a deadline for the filing of the main lawsuit, or otherwise the interim measures are automatically lifted after 60 days.⁷
- Reduction of defenses against enforcement actions. The debtor can only challenge defects in two different points in the process, as opposed to the previous system, which allowed challenges at every point in the process.
- The auction process for foreclosed real estate has also been streamlined by eliminating possibilities for delays and appeals. Further, the reserve price is determined by the market price and reduced if successive auctions fail. The possibility of an e-auction is enabled.
- Appeals against court decisions are reduced, and the appealed decisions are enforceable.
- The new ranking of claims ensures that secured creditors are allocated a priority for 65 percent of the proceeds, while general priorities will receive 25 percent of the proceeds, and unsecured creditors 10 percent. This system is superior to the previous one, which did not protect secured creditors against the potential impact of the super-priorities of public claims, which could absorb entirely the proceeds generated in the sale of collateral. Nonetheless, this ranking and distribution mechanism is not in line with cross country experience (see below, section D and box 2).

The out-of-court framework

11. The problems identified in the legal system and the institutional framework, as well as the severity of the crisis, led to the consideration of out-of-court solutions. In December 2014,

⁶ There were previous reforms, especially the Law No. 4055/2012 on fair trials and their reasonable duration.

⁷ The parties' pleadings are submitted within a deadline of 100 to 130 days from the submission of the lawsuit, and additional pleadings can only be submitted within a fifteen-day period after the expiration of the general deadline. After the case is closed, the judge or court is appointed, and there is a hearing within a period no longer than thirty days. The hearing does not include witness examination, unless it is considered that this is strictly necessary, it is just a general discussion of the case. Therefore, the procedure is generally a written one, with the extraordinary possibility of examining witnesses in certain cases.

the Greek authorities adopted a temporary out-of-court workout law (“Dendias Law”, or “OCW law”) which became effective in early 2015. The Dendias Law reflects many features of international best practices, and included three different mechanisms for debt restructuring and enforcement, with various degrees of court intervention:

- The first mechanism, involving the settlement of the debts of small businesses and professionals, was purely extrajudicial, and provided for a voluntary, debtor initiated and bank-led process to restructure the business debts of viable debtors who meet certain eligibility criteria (i.e., request must be filed by March 31, 2016 and (a) should not have been filed or withdrawn under the Katseli Law; (b) should not have ceased activities or been dissolved; and (c) should not have been convicted of certain financial crimes). The debtor must be in arrears for more than 90 days on bank debt and must be current under a payment plan with the tax or social security administration. Banks are provided with tax incentives to restructure debt to provide deep write-offs (at least 50 percent of debts up to EUR 500,000 and if less than 50 percent, the remaining debt should not exceed 75 percent of the debtor’s ‘net asset position’), and the restructuring of the private debt also triggers the inclusion of the debtor in an installment scheme for tax and social security debt. The installment scheme allows the debtor to pay amounts due to tax/social security in up to 100 installments. In addition, for debtors participating in the installment scheme through this process, an additional write-off of 20 percent of surcharges, interest and late fees is also available.
- The second mechanism, involving the extraordinary procedure for settlement of merchants’ debts, consisted of a hybrid out-of-court restructuring agreement, subject to court confirmation. Upon court confirmation, cram down of all (including dissenting) creditors (if approved by 50.1 percent of the debtor’s creditors as well as secured creditors) creates an expedited, debtor-initiated restructuring procedure (accompanied by an evaluation of viability by its creditors and a chartered auditor’s certificate that the required creditor majority has been met). A provisional stay may be granted for a maximum period of six months. As a prerequisite to debt restructuring by banks, any arrears to tax and social security creditors should be under an installment scheme on which the debtor must be current. Once a plan is approved, creditors may not take any collective enforcement action, including the declaration of insolvency under the Corporate Insolvency Law for 12 months. Financing provided for 12 months after court confirmation of the plan has priority in repayment, even if the plan fails. The best interest test is used to determine whether creditors who are crammed down are entitled to compensation (but such claims do not affect the plan). Labor dues are required to be settled in full but can be split into 12 installments, without interest. Upon plan approval, the debtor is entitled to an additional 20 percent relief on interest, penalties and surcharges on tax and social security debt. If the debtor’s public debt is over EUR 1 million, upon plan approval, the debtor may apply for a write off of 40 percent of surcharges, interest and penalties and pay the balance in 100 equal installments. The tax/social security authorities may decline the debtor’s request but must do so within two months and based on a reasoned opinion.

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- The third mechanism is the extraordinary procedure of special administration, which is a creditor initiated streamlined procedure designed to take control of the debtor's business and liquidate it through a special administrator and requires court approval. Once confirmed by the court, the special administrator can take control of and liquidate the debtor's assets over a 12-month period. Assets may be liquidated by the special administrator piecemeal or the business (or parts of it) may be sold as a going concern. During this period, individual enforcement actions by creditors are suspended. If 90 percent of the assets remain unsold after 12 months, the debtor will be liquidated, but if 90 percent of the assets have been sold, the special administrator may continue to dispose of assets. Distributions to creditors would be made in accordance with the provisions of the Civil Procedure Code. The special administrator is only liable for intentional wrongdoing and gross negligence.

12. The “Code of Conduct” for the management of private sector arrears is also part of the trend to find alternative solutions to enforcement of claims. In 2013, the Bank of Greece issued a Code of Conduct for the management of private sector arrears by Greek banks. The spirit of the Code is to assist in finding negotiated solutions to the treatment of non-performing loans. The Code of Conduct includes general principles for the assessment of debtors and finding adequate solutions for the arrears situation. The Code is designed to provide fair treatment to cooperative debtors by establishing an arrears-resolution procedure which covers the following phases: (1) debtor communication, (2) financial information gathering, (3) financial data assessment, (4) proposing solutions and (5) appeals review process. The Code has been reformed in 2016.

The market for non-performing loans

13. The market for non-performing loans has been recently liberalized and represents a complement to the insolvency and enforcement system. The goal of developing the market for loans, including NPLs, is to attract foreign capital; leverage off much needed NPL management platforms and technical expertise through service contracts and joint ventures; and where possible, to remove the non-performing loans from the balance sheets of the banks. After its adoption in December 2015, the law was revisited to correct several technical aspects and to define its scope, extending its coverage to all loans, performing and non-performing, except for mortgage loans over primary residences, under the value of EUR 140,000, which are subject to a moratorium under the law until 2018. The administrative regulations for the law have only been recently put in place, the market has not developed yet, and some practical implications of the sale regime have not been tested. In particular, any underlying problems of the legal framework affect negatively the prices of distressed assets, as NPLs will have to be restructured or enforced by the acquiring entities.

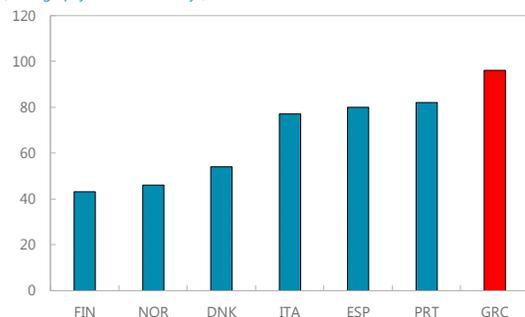
C. Current Challenges in the Insolvency and Enforcement System

14. The reforms to date have not yielded the desired results. Political and economic developments have not provided the necessary stability and support for the development and implementation of the new laws and the reinforcement of the institutions. Moreover, some of the reform amendments are recent and need time to be tested. The result is that late or non-payment is

pervasive, both in terms of the average payment term and of the percent of companies with late payments, where Greece tops the cross-country lists (Figures 4 and 5).

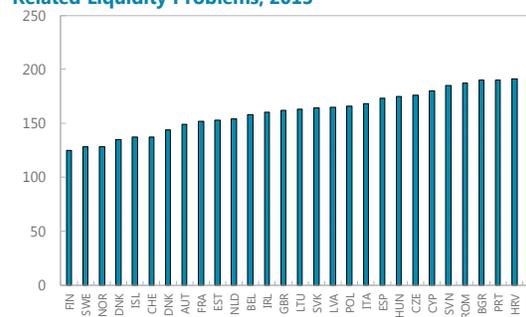
European Payment Risk Index, 2013

(Average payment term in days)



Source: EC.

Outliers: Percentage of Companies with Late Payments-Related Liquidity Problems, 2013

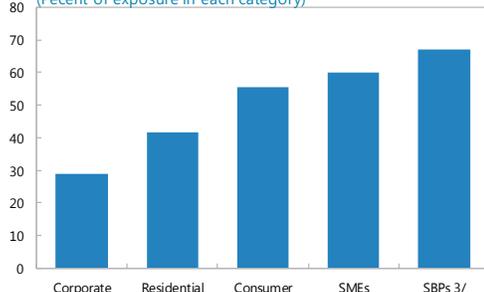


Source: EC.

15. The business insolvency regime remains underutilized. Although recent reforms have improved the framework, a disconnect remains between the design of the system and its practical operation, in particular as the framework continues to be too complex and expensive considering that about 96.7 percent of businesses in Greece are micro SMEs, and it is those that have the largest problems with servicing debt (Figure 6).⁸ Official data suggests that the number of insolvency cases bears no relation with the widespread distress in the Greek corporate sector, with bankruptcy procedures having declined relative to the pre-crisis level (Figure 7). This could be explained by the fact that the official statistics are only capturing formal liquidation procedures, rather than pre-insolvency procedures, which are more extensively used, but largely as an opportunity to block creditor actions and gain breathing space for the debtor enterprise. In addition, the liquidation process is highly inefficient. For instance, in the first three months of 2016, the Athens district court—the largest court in Greece—only registered 16 bankruptcy applications.⁹ There is no real backlog of commercial insolvency cases: most of the cases that remain in the courts for years are those where there is no action that can be taken—typically, asset-less bankruptcy cases. The lack of use of insolvency proceedings points to the paradoxical fact that although there is a high number of

Non-Performing Exposure Ratios, 2016:Q2

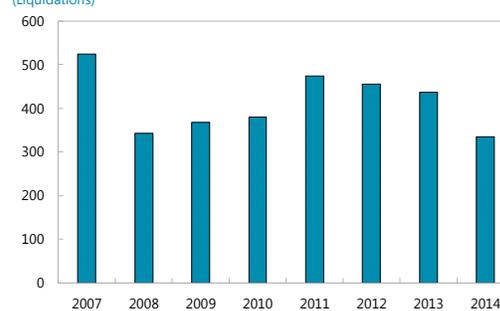
(Percent of exposure in each category)



Sources: Bank of Greece; and IMF staff calculations.
3/ SBPs: small businesses and professionals.

Insolvency cases in Greece

(Liquidations)



Source: Elstat.

⁸ Source: GSEVVEE data.

⁹ Source: Athens Court of First Instance, Bankruptcy Chamber.

(continued)

commercial debtors who are in a situation of insolvency, they largely remain outside the insolvency system, while the insolvency law is reserved for liquidation cases that are eventually resolved, after a long procedure which takes up to 10 years, with no or little pay out to creditors (see ECB 2016, 64).¹⁰ As a result, the insolvency system is not able to perform its fundamental economic function, namely to offer creditors the most efficient means of recovery, which implies the preservation of viable enterprises and the liquidation of those that are not viable, with the consequent redeployment of resources to more productive uses

16. In contrast, the personal insolvency framework has been over- and misused. More than 200,000 applications for personal insolvency have been filed in six years under the new framework (i.e., about 2 percent of Greece's population). The wave of applications has flooded the system and has led to a paralysis of the system, with debtors receiving a payment moratorium as a result of the backlog that is expected to last up to 15 years. This problem is exacerbated by the insufficient guidance to judges and the design problems preceding the 2015 law (such as the requirement that the debtor pays a minimum or no payments at all pending a court hearing). The system appears prone to abuse, with debtors who do not qualify applying anyway as a way to avoid creditor actions for a long time until the case is heard.¹¹ Thus, instead of providing a second chance for individuals who are experiencing over-indebtedness so that they can return to productive activity, the system appears to be used to fend off creditor actions and preserve assets. This does not provide a lasting solution to the indebtedness problem for either creditors or debtors, while absorbing judicial and administrative resources.

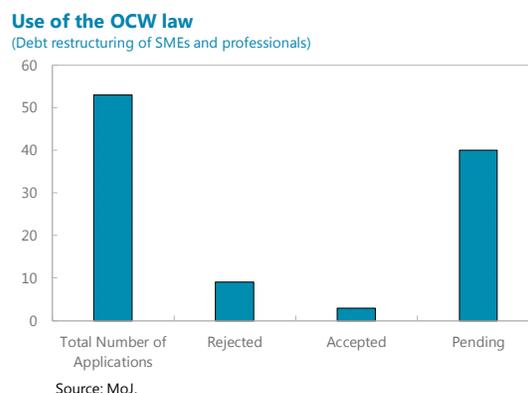
17. The enforcement system is ineffective. The repeated moratoria have undermined the payment culture, and the enforcement regime has traditionally been extremely defective, with long and costly procedures resulting in low recoveries. Collateral enforcement is lengthy due to the fact that most mortgages are not properly registered in the land register/cadaster (rather than just pre-notated), in large part due to expenses such as notarial fees and excessive transfer taxes.¹² Moreover, a land register or cadaster spanning the whole territory of Greece is lacking. Finally, foreclosures have been rare (due to formal and informal moratoria) and, when they have occurred, they have been lengthy and costly, with little pay out to the secured creditors due to the superiority of public creditors (see ECB 2016, 63). The adoption of the Code of Civil Procedure represented an opportunity to improve the system significantly, although so far its application has been limited, and the use (and misuse) of procedures that stay creditor actions continue undermining the possibilities of timely and efficient enforcement in Greece.

