

# 5 [ The 2012 Greek Debt Restructuring and its Aftermath

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## 1 Introduction

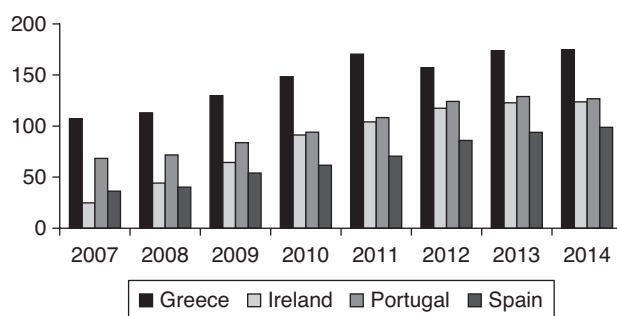
The 2012 Greek debt restructuring was a watershed event in the European debt crisis. It was unprecedented in terms of its size and deep haircut, yet it took place in an orderly manner, with the consent of both private and official creditors. There is an ongoing debate as to whether it should have happened sooner to avoid bailing out private investors with public money. In line with the book's subtitle, this paper discusses the tradeoff between the need to ensure debt sustainability up front versus the fear of contagion, concerns about euro area bank solvency, and doubts about Greece's resolve to reform.

The paper tries to draw the lessons of the Greek debt restructuring for the management of future debt crises in the euro area. Was the restructuring necessary? If so, should it have happened sooner? Were the parameters of the restructuring appropriate? Did it achieve debt sustainability? We conclude that the restructuring was both necessary and successful in achieving considerable debt relief, although the subsequent derailment in Greece's adjustment programme thwarted the achievement of debt sustainability. Concerns about bank solvency and fear of contagion to the European periphery prevented an earlier debt restructuring. However, it is doubtful that an earlier restructuring would have achieved debt sustainability, given Greece's huge official financing needs and worse-than-expected growth path. Overall, we conclude that the Greek experience is likely to remain unique in the history of debt restructurings.

## 2 Background

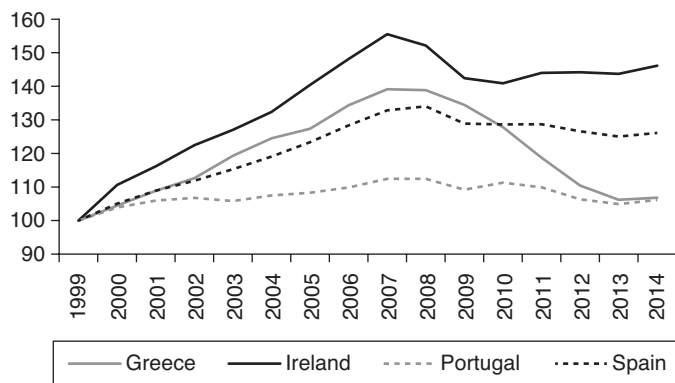
Before the global financial crisis erupted in 2007, countries in the European periphery (PIGS: Portugal, Ireland, Greece and Spain) were enjoying stable growth, relatively low fiscal deficits, and near-zero credit spreads. The financial crisis ended debt-financed consumer booms, and burst housing bubbles resulting from the sharp decline in interest rates in the runup to Economic and Monetary Union (EMU),

triggering deep recessions and raising fiscal deficits and debt levels. By 2010, the PIGS were facing severe debt problems; public debt ratios exceeded the Maastricht limit of 60% of GDP, and were on a steeply rising path in all four countries (Figure 5.1). In Greece, which had fiscal problems at the outset, the debt ratio reached nearly 150% of GDP. Credit spreads exploded as a result of a massive sell-off of sovereign bonds held by private investors. Bank deposits migrated abroad, and non-performing loans rose sharply, reducing the ability of the domestic banking sectors to provide credit to the economy and deepening the recession. The growth performance of the PIGS was diverse (Figure 5.2): the economies of Ireland and Spain bounced back after the crisis, while real GDP in Greece and Portugal today is only marginally above its level of 1999, when the European Monetary Union (EMU) was launched. The Greek