¹⁰ Statistics are fragmentary (collection of insolvency statistics is an issue in itself), but this statement appears in various sources, including in a statement made by a member of the Law Reform Committee on Insolvency Law.

¹¹ The number of strategic defaulters is estimated to amount to as much as 30 percent of the applicants (ECB 2016, 64).

¹² The commonly used pre-notation (which is noted in the cadaster and secures priority if perfected within 90 days of an initiated seizure) requires a payment order (PO) from the court of first instance to foreclose on the property. This PO requires payment of a judicial fee of 1.4 percent and may take up to one year to obtain in Athens.

18. Out-of-court approaches have not been successful so far. The Dendias Law did not achieve its objectives (Figure 8). Despite the use of advanced legal techniques, drawing on input from financial and legal experts and comprehensive stakeholder consultation, there were several important obstacles that prevented the use of the law. First, the law required a debtor to already use one of the installment schemes for tax debt, and thus did not offer an appropriate way of combining the restructuring of financial and public claims (tax and social security claims) in a unified and equitable manner. This is because the law offered no incentives for private creditors (e.g., banks) to engage in debt restructuring, given that public creditors were protected, and private creditors would have needed to bear larger losses. Second, the set of tax incentives for debt restructuring was insufficient. Third, the implementing regulations were insufficiently adopted; thus, no standard forms or templates as well as engagement protocols were adopted. Finally, the OCW law came into force at a time of high political instability, which undermined the incentives for parties to use the OCW process due to the political and economic uncertainty and further complicated dissemination to the public.



19. Other legal obstacles complicate the debt restructuring process:

- Unlike most other EU countries, in Greece secured creditors are less protected and public creditors (tax and social security) are most protected (see Box 2), even after the Code of Civil Procedures has been reformed. Overprotection of the public interest has consequences – secured creditors will lend less, demand higher interest rates, and higher value of collateral-, and unsecured creditors—especially suppliers—suffer the impact of priorities that reduce significantly their possibilities of recovery. The complex relationship between public claims and private claims (secured and unsecured) adds to the difficulties in an already complex debt resolution process.
- The tax and social security authorities have little to no capacity to engage in meaningful debt restructuring. Moreover, public creditors are reluctant to engage in meaningful debt restructuring, due to their concern for criminal liability, as the write-down of public debt could be included within the scope of the criminal offence of dishonest administration. This concern for liability also affects bank officials, as there is a risk that the same interpretation of the crime of dishonest administration be applied to the restructuring activities of banks recapitalized with public funds, and bank officials could face both civil and criminal liability.
- Obstructive shareholders can prevent the effective restructuring of companies. The treatment of shareholders in Greek insolvency law allows the owners of the business to retain control and influence crucial decisions in the restructuring process, even when their economic interest is non-existent due to the fact that there is no value in equity in the insolvent company. Shareholders have their legal powers intact, and can undermine numerous debt restructuring

strategies –for instance, the use of debt/equity swaps– and obtain advantages from creditors, thanks to the “nuisance value” of their position. The authorities are aware of the importance of this issue and have introduced amendments to the insolvency law to disenfranchise shareholders in the restructuring process when the company is insolvent.

20. Lack of adequate implementation has thwarted the effectiveness of reforms. In some cases, this has been due to lack of secondary legislation (e.g. the OCW law, electronic auctions under the CCP). In other cases, it has proved difficult to enforce the strict deadlines provided for in the law. For example, while the new CCP has been in force since January 1st, 2016, due to the lawyers’ protest, it has only been applied as of September 2016. The courts will need to make an effort in training, adapting to the new procedure, and establishing the adequate infrastructure. Lack of coordination and expertise have also contributed to implementation problems. For instance, the government council for private debt, established in 2014 and intended to play a coordinating role among government stakeholders, met only rarely provided only infrequently input into the debt restructuring reform process. This was not only due to resource constraints, lack of management capability, and lack of expertise, but also to weak reform ownership and frequent changes in governments. Finally, the supporting infrastructure for debt restructuring remains weak. Debt counseling services are yet to become operational, social safety nets are inadequate, and the supportive data infrastructure is incomplete (e.g., public registers, the credit register).

21. Significant problems in the institutional framework have also affected the functionality of the insolvency and enforcement system:

- The limited capacity of the judicial system has been an issue since the beginning of the crisis. The delays in litigation are endemic, courts lack adequate technology and data systems, and the support bureaucracy is highly inefficient. The court system is also overburdened because of the high appeal rate: reportedly, more than 50 percent of judicial decisions are appealed, which consumes additional judicial resources in the resolution of disputes.
- The insolvency and creditor rights framework is supported by an inadequate institutional setting. The court system is fragmented, not centrally managed and operated, and lacks the necessary supportive data systems. Moreover, judges lack specialization and expertise. For instance, judges deal with all types of cases (civil and criminal cases) and need to rotate every two years in their position, not enabling specialization. Training of the judiciary is also lacking. There is a lack of competent auxiliary staff, proper systems for case management, and adequate infrastructure. Additional judicial resources have been allocated to address the backlog in personal insolvency cases.
- The insolvency profession has not been regulated. Beyond lawyers, which have been frequently on strike, there is no professionally organized cohort of insolvency professionals, which weakens the application of the insolvency framework. The 2015 reforms of the business insolvency law introduced a new regime for the regulation of insolvency administrators. However, this regime is yet to developed by secondary legislation and then put into practice.

Box 1. The Greek Court System for Enforcement and Insolvency

The Greek court system does not have specialized courts or judges for enforcement and/or insolvency matters except for the three major districts. Insolvency and enforcement matters are dealt with by the civil courts (dealing with all types of matters of civil and commercial issues from family matters to commercial disputes and IP disputes) that consist of three levels of courts: first, the magistrate courts (formerly peace courts are 154 in the country) and courts of first instance (about 63 courts); second, the civil court of appeals (about 19 Courts of Appeal courts (including 4 newly established courts); and third, one Cassation Court (Supreme Court of Areios Pagos). Enforcement and corporate insolvency matters are dealt with by the first instance courts, while cases under the Katseli law are dealt with by the magistrate courts. There are currently about 880 judges in magistrate courts; this number has been increased by 194 (judges for household insolvency cases) in 2016. The number of first instance judges is 807. The number of court of appeals judges is 459 and the number of cassation court judges is 61.

The judiciary is self-administered but not centrally managed Judicial appointments are made independently from the Executive (except for the most senior positions). All organizational matters (including promotions and assignments) are decided by the Supreme Judicial Council (consisting of the Supreme Court presidents and elected common judges). For instance, magistrate judges cannot be promoted to more senior positions at higher courts. Judges typically do not specialize on certain matters but get assigned a whole range of types of cases at the same time; further, generally judges need to rotate every two years from their positions, which does not enable specialization and seeing a case from start to finish since the typical cases lasts more than two years. Courts are operated as individual units rather than a coherent judicial system leading to fragmentation and little flexibility in assigning resources. There is no centralized management nor adequate management at the court level. Data systems, if existent, are court-specific and do not span the entire court system, leading to the absence of an oversight function and the impossibility to have an effective case management.

D. Policy Recommendations

22. Reforms should be supported by more intense implementation efforts and by a reinforcement of the institutional framework. Changes in the legal system have brought Greece closer to best international practices. These changes must be supported by more intense implementation efforts and changes in the institutions. In this regard, the following actions need to be taken:

- *The implementation of the Code of Civil Procedure should be a priority.* This is because an efficient enforcement of claims is the foundation for an insolvency and debt restructuring regime. The authorities should thus adopt all remaining secondary legislation necessary for the full implementation of the Code of Civil Procedure. With the completion of the rules on the electronic registry of cases and the use of market valuation standards for collateral, one of the most important changes remaining is the regulation of electronic auctions. A system allowing flexibility in the formulation of bids, open competition, and equal access to information, would represent a significant improvement over the existing framework.
- *Coordination among stakeholders is key.* The authorities should set up again and make full use of a coordination mechanism that includes all stakeholders and meets regularly. This

mechanism would need to be adequately resourced to design a comprehensive and properly sequenced plan that would then need to be implemented.

- *Liquidation should be simplified and streamlined.* This should take into account that 99 percent of business are MSMEs. The current liquidation process is too complex, costly and protracted leaving little to no pay out to creditors.
- *Reinforcement of the judiciary, auxiliary staff, and infrastructure to deal with civil action is also keys.* Although the procedural regime designed by the Code of Civil Procedure is largely adequate, it will need to be tested in the courts. It is likely that the demanding deadlines set out by the Code will require additional efforts on the part of the judiciary and Justice administration. In the medium term, the authorities should consider a new judicial organization (focusing on further specialization for judges, concentration of subject matters and flexibility in assigning resources), with professional management tools and data systems that permit a continuous assessment and improvement (e.g., a full e-justice system).

23. The latest reform of the business insolvency law represents a positive step, but effective implementation, and the regulation of the insolvency profession should be now prioritized. The business insolvency regime has been fine-tuned with the amendments adopted in December 2016. Some of the changes are especially positive, such as the measures to tackle the obstructionist tactics of controlling shareholders. There are other aspects of the regime which should be improved, such as the legal protection of public officials and bank staff in charge of insolvency and debt restructuring activities. Irrespective of the legal amendments, modern insolvency procedures require the assignment of functions to qualified professionals with specialized knowledge. The potential of the insolvency legislation will not be fulfilled until an expert insolvency profession is developed. The regime of insolvency professionals requires a number of regulations, covering aspects such as qualifications, examinations, supervision, training, a code of conduct, liability and insurance, and a sanctioning regime. In addition, the supervision of the insolvency profession requires additional administrative resources and a proper structure to guarantee the quality and effectiveness of the functions performed by insolvency professionals. As indicated before, it would be helpful to allow further specialization of the judiciary in commercial law, generally, and in insolvency law, specifically. By their very nature, changes in the institutional framework will not produce effects overnight: the benefits of those changes will only be appreciated over the long term, although this does not detract from their importance.

24. Because of the need to face the immediate consequences of the crisis, the use of out-of-court debt restructuring needs to be made more effective. Since institutional changes will take time to produce tangible results, promoting out-of-court debt restructuring is essential to deal with the over-indebtedness problem over the medium term. The advantages of out-of-court restructuring are numerous: it can deal with a high number of debtors at a much lower cost than judicial procedures, and the restructuring agreements can be more beneficial for creditors and debtors, avoiding lengthy judicial procedures and the stigma associated with insolvency. To be effective, the out-of-court process should be simple, tailored to the large number of SMEs, and based on the cooperation of debtors and creditors. Because of the special characteristics of the

ranking of claims in Greece (see Box 2), public creditors will need to participate together with private creditors in debt restructuring solutions on an equal footing. This implies that the public creditors must be prepared to face losses, and those losses should be generally distributed in accordance with the applicable ranking of claims. The system will also require expertise in developing viability assessments, which will necessitate adequate financial and economic information about the debtor. Finally, the system must be supported by a proper tax treatment of debt restructuring activities and by rules providing adequate protection for those who take debt restructuring decisions in the public administration or in financial institutions.

25. In order to establish a solid foundation for access to credit in the future, it will be necessary to revisit the ranking of claims in the Greek law. The position of secured creditors under Greek law (both in individual enforcement and in insolvency) creates comparative disadvantages for financial institutions operating in Greece, and will limit the access to credit for households and enterprises. A revision of the ranking of claims, hand in hand with the implementation of other reforms, will be needed in the future to avoid these negative effects.

Box 2. Ranking of Claims in Selected European Jurisdictions

Insolvency systems implement different approaches to the ranking of claims, reflecting complex policy choices: the ranking of claims reveals a distributional policy, allocating the damage derived from insolvency to different classes of creditors. Despite the existence of some common features, such as the priority of secured credit, and the priority of workers' claims, there are many differences across legal systems, including across countries belonging to the European Union.

Country	Priority of Tax Claims	Priority of Secured Claims
Germany	No priority for public claims	Full priority
Spain	Priority limited to 50 percent of tax claims. Interest and penalties are subordinated	Full priority
Italy	Unlimited Priority (in time and amount)	Full priority
France	Limited priority (taxes accrued over a certain period) ¹	Priority, only subject to potential impact of a limited 60-day wages super-priority
Greece	25 percent of proceeds in sale of secured collateral	65 percent of proceeds in sale of collateral

In Greece, 10 percent of the proceeds are reserved for unsecured creditors. In all other European countries, unsecured creditors would only receive proceeds from the sale of collateral after full satisfaction of the secured claim.

The ranking of claims in Greece is different: the ranking operates within the Code of Civil Procedure, and applies separately to the proceeds of different assets, as opposed to insolvency rankings, which consider the position of creditors over the whole of the insolvency estate. Regarding collateral, secured creditors are entitled to receive 65 percent of the proceeds of the sale of the encumbered asset, and 25 percent of the proceeds are distributed among general preferential creditors, which include the workers' remuneration for two years before insolvency, and termination compensation; lawyers' fees for six months, social security contributions until the declaration of bankruptcy for two years, and claims of the state arising from VAT and its surcharges. After all these, all other claims of the state (including taxes and social security contributions) also have priority. Unsecured creditors receive the remaining ten percent of the proceeds.

¹ France has a general tax preference, but is limited in its application to the main taxes. There is no specific limitation for social security, agricultural security and holiday insurance contributions, and there is a longer period for income and wealth taxes (four years) and a shorter period for customs duties (three years). The general tax preference entitles the government to priority with regard to movable assets but not real estate (except for real estate taxes).

References

Aiyar, S., Bergthaler, W., Garrido, J. M., Ilyina, A., Jobst, A., Kang, K., Kovtun, D., Liu, Y., Monaghan, D., and Moretti, M., 2015, "A Strategy to Resolve Europe's Problem Loans", SDN/15/19 (Washington: International Monetary Fund).

Bazinas, G., 2014, *Insolvency law and Company Law in Greece*, available at <http://www.globalforumijd.org/sites/default/files/docs/cop/Questionnaire%20Greece.pdf>

Bergthaler, W., Kang, K., Liu, Y., and Monaghan, D., 2015, "Tackling Small and Medium Sized Enterprise Problem Loans in Europe," SDN/15/04 (Washington: International Monetary Fund).

European Central Bank, 2016, *Stock-take of national supervisory practices and legal frameworks related to NPLs*, ECB, Frankfurt.

European Commission, 2016, *The EU 2016 Justice Scoreboard*, available at http://ec.europa.eu/justice/effective-justice/files/justice_scoreboard_2016_en.pdf

European Commission, 2016, *Study on a new approach to business failure and insolvency Comparative legal analysis of the Member States' relevant provisions and practices*, available at http://ec.europa.eu/justice/civil/files/insolvency/insolvency_study_2016_final_en.pdf

Garrido, J. M., 1995, "The Distributional Question in Insolvency Law: Comparative Aspects", IIR, 25

Garrido, J. M., 2012, *Out-of-Court Debt Restructuring* (Washington: World Bank).

International Monetary Fund, 2013, *Greece: Staff Report for the Fourth Review Under the Extended Arrangement Under the Extended Fund Facility*, Country Report No. 13/241.

International Monetary Fund, 2013b, *Greece: Selected Issues Paper, "How Can the Financial Sector Support Recovery?"*, Country Report No. 13/155.

International Monetary Fund, 2014, *Greece: Staff Report for the Fifth Review Under the Extended Arrangement Under the Extended Fund Facility*, Country Report No. 14/151.

Isaias, K. S., Koutsopoulou, V. N., 2013, "Greece – Pre-insolvency Proceedings under Greek Law: Some Critical Thoughts", 204 *Global Insolvency and Restructuring Review*, 63.

Liu, Y., and Rosenberg, C., 2013, "Dealing with Private Debt Distress in the Wake of the European Financial Crisis. A Review of the Economics and Legal Toolbox", WP13/44 (Washington: International Monetary Fund).

GREECE

Manuelidis, Y., Metallinos, A., Moumtzoglou, 2015, "Greek Pre-Insolvency Proceedings", in Olivares-Caminal (ed.), *Expedited Corporate Debt Restructuring in the EU*, OUP, Oxford, 358.

Paulus, C., Potamitis, S., Rokas, A., Tirado, I., 2015, "Insolvency Law as a Main Pillar of Market Economy—A Critical Assessment of the Greek Insolvency Law", *IIR*, 1.

Perakis, E., 2010, "The new Greek Bankruptcy Code: How Close to the InsO?", *FS K. Hopt, De Gruyter, Berlin*, 3251.

PriceWaterhouseCoopers (Greece), 2015, "Stars and Zombies: Greek Corporates Coming Out of the Crisis", available at <https://www.pwc.com/gr/en/publications/assets/stars-and-zombies-september-2015.pdf>

Potamitis, S. – Nounou, E., 2016, "Greece", in *Restructuring and Insolvency, Getting the Deal Through*, LBS, London, 193.

Potamitis, S., Rokas, A., 2012, *A new pre-bankruptcy procedure for Greece*, *JBL*, 235.

ADDRESSING THE BURDEN OF TAX AND SOCIAL SECURITY DEBT¹

Greece's exceptionally high level of tax and social security debt to the state hinders the efficiency of current tax collection and imposes a drag on economic activity. This paper describes the key drivers of tax and social security contribution (SSC) debt and outlines policy recommendations to address this problem.

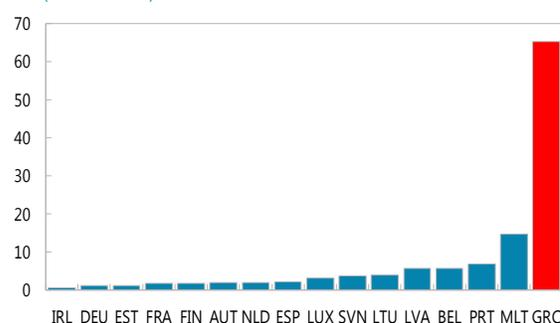
A. Characteristics and Evolution of Debt to the State

1. Greece's tax and social security debt to the state is by far the highest in Europe. It has reached about €115 billion, or close to 70 percent of GDP. Almost half of taxpayers and half of social security contributors (SSC) are in debt to the state. This excessively large debt burden weighs on the balance sheets of companies and individuals, hindering investment, consumption, and the resumption of growth. Moreover, it burdens the already weak tax administration, as tax officials' efforts are stretched by the large and growing amounts of debt to the state.

2. Tax debt represents about 80 percent of total liabilities to the state and is concentrated among a relatively few number of taxpayers. At end-November 2016, tax debt reached €94.2 billion (55 percent of GDP), and the number of tax debtors stood at about 4.3 million. About 85 percent of tax debtors owe less than €3,000 each and account for about 2 percent of total tax debt. In contrast, less than 1 percent of debtors, owing more than €1 million each, account for about 80 percent of tax debt, pointing to a highly skewed distribution of debt among a relatively small number of large taxpayers.

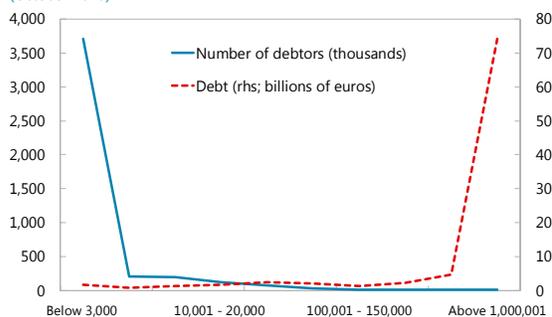
3. Tax debt has increased at a rapid pace. Since the onset of the crisis, the tax debt has more than doubled, growing at a rate of about €1 billion per month in recent years. As to its composition,

Private Sector Debt to the State
(Percent of GDP)



Sources: Ministry of Finance; and OECD Tax Administration 2015.
Note: Data for Greece are as of end-November 2016 and include social security contribution debt. For other countries, data are as of end-2013, and for Germany as of end-2012.

Tax Debt Brackets
(October 2016)

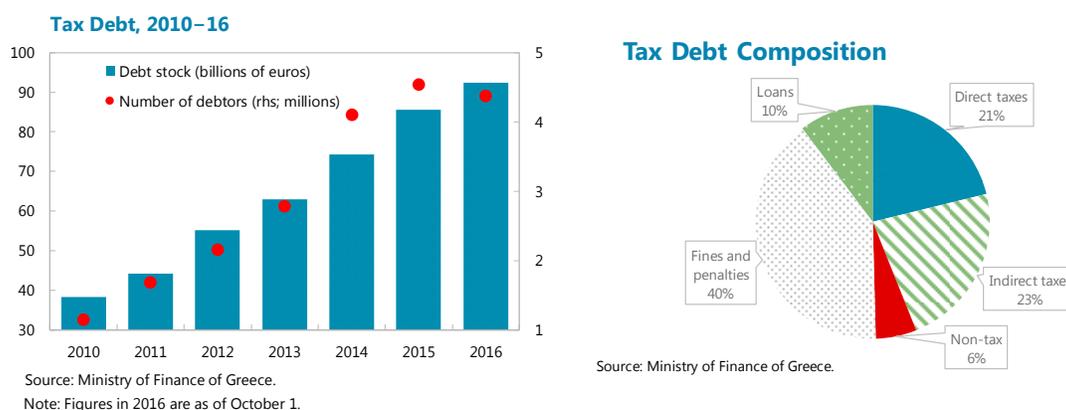


Source: Ministry of Finance of Greece.

¹ Prepared by Ivohasina Razafimahefa (FAD).

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around 40 percent is due to penalties and fines, with less than half on account of direct and indirect taxes. The structure and evolution of tax debt can be explained by a variety of factors:



- The long recession.* The protracted downturn, including the sharp rise in unemployment and reduction in incomes, has hindered taxpayers' ability to stay current with their tax obligations. But the downturn may have also incentivized tax evasion, to the extent that it was associated with a shift from the formal to the informal sector.² Moreover, taxpayers under economic strains may have perceived the downside risks of tax evasion (penalties) to be smaller than the potential upside gains (avoiding bankruptcy). The tight credit availability may have also lead taxpayers to use tax evasion as an alternative source of financing (e.g. by not remitting to the government VAT and taxes withheld from customers and employees).
- A weak payment culture.* Tax debt was high in Greece (the highest in the Euro Area) even in the period preceding the crisis, suggestive of a weak payment culture. Since the crisis, tax collection rates—defined as the ratio of collection to assessment, and including penalties and fines—have been on a downward trend, from about 75 percent in early 2010s to 45 percent by end-2015. Another indicator of payment culture is the difference between overall tax liabilities (identified and unidentified) and effective collection, called the compliance gap. Greece's VAT gap—measured as the difference between the theoretical VAT liability according to tax laws and actual VAT collection—stood at around 28 percent at end-2014, being nearly twice as large as the Euro Area average (16 percent). This points to significant and persistent tax compliance issues, including due to under-declaration of tax liabilities.
- High tax rates on narrow bases.* Rates of all major taxes have been repeatedly increased and are currently higher than in peer countries, making it more difficult for taxpayers to comply with their tax obligations. However, this has not resulted in a commensurate increase in tax revenues, which are lower than in peer countries. Remaining tax exemptions also keep tax

² A regression analysis based on a panel of European Union countries found a positive and significant relationship between VAT efficiency and the output gap (Brondolo, 2009). Furthermore, Sancak et al. (2010) find that VAT efficiency is hindered by changes in tax evasion during economic downturns.

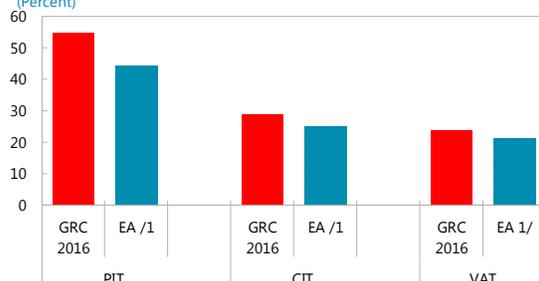
bases narrow, burdening a small share of taxpayers with a large tax liability. For example, the generous personal income tax (PIT) credit on wage, pension, and farming income exempts more than 50 percent of wage earners, and together with steep marginal PIT rates, implies that 60 percent of PIT collections are paid by the highest income decile. Such tax policy distortions reduce compliance incentives and contribute to tax debt accumulation.

Tax Rates (Percent)

Tax	Number of increases since 2009	Top rate increase (ppts)	Current top rate
PIT (income=€45,000)	3	10	45
CIT	2	9	29
VAT	2	5	24
Excises (% change) 1/			
Petrol (per liter)	1	63	0.67
Cigarettes (per 1,000)	2	1352	80
Alcohol (per liter)	1	87	24.5

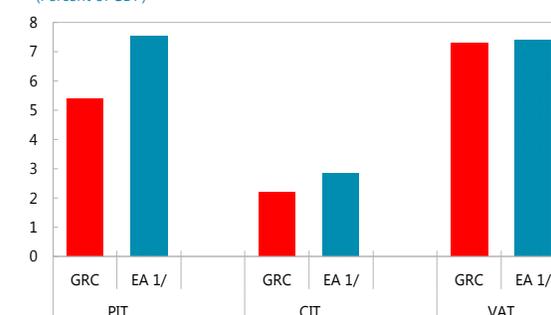
Sources: OECD; and IMF Staff calculations.
1/ VAT applied in addition to higher excise rates.

Tax Rates, 2015 (Percent)



Source: OECD Tax Database.
1/ Simple averages of the top marginal PIT rate, combined central and subcentral government CIT rate, and the standard VAT rate for euro area countries.

Tax Revenues, 2015 (Percent of GDP)



Source: Eurostat.
1/ Simple average of PIT, CIT, and VAT revenues for euro area countries.