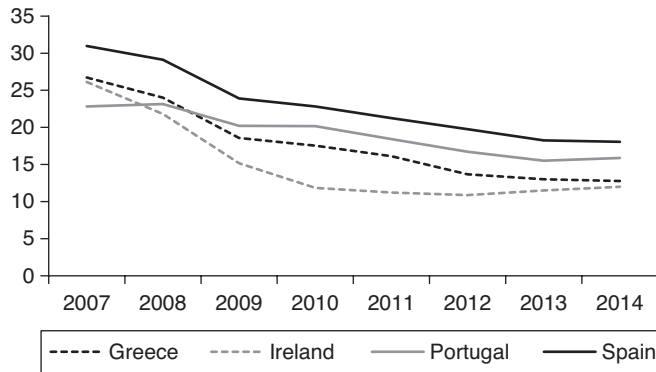
**Figure 5.1** PIGS: General government gross debt (% GDP)

Source: IMF, WEO database



**Figure 5.2** PIGS: Real GDP, 1999=100

Source: IMF, WEO database



**Figure 5.3** PIGS: Investment ratios, 2007–14 (% GDP)  
 Source: IMF, WEO database

rollercoaster is especially noticeable, as the country suffered the reversal of “the good times” which were based on rapid credit expansion and real wage increases far above productivity growth. The uncertainty generated by the crisis led to a collapse of private investment (Figure 5.3), casting doubt on the claim that fiscal austerity alone had brought about the collapse in output.

Greece was the first to request official financial assistance in April 2010. The new government elected in October 2009 had previously revised the 2009 fiscal deficit to more than twice the previously reported level of 6% of GDP, raising doubts about the ability of the Stability Pact to impose fiscal discipline. Greek sovereign bond yields continued to rise, with spreads over German Bunds shooting up from 300 basis points in January 2010 to nearly 600 basis points in early April, ahead of a €10 bn rollover of Greek government bonds, effectively excluding Greece from access to bond markets. In late April, Standard and Poor’s downgraded Greece’s debt three notches to junk status, from BBB+ to BB+, with negative outlook. The Greek government had little choice but to turn to euro area governments and the IMF for financial support.

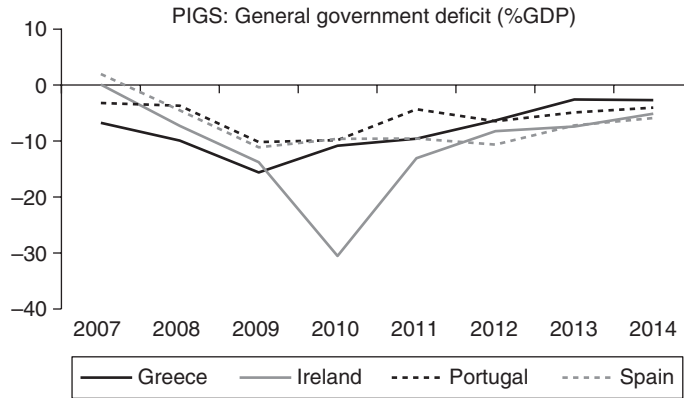
A three-year rescue package funded by the euro area governments and the IMF to the unprecedented amount of €110 bn (48% of GDP) was finally agreed in early May 2010, after months of controversial discussions (IMF 2010a). Within this total, euro area governments committed to contribute €80 bn in bilateral loans and the IMF €30 bn – an unprecedented amount equal to 3,212% of Greece’s IMF quota, far above normal access limits. Agreement on a rescue package for Greece was politically difficult, with Germany invoking the “no-bailout” clause of the Maastricht Treaty to initially turn down any request for assistance. By the time the risks of contagion had become clear, the modalities of official financial support and the role of the IMF had to be agreed in the midst of the crisis, since the euro area architecture did not

include a crisis management institution, based on the expectation that the Stability Pact would impose fiscal discipline. It was only after the Greek loan package was agreed that the European Financial Stability Fund (EFSF) and later the European Stability Mechanism (ESM, the permanent crisis resolution mechanism) were set up. In May 2010, the ECB launched a Securities Market Programme (SMP), intended to keep sovereign borrowing costs at reasonable levels through secondary market purchases. The ECB bought some €50 bn of Greek government bonds (GGBs) between May 2010 and February 2012, when the last SMP purchases took place before the programme was terminated.