4. Social security contribution debts are also large and increasing rapidly. They currently amount to about €20 billion, or about 12 percent of GDP.³ Most of the debts (close to 9 percent of GDP) relate to the largest social security fund (IKA-ETAM), which has experienced a doubling of the SSC debt level during 2012-15. About 40 percent (1.6 million) of all contributors were in debt at end-2015. Similar to tax debt, the surge in SSC debts is largely due to a weak payment culture and the deep recession, coupled with weak collection enforcement capacity. Also, the system of SSC assessment based on notional income may have worsened the problem, as contributors who earn an actual income below the notional income may not have the financial capacity to stay current on their SSC obligations.

Social Security Contributions Arrears (Million of euros)

	2014	2015
IKA-ETAM	14,267	15,182
OAE	4,503	5,174
ETAA	85	99
TSAY	13	15
TAN	46	54
TSMED	26	30
OGA	226	207
TOTAL	19,081	20,662

Source: Ministry of Labor of Greece.

³ The figures are related to the four main SSC funds.

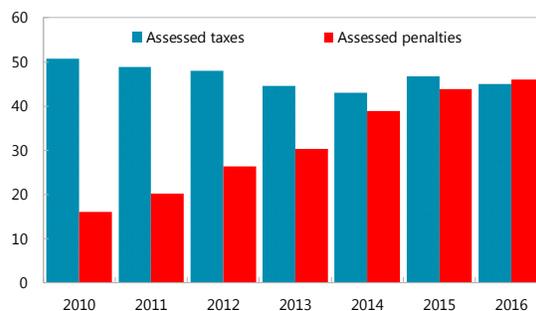
B. Tax Administration Issues

5. Tax administration practices did not alleviate the tax and SSC debt accumulation and may have even exacerbated the problem. Various reforms have been attempted to modernize the tax administration and improve revenue collections, including an overhaul of the tax procedure code, including the redesign of installment schemes and revision of fines and surcharges; institutional reforms aiming to establish an autonomous revenue agency and set up units for large taxpayers, high-wealth individuals, and large debtors; and the creation of the dispute resolution unit aimed at accelerating procedures. However, the reforms did not lead to the expected outcome, either because the design of the measures was not effective (e.g. installment schemes were not targeted, and the autonomy of the tax administration was compromised by continued political interference), or because reforms were not fully implemented (e.g. risk-based audits and the prioritization of debt collection remained hampered by other legal obligations and practices). Limited capacity also constrained reform implementation. As a result, some of the measures that were introduced to address the accumulation of tax and SSC debt were not only ineffective, but may have contributed to exacerbating the problem, as discussed below.

6. First, the system of fines and penalties remains counterproductive, adding to the debt problem.

The Greek tax administration imposes multiple and large fines. Although the system of fines was significantly simplified with the introduction of a modern Tax Procedure Code in 2014, the majority of fines continue to be based on the previous complex system.⁴ Moreover, tax officials remain obliged to impose fines whenever the objective criteria have been met, regardless of circumstances (e.g. companies that already have excessive tax arrears and for which no person has been or can be held jointly liable for the penalties are still subject to fines). As a result, fines and penalties have more than tripled since 2010, and in 2016, the amount of assessed fines and penalties exceeded the amount of assessed current taxes. Such punitive assessments, instead of acting as a deterrent for tax avoidance, have added to the stock of tax debt. For example, about two thirds of 2016 penalties assessed through October are due to reassessments of penalties already in arrears, pointing to the ineffectiveness of such methods and to deep inefficiencies of the revenue administration (also see below).

Assessed Current Taxes and Penalties, 2010–16
(Billions of euros)



Source: Ministry of Finance of Greece.

Note: For 2016, the data refer to end-November.

7. Second, the current legal framework prevents the effective classification of tax debt as uncollectible and is overly restrictive regarding debt write-offs. Although recent legislation allows for classification of uncollectible tax debt, procedures are cumbersome and time consuming. For example, debts to the state can be considered uncollectible only if all required investigations

⁴ Prior to 2014, fines and penalties were regulated by complex legislation under the Code of Books and Records, which lacked proportionality between the penalty size and the seriousness of the violation and, thereby, punished severely minor accounting errors.

have been completed, validating that no assets or claims against third parties of the debtor and persons jointly liable were recorded, no sale of assets could have been annulled, criminal prosecution has been lodged, and the recovery of the revenues is objectively impossible. Completing such a procedure takes significant time. Moreover, the law allows for write-offs or cancellations of such uncollectible debt only if a number of specific conditions are met, related to unsuccessful investigations and enforcement actions. Decisions on the cancellation of tax debts are thus hampered by extensive legal requirements, and also by the fear of personal liability.

8. As a result, Greece lags its peers with respect to debt write-offs, despite most of the debt being uncollectible. The share of tax debt that is written-off in Greece is around 10 percent, lower than in many peer countries and the Euro Area average (of 15 percent).⁵ This is notwithstanding the very high level of total tax and SSC debt in Greece compared to peers, of which a large part is not collectible. Specifically, about half of the stock of large tax debts—which is more than 60 percent of the total tax debt—is largely owed by debtors in bankruptcy or special liquidation and by inactive companies, while more than 55 percent of tax debt is older than 3 years, for which the collection rate is below 2 percent. And, as noted above, 40 percent of tax debt is due to penalties and fines, for which collection rates are around 1 percent. Similarly, although the legal framework and classification are not well developed yet, a large share of SSC debt could also be considered uncollectable, as more than 80 percent of SSC debt is older than three years, with a collection rate of about 2 percent.

Greece: Large Tax Debts by Types, end-2015

(Billions of euros, unless otherwise indicated)

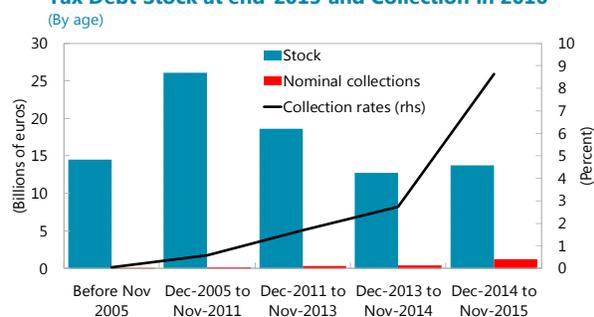
	Individuals (IN)	Legal Entities (LE)	Public & Municipal Corporations	Bankrupted	LE - Special Liquidation	Written offs	Written offs in process	Inactive Companies (IN-LE)	Totals	% of Grand Total
Direct Taxes	1.18	2.14	0.70	1.89	0.26	0.48	0.63	0.04	7.33	13.7%
Indirect Taxes	1.79	3.30	0.26	3.84	0.47	1.48	1.54	0.07	12.75	23.9%
Non-Tax Revenues	0.80	0.84	0.03	0.31	0.06	0.14	0.08	0.00	2.25	4.2%
Fines	3.98	4.84	0.16	1.93	5.56	2.48	3.99	0.18	23.12	43.4%
Loans	0.00	0.87	6.85	0.06	0.07	0.00	0.00	0.00	7.86	14.7%
Totals	7.76	11.99	8.00	8.03	6.42	4.58	6.24	0.30	53.32	
% of Grand Total	14.5%	22.5%	15.0%	15.1%	12.0%	8.6%	11.7%	0.6%		

Source: Ministry of Finance of Greece.

⁵ In 2008, the share of debt written off in total debt inventory was around 1 percent in Greece compared to a Euro Area average of 22 percent (the country composition of the Euro Area group in these calculations differs between 2008 and 2013 due to data availability).

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Tax Debt Stock at end-2015 and Collection in 2016

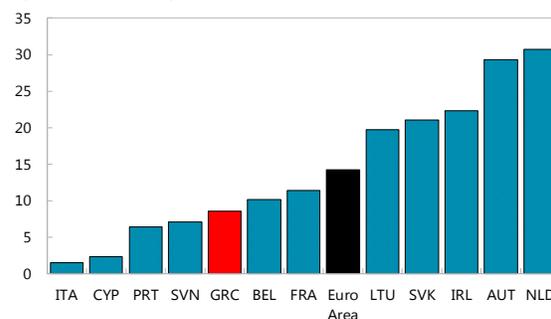


Source: Ministry of Finance of Greece.

Note: This chart classifies the stock of tax debt at end-2015 for each period it was accrued, and the collection and collection rate in 2016 from each group of tax debt.

Tax Debt Written Off, 2013

(Percent of debt stock)



Source: OECD Tax Administration, 2015.

9. Third, collection prioritization and enforcement are weak, and untargeted installment schemes have further undermined the payment culture.

Lack of adequate prioritization of audit cases, combined with insufficient capacity or ability to enforce debt collection, and with untargeted installment schemes have perpetuated the accumulation of debt. Specifically:

- Prioritization of cases and statute of limitations:* Although recent legislation allows the tax administration to prioritize tax cases, it has not been fully implemented due primarily to capacity constraints (including vacant or frequent changes in key management positions), an overwhelming number of cases recommended by the prosecutor (which have to be processed with priority regardless of their tax recovery prospects), and a fear that perceived neglect of cases would result in personal liability for causing losses to the state. As a result, the tax administration is overburdened by a large volume of audit cases that cannot be processed timely, leading to the tendency to continuously extend the statute of limitations of expiring cases. This adds to the backlog, increases the age of tax debt, and further diminishes collection prospects. Indeed, the statute of limitations has been extended every year for the last five years. About 20 percent of tax debt is older than 10 years, for which the collection rate is 0.1 percent; and about 30 percent of tax debt is between 5 and 10 years old, for which the collection rate is about 0.5 percent.
- Enforcement actions:* The authorities have various tools for enforcement: (i) garnishments, which consist of requesting a third party who holds wages, income, or assets of the tax debtor to directly pay to the tax administration the amounts of tax debts before paying the remaining balance to the tax debtor; (ii) seizures, which consist of freezing debtors' bank accounts; (iii) auctions, which consist of collecting tax debts through the proceeds of the sale of a property; and (iv) mortgages in favor of the tax administration. However, progress in initiating and completing enforcement actions has been uneven, with only about a half of tax debtors being under enforcement action. For example, while the use of garnishments has expanded in the last two years, other seizure orders have plummeted. Moreover, an inefficient auctioning process of seized real estate due to an excessively high required minimum bidding price deprives the tax

administration of an important debt collection tool.⁶ Capacity to initiate bankruptcy and liquidation proceedings is also very limited, and the legal framework weakens the tax administration's ability to initiate prosecution for tax evasion. For example, once a taxpayer settles his tax debt and administrative fines, prosecution is precluded irrespective of the initial intention of the taxpayer (*i.e.* financial incapacity to pay tax obligations vs. deliberate intention to evade taxes). These problems exacerbate non-compliance.

- *Installment schemes:* More than 50 tax and SSC installment schemes have been legislated since 2001 and have become increasingly more generous, with longer installments, lower interest rates, and fewer eligibility requirements. This has raised expectations among taxpayers that participation conditions would ease even more in the future, potentially undermining further the payment culture and reducing participation rates. For example, the total stock of tax debt in installment schemes at end-September 2016 was about €5 billion, or less than 6 percent of total tax debt.⁷ Moreover, in the absence of effective collection enforcement and of a link between the installment program and the debtor's capacity to pay, drop-outs have been frequent, further undermining the schemes' effectiveness and suggesting that borrowers perceive them more as *de facto* amnesty schemes and as a means of obtaining a tax clearance certificate when needed. For instance, the drop-out rate for the most recent scheme—legislated in March 2015—is high and increasing, reaching 13 percent at end-October 2016, both in terms of nominal amount as well as number of debtors. Social security contribution schemes are even weaker, with drop-out rates reaching about 50 percent within a year.
- *Tax amnesties:* The authorities have occasionally relied on tax amnesties to boost revenues in the short run. Such amnesties were adopted in 2010-11. More recently, the authorities have legislated a Voluntary Disclosure Initiative, which provides an installment arrangement for paying previously undeclared tax liabilities under reduced fines and interest and generous eligibility conditions (e.g., taxpayers currently under audit are eligible to participate in the scheme). The reduction in interest and soft treatment of detected noncompliance can be perceived as an amnesty for tax evaders. Moreover, the initiative also creates an expectation that similar (and more generous) schemes will continue to be provided in the future. These elements, coupled with lack of effective enforcement (as noted above), may further jeopardize tax compliance rather than deter tax evasion. Indeed, best practice in effective tax administrations is to follow through with severe enforcement, including prosecution, if non-compliant tax behavior is detected, even when incentives for voluntary disclosure are offered.

⁶ The Code of Public Revenue Collection has not yet been aligned with the amended Code of Civil Procedures, which streamlined the auction process for foreclosed real estate, allowing the minimum bidding price to be determined by market prices. See also Selected issues paper "Insolvency and Enforcement Issues in Greece."

⁷ The total number of debtors in tax installment schemes is about 1.3 million (relative to a total number of tax debtors of about 4.4 million). However, since tax debtors may participate in several schemes simultaneously, the 1.3 million figure likely overestimates the number of individuals taking advantage of such schemes.