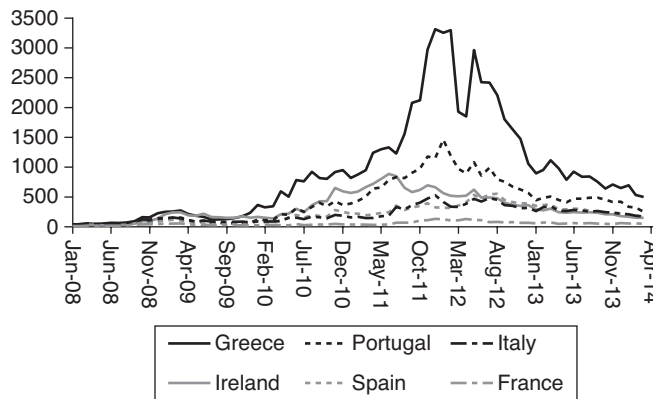
After a strong start, the Greek adjustment programme was derailed within months in the face of strong domestic opposition and limited political commitment to reform. Across-the-board cuts in pensions and public sector wages were not followed up with growth-oriented structural reforms; the adjustment effort relied primarily on tax increases rather than cuts in public consumption, while the public investment programme was cut to the bone to meet deficit targets, deepening the recession. Moreover, the long process of revising Greece's pre-crisis fiscal data was only completed by Eurostat in November 2010, revealing larger deficits and debt at the outset of the programme.<sup>1</sup> Market sentiment deteriorated steadily during the first half of 2011, as deposit outflows accelerated and market analysts started speculating about a debt restructuring (Moody's 2011, Kopf 2011). Roubini Economic Research went as far as to claim that "Greece should default and abandon the Euro" (Roubini Economic Research 2011). Fears of Greece's exit from the euro area ("Grexit") gave rise to investor concerns about forcible currency re-denomination risk. Greece's credit spreads soared as the country's credit rating was downgraded to near-default levels.

Meanwhile, the euro area crisis was becoming systemic. After Greece, a rescue package for Ireland was agreed in November 2010 (€85 bn), followed by one for Portugal in May 2011 (€78 bn), with a rescue package for Spanish banks agreed later, in July 2012 (€41 bn). Large budget deficits implied that the PIGS' debt ratios remained on a rising path (Figures 5.1 and 5.4). At the October 2010 Franco-German Summit in Deauville, President Sarkozy and Chancellor Merkel called for a permanent crisis resolution mechanism in Europe, including "private sector involvement" (PSI) in the resolution of debt-servicing difficulties. A clear signal that sovereign debt restructurings were on the cards, the Deauville statement triggered a widening of credit spreads in the European periphery countries (Figure 5.5). The failure of the euro area to build an effective firewall by leveraging the EFSF contributed to the sell-off. The euro area sovereign debt crisis threatened not only the public finances of member states but also their banking systems and the common currency itself.

From the outset, the ECB was strongly opposed to any debt restructurings in the euro area that would hurt bank balance sheets, weaken growth, and trigger contagion to other heavily indebted countries in the European periphery. The ECB's



**Figure 5.4** PIGS: General government deficit (% GDP)  
 Source: IMF, WEO database; figures for Ireland include the 2010 bank rescue package



**Figure 5.5** Spreads over ten-year German bond yield (bps)  
 Source: Bloomberg

opposition was made clear in a letter that ECB President Trichet addressed to Greek PM George Papandreou on 7 April 2011, excerpts of which were later published in the Greek press (Palaiologos 2014):

“I am writing to inform you about the grave risks that the Greek government would take if it were to pursue at this juncture a rescheduling of its debt, even on a voluntary basis [...] Pursuing such a strategy would put Greece’s refinancing in euro at major risk.”

Trichet's letter warned that even a voluntary debt restructuring would result in the ECB pulling the plug on Greek banks, since they would lack appropriate collateral and the capital needed to access the ECB window. Essentially the ECB warned that Greece would be forced to leave the euro area and return to printing drachmas.

It was against this background that a restructuring of the Greek debt was finally agreed in principle in July 2011 (EU Council 2011a). However, a 21% haircut in net present value (NPV) terms proposed by private bondholders and endorsed by the 21 July Summit of euro area leaders would have been insufficient to restore debt sustainability. A revised debt sustainability analysis (DSA) prepared by the IMF for the October 26–27 EU Summit noted that Greece's growth outlook had deteriorated because the economy was adjusting through recession rather than through growth-enhancing structural reforms (IMF 2011). The DSA projected a slower recovery, lower privatization proceeds, and delayed access to capital markets compared to earlier estimates. Under these assumptions, Greece's debt ratio would peak at 186% of GDP in 2013 and decline only gradually to a still-high 152% of GDP by the end of the decade. The projections implied that Greece would need far more comprehensive debt relief to reach debt sustainability.

The 26 October Euro Summit (EU Council 2011b) gave its consent to “a voluntary bond exchange with a nominal discount of 50% on notional Greek debt held by private investors” and pledged an official contribution of €30 bn to the PSI package, as well as additional financing of €50 bn to recapitalize Greek banks. Overall, official creditors committed €130 bn in new loans, in addition to the €37 bn which remained undisbursed from the first rescue package. Euro area creditors also agreed to reduce the spread over Euribor on the bilateral loans that funded the first rescue package to Greece from 300 basis points to 150 basis points, and extend the average maturity of their loans from 10 to 15 years. These commitments triggered a new round of PSI negotiations, which resulted in a large debt exchange in March 2012.

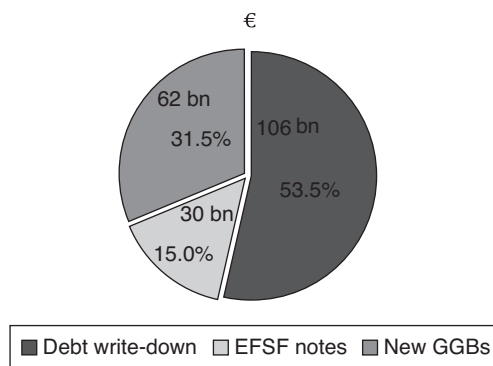
### 3. The debt exchange

The Greek debt exchange that finally took place in March 2012 was unique in several respects: It was the largest in history – more than twice as large as the 2005 Argentine debt exchange – and the first in the euro area – a monetary union consisting of developed countries. Since the write-off of post-WWII debts in the early 1950s, sovereign debt crises and debt restructuring occurred exclusively in emerging markets. But unlike emerging markets, whose external debt is typically denominated in foreign currency and issued under foreign law, Greece's debt was denominated in domestic currency (euros) and issued under domestic law. These characteristics implied that Greece could not inflate its debt away by virtue of its membership in the euro area, which prohibits monetary financing of deficits. However, the fact that the bulk of Greece's debt was issued under domestic law gave Greece enormous power to change

the terms of the bonds by an act of parliament, if it chose to. Instead, Greece chose to retroactively insert Collective Action Clauses (CACs)<sup>2</sup> in the Greek-law bonds to facilitate the restructuring by having the majority of bondholders impose the terms of the restructuring on a dissenting minority. Changing the terms of the bonds would have been viewed as expropriation of bondholders by legislative fiat, and could have been challenged under both Greek and international law (Zettelmeyer et al. 2013).