C. Policy Recommendations

10. In view of the large and growing tax and SSC debt, durable solutions to prevent new tax and SSC debt accumulation and reduce the existing debt stock are urgently needed. Large tax and SSC debt overhang puts a drag on economic activity, impedes taxpayers' capacity to pay current tax obligations, and contributes to a vicious circle of tax debt accumulation and meager growth. The scale of tax debt—affecting millions of taxpayers—also strains the tax administration, which has limited capacity to cope with the problem, while striving to modernize its institutions and operations and raise its credibility by ensuring efficient revenue collection and effective services to taxpayers. Bold measures are thus needed to cease the pattern of increasing tax and SSC debt and unlock economic and tax administration resources for more efficient uses. These should go hand in hand with fiscal policies that broaden tax bases and allow for lower tax rates.

11. First, the authorities should measure the full scale of the existing tax and SSC debt problem by assessing tax debtors' financial situation. The economic downturn has made such an assessment particularly difficult, as the associated uncertainty hampers the ability to determine the future financial prospects of individual taxpayers. Notwithstanding these difficulties, the authorities need to develop a common methodology to classify debtors according to their financial viability, taking into account information on both public (*i.e.* tax and SSC) and private (*i.e.* bank, suppliers, etc.) debts, assets, and projected cash flow, taking into account the taxpayer's compliance record and reason for accumulating arrears. Understanding debtors' past behavior and intentions regarding their tax obligations could help distinguish potential strategic defaulters from tax debtors in temporary financial distress. A comprehensive look at their balance sheets and cash flow projections (with focus on key indicators, such as income to debt ratios, EBITDA, etc.) can also help distinguish between solvency and temporary liquidity problems (*i.e.* between non-viable and viable tax debtors). A methodology with objective criteria could also help address the officials' fear of personal liability as they would be guided and protected by a formal framework in their decision to categorize tax debts as uncollectable or eligible for write-off.

12. Second, the authorities need to make use of all available tools to restructure existing tax debts in a targeted manner, with a view to preserving taxpayers' viability. Across-the-board solutions—such as installment schemes—that have been tried and failed in the past, should be avoided, as they jeopardize payment culture and exacerbate debt accumulation. Instead, the authorities should develop targeted solutions in line with taxpayers' financial viability and ability to pay. Specifically:

- *Enforcement actions:* For strategic defaulters and unviable debtors, enforcement actions need to be intensified. In particular, the taxpayers that are able to pay their tax obligations in full but fail to do so should be identified and subject to enforcement measures, such as wage, income or asset seizure (including e-garnishment), putting a lien on assets, mortgage in favor of the tax administration, and auctions. Non-viable enterprises should be subjected to fast-track liquidation procedures. In this regard, the tax administration's capacity to initiate bankruptcy and liquidation proceedings needs to be strengthened, including by increasing the number of staff

with legal expertise and allowing appropriate decision-making and incentives (e.g. measurable targets, etc.) to initiate and complete the process.

- *Debt restructuring:* For viable and potentially viable debtors, debt restructuring should be made available under certain conditions, and in accordance to the debtor's capacity to pay, while minimizing the risk for moral hazard. In this regard, the completion of the ongoing efforts to develop and implement a voluntary out-of-court debt restructuring framework that applies to both bank debt and public claims can help accelerate debt restructuring without undergoing lengthy court procedures. The active participation of the public sector in this initiative is critical to ensure that public claims are addressed together with bank and other debts to adequately restore the debtor's viability and foster reaching agreement on debt restructuring among all creditors.⁸ Even in cases where debtors have only public claims, debt restructuring solutions should still be sought under the out-of-court framework so as to ensure equal treatment of debtors. Tax debt restructuring under this framework should aim for optimizing collection from tax and SSC debts. This will likely entail selective write-offs of public claims (in particular with respect to fines and penalties, which are largely uncollectible) to restore debtors' viability and recover the claims that taxpayers are able to pay. Adequate safeguards need to be put in place to prevent moral hazard, including information requirements regarding debtors' financial situation, clear eligibility criteria, and strict consequences for breaching of the restructuring agreement.

13. Third, to prevent a further accumulation of tax debt, tax administration practices need to be aligned with modern approaches used in advanced economies:

- *Modernizing the legal framework:* The framework for determining the (un-) collectability and cancellation of tax and SSC debt should be reviewed and streamlined, based on good practices in peer countries.⁹ Delegation by the head of the revenue administration to lower level managers and units to determine debt collectability and debt cancellation could be based on debt size, while ensuring appropriate balance between operational efficiency and adequate safeguards from mismanagement or abuse. Safeguards could also be put in place through ex-post audits by internal or external public entities, including by expanding the coverage and tasks of the existing auditing entities. For instance, the internal audit department of the Ministry of Finance and the external Court of Audits could be tasked to monitor the implementation of debt restructuring, including debt cancellation. Adequate protection of officials against the fear of personal liability should be put in place; such a protection could include legal provisions that absolve tax officials of liability if they follow established tax administration guidelines on the criteria and procedures to categorize tax and SSC debt as uncollectable and eligible for write-off.

⁸ The existing framework does not cover public claims. As a result, banks have no incentive to restructure their debts, as they perceive the public sector to receive preferential treatment. Also see Selected issues paper "Insolvency and Enforcement Issues in Greece."

⁹ "Treatment of Revenue Losses: Write-offs, Remissions, and Debt Reliefs," Meeting of IOTA Area Group on Debt Management, Intra-European Organization of Tax Administrations.

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- *Modernizing collection and audit practices:* The tax administration should modernize collection and audit practices to improve collection prospects and reduce the administrative burden. In particular, the new legal framework on fines (*i.e.* the tax procedure code) should also be applied to pre-2014 cases, and the legal framework for charging excessive fines on already indebted inactive companies should be reviewed and amended to ensure that fines act as a deterrent rather than as a contributor to tax debt accumulation. At the same time, the existing legal framework for risk-based audits and debt collection prioritization should be fully implemented by focusing tax administration efforts on new and large instead of old and small tax debts. Moreover, the legal framework should be revised to ease the burden of cases recommended by prosecutors to the tax administration. In this regard, the legal framework could be amended to allow the prosecutors to send some (non-priority or low-collection) cases to the tax administration as information only and without a binding requirement to audit.

References

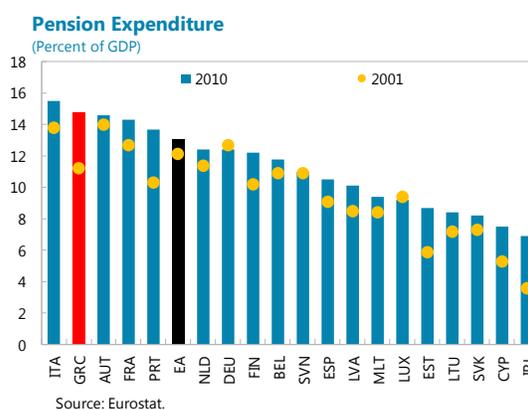
- Artavanis, N., Morse, A., Tsoutsoura M., 2016, "Measuring Income Tax Evasion Using Bank Credit: Evidence from Greece", *The Quarterly Journal of Economics* (2016) 131 (2): 739-798.
- Brondolo, J., 2009, "Collecting Taxes During an Economic Crisis: Challenges and Policy Options" IMF Staff Position Note, International Monetary Fund, Washington D.C.
- European Commission, 2016, *Study and Reports on the VAT Gap in the EU-28 Member States: 2016 Final Report*. European Commission, Brussels.
- IOTA, 2013, "Treatment of Revenue Losses: Write-offs, Remissions, and Debt Reliefs," Meeting of IOTA Area Group on Debt Management, Intra-European Organisation of Tax Administrations.
- OECD, 2015, *Tax Administration 2015: Comparative Information on OECD and Other Advanced and Emerging Economies*, OECD Publishing, Paris.
- Sancak, C., Velloso, R., and Xing, J., 2010, "Tax Revenue Response to the Business Cycle," Working Paper 10/71, International Monetary Fund, Washington D.C.

REFORMING THE GREEK PENSION SYSTEM¹

The Greek pension system has been costly, complex, and unfair, which has contributed to Greece's fiscal problems and discouraged labor force participation. Several attempts to reform the system faltered due to lack of implementation, pushback by vested interests, and court mandated reversals. The most recent reform introduced in 2015-16 goes in the right direction by removing some distortions and reducing costs. However, it too falls short of making the system affordable and creating strong incentives to work and contribute, and is subject to large implementation risks. The authorities should fully implement the recent reform and complement it with additional reforms to address remaining deficiencies.

A. Background: Early Pension Reforms and Outcomes

1. Excessive pension spending was one of the main drivers of Greece's poor fiscal performance prior to the crisis. During 2000-10, Greece's pension spending increased from close to 11 percent of GDP (below the euro-area average of 12 percent) to almost 15 percent (the second highest in the euro area, after Italy). This represents the largest increase in relative terms among peers, and was due to a rapid increase in nominal pensions on account of high wage and inflation growth, combined with generous benefits (pensions were linked to the best five of the last 10 years of one's wage history) and options for early retirement. As a result, the system's deficit reached an estimated 7.3 percent of GDP by 2010, being the largest contributor to the overall general government deficit (of close to 11 percent).² Moreover, pension projections pointed to a significant solvency problem, prompting the OECD to describe the Greek pension system as "a fiscal time bomb," as pension spending was expected to double by 2050, driven by rapid population aging and a doubling of the old-age dependency rate (OECD, 2007; EC 2009).



2. A comprehensive reform was undertaken in 2010 aiming to address the long-term sustainability of the pension system. The reform aimed to contain future pension spending by tightening eligibility conditions and introducing a less costly benefit rule for new retirees, among others. Specifically, it set the early and statutory retirement age at 60/65 for all insured, while increasing the required years of contribution (from 35 to 40). It also tightened early retirement rules by introducing a penalty for early retirement and streamlining the list of hazardous professions entitled to early retirement options. The design of a unified benefit formula introduced for all main pension funds (except the farmers' fund OGA) was overhauled by introducing a basic pension component (€360 per month) in addition to an earnings-related pension with "average" accrual

¹ Prepared by Alvar Kangur.

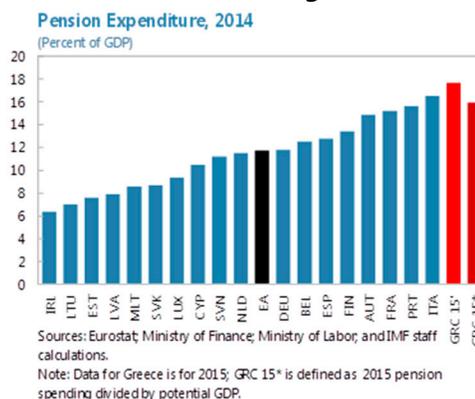
² This figure is likely an underestimate, as it excludes lump-sum pensions.

rates—annual proportion of pensionable earnings transformed into a pension benefit—ranging from 0.8 to 1.5 percent of earnings, compared to 2-3 percent before the reform. However, while the reform linked pensionable earnings to *the lifetime* earning history (rather than the best five of last ten years), the introduction of the non-contributory basic pension flattened the benefit schedule and weakened contribution-benefit links. Moreover, the reform was undermined by extensive grandfathering of previous early retirement options, which led to a massive wave of early retirements to take advantage of the previous more generous rules. Finally, its key element—the unified benefit rule—*was never applied*.

3. Further reforms during 2011-12 sought to contain the medium-term costs of the pension system. The reforms introduced a zero-balance rule for auxiliary pension funds aiming to ensure the elimination of their annual deficits, increased the early and statutory retirement ages by a further two years (to 62 and 67, respectively), and froze the indexation of pensions (previously linked to GDP and inflation growth) until 2016. In addition, the reforms reduced the benefits of current retirees, including by eliminating the 13th and 14th pension payments and introducing a series of progressive cuts of main and supplementary pensions above certain limits.³ However, these reforms also suffered from serious setbacks. The zero-balance rule was not implemented, leading to continued deficits that had to be financed from the general budget. The increase in the retirement age lacked effectiveness due to extensive grandfathering. And the pension cuts (expected to yield 2¼ percent of GDP in gross fiscal savings) were ruled unconstitutional by a Council of State (CoS) decision in 2015.⁴

4. Despite the successive reforms, pension spending continued to rise during 2010-15.

Pension spending increased from 14.8 to 17.7 percent of GDP during 2010-2015. Although the average pension (calculated as the ratio of nominal pension spending to the number of retirees) declined by about 8 percent during this period, this was not sufficient to offset the decline in GDP (by around 25 percent), leading to an increase in pension spending relative to output.⁵ While part of the increase could be considered cyclical, as GDP is expected to recover over time, pension spending is also likely to grow along wage and inflation growth. Taking into account



³ These targeted mainly main monthly pensions above €1,300, and above €1,000 of retirees younger than 55, as well as supplementary pensions at various ranges.

⁴ The CoS did not find sufficient evidence of exceptional circumstances to support the 2012 reforms and concluded that a scientific study should have examined if the measures were “appropriate and necessary” to address the problem of sustainability of the pension system, taking into account the effect of all measures (e.g. tax reforms, cost of goods and services etc.) on retiree’s living standards. The CoS also found that pension cuts applied only to certain categories of pensioners and violated the principle of equal participation in public charges and the principle of social solidarity.