The aim of the debt exchange was to bring Greece's public debt ratio from 170% of GDP at end 2011 to the original programme target of 120% of GDP by 2020. To reach this target, the PSI offer contained a single option, subject to a 90% acceptance requirement, to ensure deep debt relief; it offered to exchange €205bn of eligible claims for a discount bond with a face value of 31.5% of the original claim, plus a "credit enhancement" consisting of short-term EFSF notes amounting to 15% of the face value of the original claim through a co-financing agreement between the EFSF and Greece (Figure 5.6). Bondholders would thus lose 53.5% of the value of their original claim, but would receive new claims partially backed by the EFSF's triple-A credit, and a detachable GDP-linked warrant. The new GGBs were issued under English law with a maturity of between 10 and 30 years, and a step-up coupon starting at 2% and averaging 3.85% over the life of the bonds. With the new GGBs maturing between 2023 and 2042, and maturity extensions granted on official loans, Greece faced very little rollover risk over the next decade.<sup>3</sup>

The terms of the exchange were announced in late February 2012, and bondholders were invited to tender their bonds by 8 March. However, bondholders tendered only 86% of the Greek-law bonds and 69% of foreign-law bonds, falling short of the 90% participation needed to achieve the debt reduction target. The Greek government thus decided to activate the CACs that had been retrofitted by an act of the Greek



**Figure 5.6** Distribution of PSI losses on €198bn of accepted bids (€bn)

Source: PDMA

parliament to the bonds issued under Greek law, raising the participation of Greek-law bondholders to 100% of the total after the required supermajority of more than 66.7% had agreed to the new terms.

Out of a total of €205 bn of eligible claims, €177 bn were issued under Greek law, and €28 bn under foreign law. All €177 bn of the Greek-law bonds, and €21 bn of the foreign-law bonds (75% of the total) were tendered in the debt exchange. The face value of bonds tendered thus amounted to €198 bn, while €6.4 bn remained in the hands of creditors who did not accept the terms of the exchange. These creditors held foreign-law bonds, whose built-in CACs applied separately to each series of bonds and typically required a 75% majority to approve the new terms. The required majority was not reached in some bond series, giving rise to holdout creditors who are being repaid in full to avoid triggering cross-default clauses included in other foreign-law bonds, causing a disorderly default.<sup>4</sup>

The ECB insisted on a “voluntary” restructuring to avoid an event of default that would trigger the CDS contracts and thus reward the “speculators” while having a possible knock-on effect on banks and insurance companies that sold CDS contracts. As it turned out, on 9 March the International Swaps and Derivatives Association (ISDA) ruled that a “Restructuring Credit Event” had occurred due to the retroactive change in bond contracts (though not payment terms), triggering payment of CDS contracts. By that time, outstanding CDS contracts reportedly amounted to just €2.5 bn, so the ECB’s fears proved exaggerated. The ECB’s strong opposition to a forced restructuring also stemmed from its reluctance to accept as collateral the sovereign bonds of a country in default. However, the restructuring did not disrupt the Greek banks’ access to liquidity; for during the few weeks that Greece remained in “Selective Default”, Greek banks lost access to the ECB window but received funding through the Exceptional Liquidity Assistance (ELA) from the Bank of Greece.

In line with the seniority accorded to SMP purchases, the ECB did not participate in the restructuring, nor did national central banks of the Euro area (NCBs) that had invested part of their reserves in GGBs. However, contrary to what equality of treatment would dictate, GGBs held by the People’s Bank of China were subject to the same haircut as private bondholders. Overall, the PSI extinguished €106 bn of debt (€198 bn × 53.5%), equivalent to 55% of Greece’s 2012 GDP. However, Greek banks (which held nearly a third of GGBs) suffered losses of €38 bn as a result of the PSI, and had to be recapitalized (Bank of Greece 2012). The net debt relief resulting from the PSI (excluding bank losses) thus amounted to €68 bn (35% of GDP). To ensure that banks continued to function normally, the second rescue package for Greece, amounting to €130 bn, set aside €50 bn to recapitalize Greek banks (including PSI losses and non-performing loans) as well as €30 bn for the “credit enhancement” needed for the PSI to be accepted by creditors.

The conclusion of the PSI and the second rescue package helped tighten the GGB spread over Bunds from a peak of 3330 basis points to 1800 basis points in March



2012 (Figure 5.5). However, with Greece's rating remaining deep in junk territory, the new bonds sold off, pushing their price far below par, unlike most debt exchanges where the new bonds typically trade around par; in Greece, the market discounted a new default with extremely low recovery value of around 25 cents, giving rise to bondholder losses that far exceeded the 53.5% haircut.

Greece's situation took a turn for the worse when the May national elections resulted in a hung parliament and had to be repeated in June. Opinion polls showing that the radical left Syriza party might win the June elections gave rise to fears that Greece would drop out of the euro area. Extreme distress pushed the GGB trading range to a low of 13–18 cents in early June. Bond prices recovered only slowly after a right–left three-party coalition was formed with a mandate to keep Greece in the euro area. But protracted negotiations on a coalition agreement delayed implementation of the programme and raised doubts about Greece's commitment to reform. By November 2012, the programme was off track. The Eurogroup offered a two-year extension of the programme and significant additional debt relief to avoid a default. The primary fiscal surplus target of 4.5% of GDP needed to achieve debt sustainability was moved from 2014 to 2016 to ease the adjustment path, and significant amount of official debt relief (OSI) was granted by:

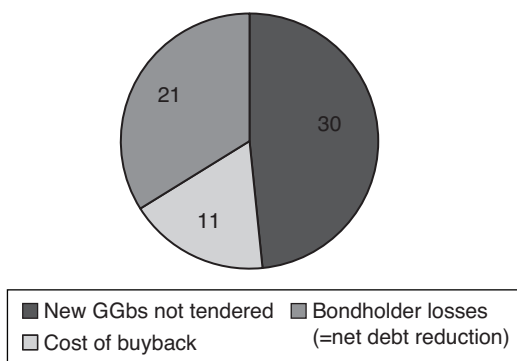
- deferring interest payments due to the EFSF by a decade,
- reducing further the interest margin on the “Greek Loan Facility” (GLF) from 150bps to 50bps,
- cancelling the EFSF guarantee commitment,
- extending the maturities of EFSF and GLF loans to 30 years, and
- passing on to Greece the income on the ECB's SMP portfolio (including capital gains) as of 2013.

Official debt relief would be provided in a phased manner, conditional on full implementation of the agreed adjustment measures (EU Council 2012). These measures contributed additional financing of €8 bn in 2013–16 and were anticipated to reduce the debt stock by 7% of GDP by 2020 (EC 2012). The Eurogroup also promised to provide additional debt relief if needed, provided Greece continued to abide by the terms of the 2012 EU/IMF-funded programme.

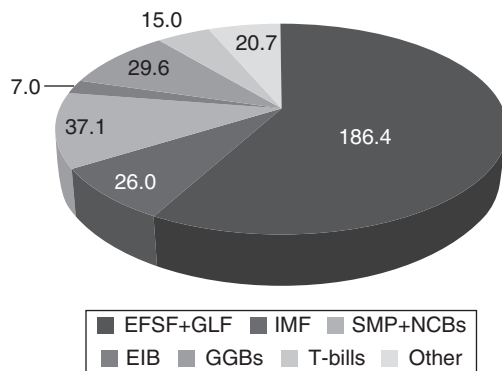
#### 4. The debt buyback

The official debt relief measures agreed at the November 2012 Eurogroup, though significant, were insufficient to secure a debt ratio below 120% of GDP by 2020, as originally targeted. A debt buyback scheme was therefore agreed to help lower the debt ratio further. In early December 2012, the Greek Debt Management Agency (PDMA) conducted a reverse auction to buy back a portion of the €62 bn