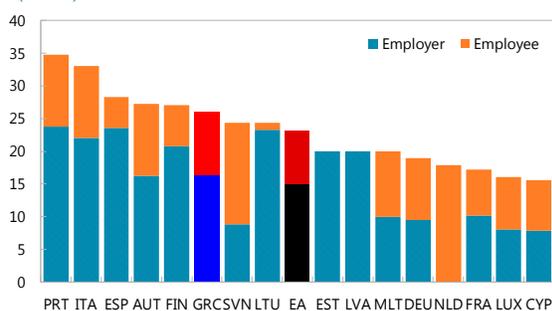
⁵ Relative to a no-reform scenario, the reduction in the average pension per retiree is estimated at around 24 percent, as pensions per retiree were projected to increase by 16 percent on the basis of the pre-reform parameters.

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cyclical effects (i.e. dividing pension spending in 2015 by potential output), the increase since 2010 is smaller, at 1.1 percent of GDP, although Greece's pension spending still remains among the highest in the euro-zone (second only to Italy). Moreover, the evolution of pension spending over the last five years stands in sharp contrast to other spending categories—in particular investment and discretionary spending—which were compressed significantly relative to GDP to help reduce the fiscal deficit (along with tax rate increases).

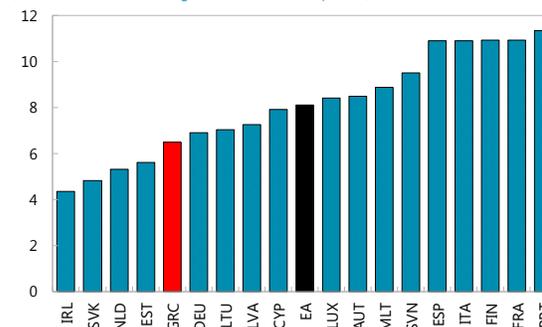
5. While social contribution rates are above the euro-area average, contribution revenues have been low compared to peers. Contribution rates for both employers and employees, including main and supplementary pensions, stood at 26 percent at end-2015, above the euro-area average of 25 percent. Together with high income taxes, this contributes to relatively high marginal and average tax wedges in Greece.⁶ Nonetheless, pension contribution revenues have been relatively low by international comparison (6½ percent of GDP compared to a euro area average of about 8 percent in 2015). This is an indication that the Greek social security, similarly to the tax system, suffers from high rates levied on narrow bases eroded by low payment and collection efficiency.^{7,8} At the same time, the prolonged recession has taken a significant toll on individuals' incomes and their ability to support an increasing tax and social security contribution burden, given the declining workforce (by 22 percent since 2009), the high unemployment rate (25 percent at end-2015) and large wage reductions (more than 20 percent during 2010-15).

Public Pension Contribution Rates in the Euro Area, 2013
(Percent)



Source: EC (2015) Aging Report.
Note: Data for Greece excludes lump-sum and dividend fund contributions. For Austria and Finland the rates are simple averages of mandated ranges.

Pension Contributions Revenues, 2015 (Estimates)
(Percent of GDP, excluding revenue from third parties)



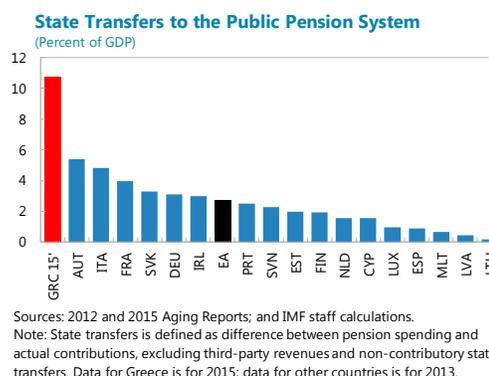
Sources: 2012 and 2015 Aging Reports; and IMF staff calculations.

⁶ At 38 percent, the average tax wedge in Greece in 2015 for a one-earner married couple with two children and average earnings is much higher compared to 26.7 percent in OECD or 31.4 percent in the euro area. In addition to pensions this reflects also high non-pension social security contributions. These relative magnitudes are similar for a two-earner family. While a single person with average earnings in Greece benefits from exceptionally generous tax credit, a single person with a higher income is subject to steeply increasing marginal income tax rates. According to the OECD a single person receiving 67 percent above the average earnings faces a 55 percent marginal tax wedge, compared to 47 percent in the OECD and 53 percent in the euro area.

⁷ Greece has one of the highest shares of informal economy, incidence of tax evasion, and hours per week spent on undeclared work in the OECD (Andrews and others, 2011). According to the Ministry of Labor (Artemis reports, 2014), about 9 percent of audited employees and 18 percent of audited companies have not been formally declared and thus were not insured in late 2014.

⁸ Collection rates are only about 30-50 percent in the farmers' fund, 55 percent in the fund for self-employed, and about 80 percent in the fund for doctors, lawyers and engineers. As a result, large contribution arrears have accumulated across funds, especially among the self-employed where arrears are 4.5 times the annual revenue collected. See Selected Issues Paper "Addressing the Burden of Large Tax Debt and Social Security Debt."

6. With high pension spending and low pension contribution revenues, substantial state transfers have been needed to finance the large deficit of the pension system. Transfers to the pension system have risen from 7.3 percent of GDP (excluding lump-sum funds) in 2010 to almost 11 percent of GDP by end-2015.⁹ All main funds experienced large deficits, as in most cases contributions cover less than half of benefit spending, especially in funds in the energy and communication sectors, the navy and public administration and the funds for journalists, and doctors, engineers, and lawyers (ETAA), whose insured enjoy relatively high benefits, while contributions are low as a result of under-declaration of income. The state has been mandated to cover all these deficits, along with subsidizing the farmers' fund (OGA), since insured pay only the employees' contribution of 7 percent (less than 10 percent of benefits).



B. Characteristics of the Pension System Prior to the 2015-16 Reforms

7. Despite the reforms, the pension system remained highly fragmented (Box 1). By end-2014, the mandatory main pension system was differentiated into seven occupational funds. As the unified benefit rule of the 2010 reform that was set to take effect in 2015 was never applied, the funds retained their own rules. While most supplementary or auxiliary pension funds were merged under a single umbrella fund after the 2012 reform, they retained different degrees of autonomy and their own benefit formulas. In addition, several lump-sum and dividend funds provided additional benefits mostly for civil servants but also some professional groups. As a result, close to half of pensioners received one pension, 35 percent two, and 15 percent three or more pensions from the various funds. The pension provision consisted of multiple benefit layers, where basic, contributory, and minimum pensions in the main funds were topped up by auxiliary, lump-sum, dividend and/or targeted pensions (e.g. the EKAS benefit). The introduction of basic pension, various minimum and targeted pensions, as well as a series of past progressive cuts had considerably flattened the pension system and weakened its contribution-benefit links.

⁹ Consistent with EC (2012) Ageing Report, the calculations exclude revenues from third-parties, government grants, income from property as well as any legislated state transfers not in the nature of actual contributions.

Box 1. The Greek Pension System Prior to 2015-16 Reforms

Prior to the 2016 reform, the Greek pension system was fragmented across occupations, types of pensions, and benefit rules. It provided main, auxiliary, lump-sum, dividend, targeted, and social pensions as well as other contributory welfare benefits financed through a pay-as-you-go principle. The system was financed by state transfers, and in some cases by third-party charges benefitting special groups (e.g. journalists). The benefits were provided by a number of segmented funds with their own rules:

- **The main pension** providers comprised eight funds: IKA (salaried workers, including also Banks, TAP-DEH that is Public electricity company, and others), PS (civil servants), OAEE (self-employed), OGA (agricultural sector), ETAA (lawyers, doctors, and engineers), ETAP-MME (journalists), NAT (seamen), and a fund for Bank of Greece employees.
- **Auxiliary (supplementary) pension funds**, which in 2012 were merged into a single entity (ETEA) and in 2014 were transformed into a Notional Defined Contribution (NDC) system, pro-rated over defined benefit (DB) rules for pre-2014 contribution periods. The NDC included a sustainability factor that under a full pay-as-you-go principle required maintaining a zero deficit every year; however, the zero-deficit rule was not implemented.

Greece's pension benefits consisted of the following components:

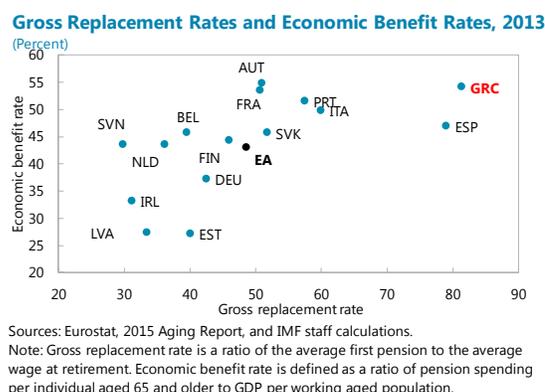
- **Basic pension:** introduced with the 2010 law as part of the main pension formula at a fixed level of €360 per month available to all who were eligible to a pension.
- **Contributory pension:** the earnings-related component of main pensions calculated through a defined benefit (DB) formula. The accrual rates—annual share of pensionable earnings transformed into a pension benefit—varied widely across funds between 2 and 3 percent prior to the 2010 reforms, and between 0.8 and 1.5 percent, depending on years of insurance, after the reform.
- **Guaranteed contributory pension** (minimum pension): a pension benefit floor applied to the main (sum of basic and contributory) pensions. In the main pension fund IKA this floor was €487-€600 depending on family size. Supplementary pensions, lump-sum pensions and a solidarity grant were provided in addition to the guaranteed contributory pension.
- **Auxiliary or supplementary pensions:** followed their own DB rules often subject to separate minimum pension limits with an eligibility linked to the main pension provision.
- **Lump-sum and dividend pensions** provided additional layers of contributory benefits mostly to civil servants and selected categories of professionals / self-employed.
- **EKAS pension:** a means-tested solidarity grant provided to those who already qualified for an insurance pension up to a ceiling of €850 per month and pension income of €767 per month, in monthly payments ranging from €30 to €230. The guaranteed contributory pension topped up with EKAS thus exceeded the minimum wage of €684.
- **Social pension:** a means-tested welfare benefit of €360 per month provided to elderly at 67 years of age who had not fulfilled the eligibility conditions for social insurance pension.
- **Other pension benefits** provided by the social security funds included summer camps, temporary accommodations to seamen etc.

8. Moreover, nominal pensions in Greece remained relatively generous by international standards, despite lower productivity. Despite the reduction in pensions due to the reforms, the average old-age pension in Greece at end-2015 (the ratio of total monthly pension spending to the total number of retirees) was estimated at €978¹⁰, similar to the euro-area average, once it is adjusted for purchasing power parity (PPP).¹¹ However, in Greece, pensions are granted at younger ages and based on shorter contribution periods, and productivity has lagged that of peer countries. For example, while pension benefits in Greece in 2014 (when comparable PPP data can be found) were almost identical to those in Germany, in Greece average wages and productivity were less than half of those in Germany and about half of euro area average (text table). Furthermore, workers in Greece retired on average 5 years earlier and made lifetime contributions that were only 1/3 of their lifetime benefits—less than half of the contributions made by German workers.

Comparison of Greek and German Pension Systems (Monthly amounts in Euros, unless stated otherwise)		
	Germany	Greece
Standard Pension ("Eckpension") in 2014 1/	1,287	1,152
Average pension (comparable data) in 2014	1,224	954
Average pension (comparable in PPS terms) in 2014	1,208	1,168
GDP per capita (2015)	3,092	1,350
Average wage (2015)	3,134	1,470
Ratio of standard pension to average wage	41%	78%
Ratio of average pension to average wage	39%	65%
Minimum pension	N/A	>486 + EKAS
Effective retirement age (new old age pension)	64	59
Average contributory period (new pensions, 2010)	36.3	29.3

Sources: Eurostat, OECD, Social Security Administration, Bundesversicherungsamt (2014), IDIKA, EC 2012 and 2015 Aging Reports, and staff calculations.
1/ The standard pension is calculated for an average wage earner with 45 years of insurance retiring at 65 years of age. It provides a useful benchmark for comparison of pension benefits for retirees with the same retirement ages and contribution years.

9. A better measure of the generosity of pensions is the replacement rate, which has remained high in Greece relative to peers. The gross replacement rate (the ratio of the average pension of new retirees to the average wage at retirement) was about 81 percent at end-2013, the highest in the euro-area, and almost 30 percentage points higher than the euro-area average. This illustrates the relative generosity of pension benefits relative to what retirees earned prior to retirement, suggesting that strong incentives to retire remained even after the 2010-12 reforms. Another metric is the economic benefit rate (pension spending per individual aged 65 and older relative to GDP per working aged population), which was 54 percent compared to a euro area average of 43 percent. This



¹⁰ IDIKA, October 2015.