of new GGBs issued at the March 2012 debt exchange to capture the substantial discount prevailing in the secondary market. Just over half of the €62 bn of new GGBs were tendered in the buyback operation. PDMA accepted all €32bn of debt offered at a cost of €11 bn, in exchange for six-month EFSF notes. Funding for the buyback was provided by the OSI detailed above and by the cushion built into the programme (e.g. by postponing the build-up of a Treasury cash buffer). The weighted average price amounted to 33.8 cents per euro of face value of the new GGBs, thus providing significant debt relief of €21 bn (11% of GDP) (Figure 5.7). Although the buyback operation was voluntary (that is, CACs were not triggered), Greek banks were urged to tender all the new GGBs they held, to ensure achievement of the debt reduction target. Indeed, the debt offered in the buyback was split almost equally between Greek banks and foreign bondholders, even though Greek banks held only about a quarter of the outstanding stock of GGBs post-PSI.<sup>5</sup> Greek banks had already marked the new GGBs below the buyback price, so the buyback did not give rise to additional recapitalization needs. The net debt relief that Greece secured by the debt exchange and buyback amounted to 46% of GDP (35% + 11% of GDP, respectively).



**Figure 5.7** Outcome of debt buyback targeting €62bn of new GGBs (€bn)  
Source: PDMA



**Figure 5.8** Greece: Breakdown of public debt by creditor, 2013 (€bn)  
Source: PDMA

Following the 2012 debt restructuring and official financing provided subsequently, Greece's debt due to private bondholders was tiny compared with official debt (Figure 5.8). By the end of 2013, Greece's general government debt had amounted to €321 bn, of which only €34 bn was due to private bondholders, including holdouts, suggesting that if Greece needed further debt relief it could only be provided by official creditors. Defaulting on the new GGBs, which amounted to just 11% of gross public debt at end 2013, would simply not be worth the costs. Even after the new GGBs will have reached the maximum step-up coupon of 4.3% in 2021, default would have saved less than 1% of GDP a year in interest payments. Any future restructuring is thus likely to involve the official sector, which has so far resisted debt write-downs.

As it turned out, Greece over-performed on the programme, already reaching a small primary surplus by 2013, compared with a balanced primary budget target. Nevertheless, Greece's public debt ratio at end 2013 reached 175% of GDP, higher than it was at the end of 2011, when PSI negotiations were already under way. Although the headline debt figure was lower, the sharp decline in GDP led to a rise in the debt ratio. Discussions on further official debt relief, scheduled for the autumn of 2014, will be limited to maturity extensions and interest rate reductions, as a haircut on official debt has been ruled out. In view of substantial OSI already granted to Greece in November 2012, this decision caps any additional near-term official debt relief, and thus provides only limited room to reduce the primary surplus of 4.5% of GDP needed to achieve debt sustainability.

## 5. Lessons of the Greek debt restructuring

There is little doubt that Greece's debt restructuring was necessary, even if there were any residual doubts at the outset. By early 2011, it had become clear that Greece would not be able to re-access capital markets by mid-2012, as projected under the May 2010 programme. The debt restructuring agreed between official and private creditors in mid-2011 was clearly insufficient to restore debt sustainability, so it was never implemented. The revised agreement reached in October 2011 was implemented in March 2012.

What about an earlier haircut, upon conclusion of the May 2010 rescue package? With the benefit of hindsight, the Greek debt restructuring was too little, too late. But so what? Would an earlier debt restructuring have restored debt sustainability? Would it even have been politically feasible? The answer to both questions seems to be no. Hence the IMF's recent proposal to make IMF support conditional on a "debt re-profiling" operation in cases where the debtor country has lost market access and there is uncertainty about debt sustainability, in order to avoid using Fund resources to bail out creditors in such cases (IMF 2014, Xafa 2014).

According to the quarterly bulletin on public debt published by the Greek Ministry of Finance, Greece's stock of privately held public debt (bonds only, excluding

T-bills) amounted to €268 bn (120% of GDP) at the end of March 2010; by the time the PSI was implemented, debt due to the private sector was down to €206 bn, as redemptions were funded by official loans. If the PSI terms had been agreed up front in May 2010, the public debt would have been cut by an additional €31 bn (53.5% haircut  $\times$  € 58 bn), equivalent to 17% of GDP (plus the interest savings from lower coupons). It is doubtful that this reduction, even if acceptable to bondholders and the official sector, would have made Greece's debt sustainable. But delaying the restructuring beyond the spring of 2011, when it was abundantly clear that the debt was unsustainable, just added to Greece's debt burden.