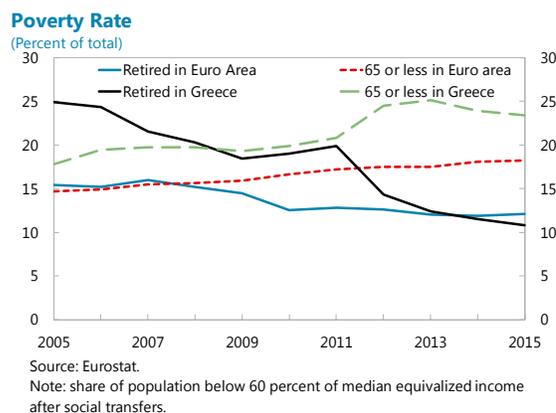
¹¹ The analysis here and throughout this paper refers only to public pension provision. Private or occupational pensions are excluded, as they are generally fully funded, not mandatory, and do not replace the coverage of public pensions. Thus, private pensions do not burden public finances directly, and private contributions do not constitute a revenue for the general government.

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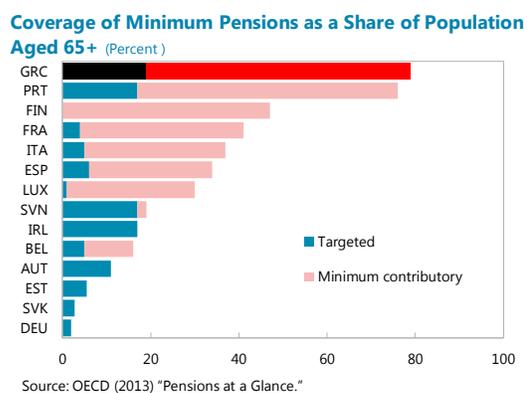
indicator suggests that benefits per retiree in Greece remained relatively high compared to the economic resources available to the workforce supporting the retirees.

10. A corollary of generous pensions relative to wages is that the poverty level among pensioners has declined, while that for the working-age individuals has increased, pointing to an unequal distribution of the adjustment burden. Despite the income losses among retirees

noted above, pensioners in Greece carry the lowest risk of poverty within the Greek population. In particular, the poverty rate for retirees has declined by 8 percentage points since 2010 to 10.8 percent at end-2015, just below the euro area average (of 12.1 percent), and well below 17 percent in Germany. If one accounts for the very high share of home ownership of the elderly population (84 percent in Greece compared to 53 percent in Germany), the poverty of pensioners would be even smaller (OECD, 2013). In contrast, the brunt of the adjustment has been borne by the working-age population, whose poverty rate has increased to 23. percent at end-2015, well above the euro-area average of 18.2 percent.



12. In addition, minimum pensions remained generous by international standards, curtailing incentives to work and contribute. Targeted and minimum pensions aim at guaranteeing a minimum standard of living after retirement, but can be costly and are also some of the most important determinants of labor market incentives. In Greece, the minimum pension amounted to €5844-€8400 annually, exceeding the standard poverty threshold of €4,512 (EU-SILC, 2015), and being among the highest in the euro area.¹² In addition, Greek pensioners were eligible to receive a means-tested solidarity top-up benefit EKAS if their income was below €9,200 per annum, that is almost twice as large as the poverty threshold and above the minimum wage (€7,963). In comparison, in Germany, the income eligibility threshold for means-tested pensions was about ¾ of the 2013 poverty level (€11,749, below the EKAS eligibility threshold in Greece), with no minimum limit on contributory pensions. As such, a minimum wage earner in Greece contributing for 15 years would have received a guaranteed pension similar to the pension received by a retiree who worked and contributed for 31 years, and would thus have no incentive to

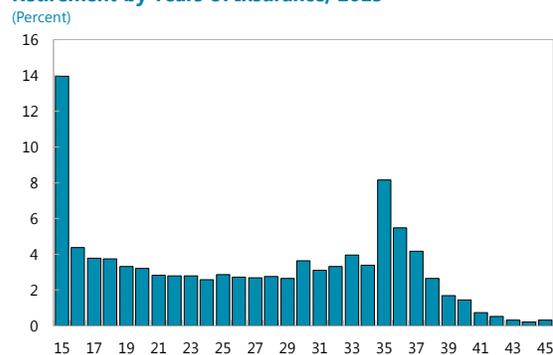


¹² In the euro area, minimum pension and safety net protection is in the range of 50-80 percent of the poverty threshold (World Bank, 2013a,b; MISSOC comparative tables on social protection).

contribute beyond the minimum 15 years. Greece stands out in the euro area as the country with the highest ratio of the elderly receiving minimum pensions.¹³

13. As a result, retirement with few years of contributions remained prevalent. Despite the increase in the early and standard statutory retirement ages to 62 and 67 years, respectively, the average retirement age of old-age retirees fell to 59 years. This reflects the fact that vested rights were protected under all previous reforms by grandfathering those insured with accrued rights to retire (those fulfilling either the retirement age or years of contributions requirements). Consequently, the distribution of retirement applications in Greece at end-2015 remained skewed toward few years of formal work, with a spike at 15 years (14 percent of total applications), and about half of retirement applications made by 26 years of contributions. Only about ¼ of applications were made after 35 years of contributions—the required contribution period in the past—and a small fraction were made after the post-2010 requirement of 40 years.

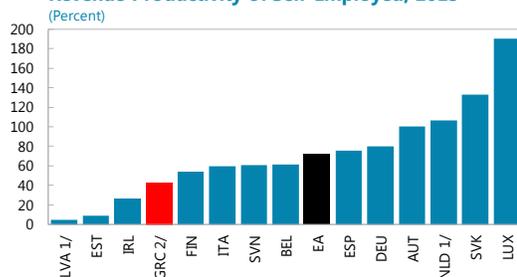
Retirement by Years of Insurance, 2015



Sources: IDIKA, and IMF staff calculations.

14. Incentives to contribute have been particularly weak for the self-employed. Even after the 2010-12 reforms, the contributions of the self-employed applied on assessed earnings (notional income based on number of years of experience) instead of on actual earnings.¹⁴ This meant that for the young self-employed with short experience history (even in lucrative professions), the base for calculating benefits was similar to the minimum wage, implying pension rights much below the minimum pensions at minimum required 15 years of insurance, and thus creating incentives to minimize contribution payments and histories. But disincentives to contribute also applied to more experienced professionals, which underreported income to avoid taxation or found it

Revenue Productivity of Self-Employed, 2015



Sources: OECD, and IMF staff calculations.

1/ 2/ Data as of 2013 or 2014 due to availability, respectively.

Note: revenue productivity is calculated as a ratio between the share of contributions paid by self-employed in total contributions and the share of self-employment in total civilian employment.

¹³ Gruber and Wise (2004) and others show that financial incentives for continued work and early retirement options are the strongest determinants of labor force participation among elderly workers. Jiménez-Martín and Sánchez Martín (2007) and Jiménez-Martín (2014) find evidence that generous retirement protection increases early retirement probabilities and results in fewer working hours. Joubert (2015) has shown that more generous minimum pension guarantees lead to significant reduction in labor force participation at older ages and transfer of workers towards informality of home production, especially for women.

¹⁴ The main fund for self-employed (OAEE) has 14 notional income classes, with ¼ of insured qualifying for the lowest notional income class (€763 per month) and ⅔ for the four lower income classes (up to €1,213 per month). The minimum notional income scales in other funds for self-employed (OGA, TSAY, TSMEDE, TAN-TEAD) are even lower, ranging from €487 to €693 per month.

beneficial to operate in the shadow economy.¹⁵ As a result, and in addition to exemptions most notably provided to farmers and newly insured professionals, the share of social contributions paid by self-employed (16 percent) is less than half of the share of self-employed in the economy (35 percent of total employment), resulting in one of the lowest “revenue productivities” of self-employed in the euro zone.

C. The 2015-16 Pension Reforms

15. In 2015-16, the authorities renewed the reform efforts, seeking to address the structural deficiencies in the pension system and reduce its medium-and long-term costs. The main structural changes aimed at, inter alia: (i) tightening early retirement rules; (ii) harmonizing the main pension benefit rules, including to address the CoS ruling; (iii) phasing out the solidarity grant EKAS; (iv) putting auxiliary, dividend, and lump-sum funds on more sustainable footing; (v) harmonizing contribution rules; and (vi) consolidating the main pension funds. The reforms also aimed to achieve fiscal savings of about 1½ percent of GDP by 2018.

Expected Fiscal Savings from the 2015-16 Pension Reforms (Percent of GDP)				
	2015	2016	2017	2018
TOTAL	0.2	0.7	1.2	1.5
Benefits	0.0	0.3	0.7	1.0
Tightening early retirement rules	0.0	0.0	0.1	0.1
Phasing out social solidarity grant EKAS		0.0	0.3	0.4
Main pension benefit reform		0.0	0.1	0.2
Supplementary, lump-sum, and dividend fund reforms		0.2	0.2	0.2
Other (incl. wider eligibility for social pension, lower ceiling)		0.0	0.0	0.0
Contributions	0.1	0.4	0.5	0.5
Raising health contributions for retirees	0.1	0.3	0.3	0.3
Harmonizing contribution rules and base		0.0	0.0	0.0
Temporary increase by 1/0.5 pp in supplementary contributions		0.1	0.2	0.2

Source: IMF staff estimates.

16. The reform overhauled early retirement rules. To contain the excessive grandfathering of retirement rights allowed under the previous reforms, the authorities required a gradual convergence by 2022 of all existing grandfathered retirement ages toward 67 years (or 62 years with 40 years of contributions).¹⁶ It also increased the benefit discount for early retirement from 6 to 16 percent for those affected by the reform. However, the reform was not able to change the eligibility to retire at earlier ages for those who by 2015 had reached both the required retirement age and years of insurance (vested rights) and did not eliminate grandfathering on the basis of years of insurance, thus exempting a large number (up to ¾) of civil servants with a short period of service.

17. It also harmonized the main pension benefit rules. The reform introduced a single uniform benefit rule for both existing and new retirees in the spirit of the 2010 law, consisting of a

¹⁵ Artavanis et al. (2015) estimate, based on household credit microdata, that self-employed in Greece do not report about 45 percent of their income. They also find that tax evasion in Greece is concentrated among highly educated and high-income professions such as doctors, engineers, lawyers, accountants, financial service agents, and educational service providers. In General, tax evasion among self-employed in Greece does not always take the form of underreporting but also over expensing through “miscellaneous” expenses that sometimes can form up to half of their total costs.

¹⁶ Arduous and hazardous workers, disabled, survivors, and some vulnerable groups could still retire at earlier ages.

basic and a contributory component. The basic pension component was increased from €360 to €384 per month at 20 years of insurance (corresponding to the 2014 poverty level). To compensate for the increased cost, the new benefit formula for contributory pensions was based on lower marginal accrual rates (in the range of 0.77 to 2 percent, depending on years of insurance). For new retirees, the new benefit rule is applied without pro-rating over the previous more generous rules. For existing retirees, the main pensions were frozen at end-2014 level (pre-dating the 2015 CoS ruling) to both maintain the savings achieved from the 2012 cuts and address the concerns of the CoS ruling. The freeze implies that in cases where the new benefit formula suggests a pension lower than the end-2014 level, the paid-out pension remains unchanged, and the difference with the formula-implied level will be eroded only gradually through indexation. In other words, current pensioners would not suffer additional reductions in main pensions even if the new formula suggests otherwise (about 1.4 million current pensioners fall into this category).

18. The reform transformed the system of basic, minimum guaranteed, and targeted pensions. With a higher basic pension, the minimum guaranteed pension became redundant and was eliminated for all retirees except those with work-related disabilities. Importantly, the authorities also legislated the phasing out of the noncontributory solidarity grant EKAS by end-2019 that distorted incentives to retire and was not compatible with the contributory insurance-based system. However, they have subsequently provided several fragmented forms of compensation to those beneficiaries who lost EKAS in 2016 and distributed a “bonus” for 2017 to retirees with pension benefit below €850 per month, which is the pre-reform limit for payments of EKAS, in effect neutralizing the effect of the reform in 2016-17.

19. Measures were taken to reduce the medium-term deficit of supplementary pensions. The authorities legislated selective cuts of supplementary pensions for pensioners with total (main plus supplementary) pension benefits above €1,300 per month, affecting about 200,000 current retirees and froze supplementary pensions as long as the funds remain in deficit. However, since these measures were insufficient to close the deficit in supplementary funds (which amounted to about 0.4 percent of GDP at end-2015), the authorities also increased temporarily supplementary social security contribution rates by 1 percentage point until May 2019, when this increase will be phased out, and pledged to use the assets of the supplementary fund to cover remaining deficits. The increase in the contribution rates rolls back previous attempts to reduce it. It also generates additional pension entitlements, given that supplementary funds operate under a notional defined contribution (NDC) regime.¹⁷

20. Finally, the reform sought to harmonize pension and health contribution rates as well as contribution bases for the self-employed. Main pension contributions were harmonized at 20 percent for all employees (implying an increase for farmers of 13 percentage points), and health contribution rates for retirees were increased to 6 percent (from 4 percent in the main funds and 0 percent in the supplementary funds). Importantly, the reform transformed the social security contribution base for self-employed from notional to actual earnings from self-employment, subject

¹⁷ In the NDC scheme the higher contribution rate feeds into accumulated notional capital that in turn determines the pension benefit at retirement.

to a minimum income limit,¹⁸ and eliminated all third-party charges (nuisance charges) previously used to finance the deficits of pensions funds for the self-employed. However, the reform did not fully eliminate existing exemptions for vested interest groups (e.g. lawyers, doctors, engineers and other highly qualified self-employed), who still benefit from reduced rates and from a 30 percent discount on the minimum earnings limit (the latter also applies to farmers).¹⁹ Furthermore, all the self-employed pay contributions on a lower base (net of social contributions of the previous year) compared to salaried workers, and pension benefits for the self-employed accrue even if they do not stay current with their contribution obligations.²⁰ Such exemptions for the self-employed are not common practice in other euro area countries, and risk perpetuating both the financial imbalances of the pension funds and the perception of lack of fairness of the system as a whole.

21. While these measures constitute important steps forward, overall, the pension system remains costly, distortive and unfair, and is subject to high risks:

- **Medium- run implications:** Despite aiming to achieve savings of 1½ percent of GDP by 2018, the reform still leaves a significant pension system deficit (9 percent of GDP) over the medium-term, after the output gap closes, which is still far above the euro-area average. This will continue to consume resources from the general budget, preventing the government to reallocate spending to other priorities, such as welfare or essential public services.
- **Incentives to contribute.** The introduction of the new (higher) basic pension led to an increase in the benefit rate—the ratio of average pension benefits to average wages—by more than 1½ percentage points (3½ percentage points for a minimum wage earner) compared to the pre-reform regime. As noted above, accrual rates for contributory pensions were reduced as a result, leading to a decline in long-run replacement rates, especially for individuals with higher earnings or longer contribution histories. Specifically, the reform is estimated to lead to a gradual reduction in replacement rates (average pensions relative to pensionable wages) by about 4.4 percentage points compared to the pre-reform scenario (assuming full implementation of 2010-12 reforms). This implies a *worsening* of contribution-benefit links, with adverse implications for labor force participation.²¹ Moreover, the combined basic and contributory benefit at 15 years of

¹⁸ This limit is applicable only to the self-employed and is equal to minimum salary of unmarried employee above 25 years of age, currently €586 per month.

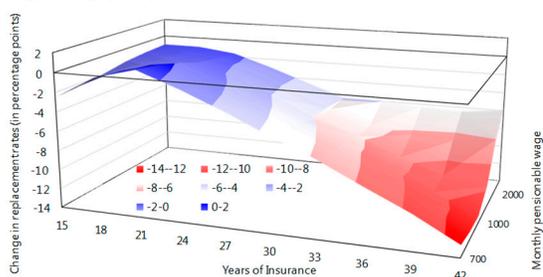
¹⁹ These categories are allowed to pay 14 percent for the first 2 years and 17 percent for the next 3 years, with the remaining amount up to harmonized 20 percent rate payable fully at the completion of 15 years of insurance or in annual payments of one-fifth of the outstanding debt per year upon reaching a preset high income level of €18,000. The 30 percent discount is applied on the minimum income level on which contributions are paid, reducing it from €586 to €410 per month. The old—more generous rules—remain in force for seamen.

²⁰ This implies that the period when one is in arrears is counted as pensionable earnings up to a limit, and will add to pension rights, leading to higher pensions (at increasing marginal accrual rates). The contribution arrears are to be withheld from pensions at the time of retirement. The contribution arrears of self-employed (OAE, ETAA, and OGA) reached 5.3 percent of GDP in 2015.

²¹ With weaker links between earnings and benefits, contributions are perceived as distortive labor taxes that impinge on employment incentives, rather than deferred savings (IMF 2012; Disney et al., 2004). Progressive (continued)

insurance still provides a generous minimum pension guarantee (estimated at around 115 percent of the poverty threshold, compared to a euro-area average of around 70 percent, as noted in EC-SPC 2015a, b). This reinforces existing incentives to retire at short careers.

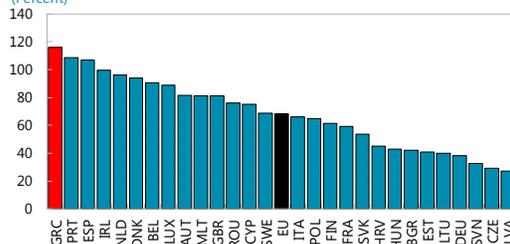
2016 Reform: Change in long-run replacement rates
(Percentage points)



Source: IMF staff calculations.

Note: Steady-state reform impact of a unified main benefit formula against the 2010 reform and full implementation of 2010-2012 cuts. The replacement rate is defined as a ratio of calculated pension benefit to pensionable wage.

Minimum Pension Income Provision in the Euro Area
(Percent)



Sources: EC-SPC (2015), and IMF Staff Calculations.

Note: Minimum Pensions as calculated in the 2015 Pension Adequacy Report as a share of poverty threshold. For Greece, sum of basic and contributory pensions under 2016 reform at minimum required 15 years of insurance as a share of poverty threshold.

- Fairness.** The fiscal adjustment delivered by the main pension recalibration and supplementary benefit reductions is largely borne by new generations of retirees with longer careers. In contrast, individuals with shorter careers (e.g. around 20 years) can see their future replacement rates and average pensions even increasing. Moreover, the main pensions of current retirees have been protected through the pension freeze, exacerbating already large inter-generational imbalances. Finally, as noted above, specific interest groups continue to benefit from exemptions and special treatment compared to salaried workers.
- Risks.** The general ownership of the reform remains fragile in face of strong resistance, which has resulted in rollbacks (including the offsetting of EKAS cuts, most recently through the Christmas bonus to EKAS-eligible pensioners) and a weakening of the original aims of the reform (e.g. the recent narrowing of the contribution base for self-employed, and the introduction of a high minimum pension for work-related accidental disabilities, among others). Moreover, the full implementation of the reform still requires following through with a large volume of implementing legislation, abolishing old conflicting legislation, processing long outstanding unpaid pensions, creating electronic registries, completing the merger of main funds, and recalibrating pensions existing retirees. Lack of full and timely implementation could risk eroding the (already weak) support for the reform, compromising its long-term gains. Finally, the reform remains subject to high legal risks, as it preserves the structure of the 2012 cuts, which had been ruled unconstitutional, and adds new progressive cuts on some of the same groups of retirees.

D. Conclusions and Policy Recommendations

22. The Greek pension system has been complex and costly, and earlier efforts to reform it have faltered. Generous benefits, nontransparent contribution rules, favorable treatment of special

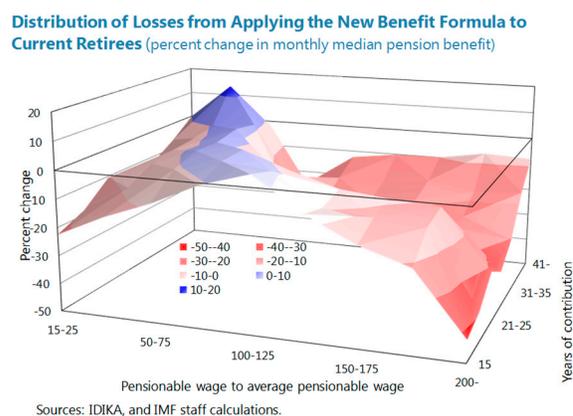
accrual rates that value additional years of work more than previous years are very rare in practice. In Greece the 2010 reform introduced such progressivity to “offset” already then the very high basic pension granted to everybody notwithstanding their income level.

groups, and favorable early retirement options resulted in an unaffordable pension system. After two major attempts to reform the system and bring down medium- and long-term costs, pension spending in Greece at end-2015 remained the highest in the euro-area, requiring state transfers that are several times larger than the euro-area average. The prolonged economic downturn exacerbated the pension system's imbalance, although the key driver remained the structure of the system, based on overly generous benefits and a narrow contribution base.

23. The 2015-2016 reform has many desirable features, but the overall pension system still remains costly in the medium run and subject to high risks. If fully implemented, the reform will consolidate the pension system's institutional structures and largely harmonize benefit and contribution rules. However, the system deficit over the medium term remains an outlier compared to euro-area peers, contribution-benefit links remain weak, limiting incentives to participate in the labor force, and the system remains unfair with regard to the treatment of current and future retirees, as well as special interest groups. Moreover, implementation risks remain high, given the large number of steps still required, the erosion of credibility in reform ownership from rollbacks, and lingering legal risks.

24. The authorities should implement the reform fully and in a timely manner, without additional rollbacks; in the medium term, they should consider additional reforms to reduce the deficit of the system and improve incentives to work and contribute. There are two areas where reforms could bring additional benefits, both in terms of fiscal savings, and of improving the system's fairness and the resulting incentives to work and contribute:

- Recalibration of pensions.* Applying the recalibration of benefits based on the new rule also to existing retirees could deliver savings of 1 percent of GDP in the medium run that can be used to strengthen social safety nets or reduce the very high contribution rates (or other excessive tax rates). This would result in larger cuts for high-income retirees at shorter years of contributions while slightly increasing pension benefits for lower-end pensioners with higher years of contributions, thus improving both inter- and intra-generational fairness (as well as incentives to contribute longer into the system).
- Contribution-benefit links.* Over the medium- to long-run, the level of basic pension could be reviewed in light of international trends, which could help to strengthen the contributory pension in an actuarially fair manner. Moreover, lowering the tax wedge as fiscal space allows would help strengthen work and contribution incentives. Finally, the authorities should aim to fully harmonize contribution rules for the self-employed, including by removing remaining distortive exemptions.



References

- Andrews, D., Sanchez, A.C. and A. Johansson (2011), "Towards a Better Understanding of the Informal Economy," OECD Economics Department Working Papers No. 873.
- Artavanis, N.T., Morse, A. and M. Tsoutsoura (2015), "Measuring Income Tax Evasion using Bank Credit: Evidence from Greece", Chicago Booth Research Paper No. 12-25; Fama-Miller Working Paper.
- Bundesversicherungsamt (2014), "Bericht der Bundesversicherungsanstalt fuer Angestellte."
- Disney R., Boeri T. and T. Jappelli (2004), "Are Contributions to Public Pension Programmes a Tax on Employment?" *Economic Policy*, Vol. 19, No. 39, pp. 267-311.
- Duval, R. (2003), "The retirement effects of old-age pension and early retirement schemes in OECD countries," OECD Economics Department Working Papers, No. 370, OECD Publishing.
- EC (2009), "2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060)", *European Economy* 2|2009.
- EC (2012), "The 2012 Ageing Report: Economic and budgetary projections for the EU27 Member States (2010-2060)", *European Economy* 2|2012.
- EC (2015), "The 2015 Ageing Report: Economic and budgetary projections for the EU27 Member States (2013-2060)".
- EC-SPC (2015a), "The 2015 Pension Adequacy Report: current and future income adequacy in old age in the EU", Vol. I.
- EC-SPC (2015b), "The 2015 Pension Adequacy Report: current and future income adequacy in old age in the EU. Country Profiles", Vol. II.
- Gruber, J. and D.A. Wise (2004), "Social Security Programs and Retirement around the World: Micro-Estimation", NBER, The University of Chicago Press.
- IDIKA (2015), "Monthly Representation of Pension and Welfare Benefits", Helios Report, October 2015IMF.
- IMF (2011), "The Challenge of Public Pension Reform in Advanced and Emerging Economies", IMF Policy Papers.
- IMF (2012), "Fiscal Policy and Employment in Advanced and Emerging Economies", IMF Policy Papers.
- Jiménez-Martín, S. (2014), "The incentive effects of minimum pensions," IZA World of Labor, Working Paper 2014:84.
- Jiménez-Martín, S. and A.R. Sánchez Martín (2007), "An Evaluation of the Life Cycle Effects of Minimum Pensions on Retirement Behavior," *Journal of Applied Econometrics*, Vol. 22, pp. 923-950.
- Joubert, C. (2015), "Pension design with a large informal labor market: evidence from Chile," *International Economic Review*, Vol. 56, No. 2, pp. 673-694.

GREECE

OECD (2004), "Informal Employment and Promoting the Transition to a Salaried Economy," in OECD Employment Outlook.

OECD (2007), "Pensions: A comprehensive reform is urgently required", in *OECD Economic Surveys: Greece 2007*, OECD Publishing. http://dx.doi.org/10.1787/eco_surveys-grc-2007-5-en

OECD (2011), *Pensions at a Glance 2011: Retirement-income Systems in OECD and G20 Countries*, OECD Publishing. http://dx.doi.org/10.1787/pension_glance-2011-en

OECD (2013), "Pensions at a Glance 2013: OECD and G20 Indicators", OECD Publishing. http://dx.doi.org/10.1787/pension_glance-2013-en

Queisser, M. and E. Whitehouse (2006), "Neutral or Fair? Actuarial Concepts and Pension-System Design", OECD Social, Employment and Migration Working Papers, No. 40, OECD Publishing.

World Bank (2013a), "Review of Key Design Parameters and Legislation for Social Assistance Programs in Latvia," in Scientific Research: Latvia: "Who Is Unemployed, Inactive or Needy? Assessing Post Crisis Policy Options."

World Bank (2013b), "Analysis of the Incentive Structure Created by the Tax and Benefit System," in Scientific Research: Latvia: "Who Is Unemployed, Inactive or Needy? Assessing Post Crisis Policy Options."