Financial markets were exceptionally patient during the period from October 2009, when the newly-elected socialist government in Greece revised the country's fiscal figures, until April 2010, when a huge €10 bn rollover of GGBs was due. Greece's ten-year credit spread over Bunds rose from 130bps in September 2009 to 594bps in April 2010, even as markets were comparing Greece to the Argentine and Russian defaults of 2001 and 1998, respectively. It was only after Greece's programme implementation disappointed, and large rollovers in March 2012 loomed, that Greece's credit spread reached a peak of 3300bps in December 2011. It is hard to believe that bondholders would have accepted a 53.5% haircut at the outset of the May 2010 programme.

Would an earlier haircut been politically feasible? Greece's debt was mostly held by European banks, which would have suffered large losses and would have needed to be recapitalized. Delaying the restructuring provided time to unload their holdings to the ECB (through SMP purchases) and to speculative investors. Concerns about the soundness of the banking system, but also fear of contagion to other heavily indebted euro area countries, motivated the initial resistance of euro area policymakers to any debt restructurings in the euro area. Following the Deauville statement in October 2010, the Eurogroup agreed in March 2011 to set up a permanent crisis resolution mechanism, the ESM, through intergovernmental agreement. This was accompanied by a statement that there would be no debt restructurings in the euro area until after the ESM had taken effect in mid-2013. A few months later, when the Greek PSI was agreed, the Eurogroup stated that Greece's case was exceptional. Policymakers were clearly behind the curve, not least by failing to build an effective firewall by leveraging the EFSF/ESM. It is hard to imagine how an early decision to restructure the Greek debt could have been made in the midst of this crisis. Trichet's letter to the Greek authorities in April 2011 left little doubt that the ECB would pull the plug if Greece attempted a debt restructuring. With the benefit of hindsight, this decision delayed the inevitable and added to Greece's debt burden by bailing out bondholders with official loans.

Euro area credit spreads peaked in December 2011 and stabilized in March 2012, when the Eurogroup decided to raise the combined lending ceiling of the EFSF and ESM from €500 bn to €700 bn. After the "Grexit" scare in mid-2012 caused a back-up in yields, market sentiment gradually improved after ECB President Draghi promised to do "whatever it takes" to save the euro in July 2012, followed

by the announcement of the Outright Monetary Transactions (OMT) programme in August, similar to the SMP but with two important differences: OMT would be subject to appropriate conditionality in the debtor countries, and OMT bond purchases in the secondary market would not have seniority over the claims of private bondholders, thus addressing their subordination concerns.

To conclude, Greece's experience is likely to remain unique. There had been no preparation for a sovereign default within the euro area. Crisis management procedures and institutions had to be invented as events unfolded. The Greek debt restructuring demonstrated that an orderly default is possible within the euro area, provided appropriate firewalls and crisis management institutions are in place. Uncertainty about how debt sustainability concerns would be addressed turned out to be the main source of contagion. The key to addressing contagion is to have a credible solution to sovereign distress.

Beyond the creation of the ESM and the announcement of OMT, the institutional setup of the Euro area has evolved in a way that makes a repetition of the Greek debt experience unlikely. The agreement on "bail-in" provisions for failing banks, reached after the Cyprus programme was agreed in May 2013, would minimize taxpayer liabilities in any future sovereign debt restructurings by having bank investors take the first hit. Also, the "fiscal compact" that took effect in January 2013 is far more likely to impose fiscal discipline than the original Stability Pact, by requiring balanced-budget amendments in all euro area countries and pre-screening of annual budgets. What remains to be seen is how the legacy debts of the PIGS (and beyond) will be tackled. The clean solution would be a write-down of all sovereign debts, including official loans to Greece. For the time being, however, "extend and pretend" rules the day.

## Notes

1. The revision revealed extensive misreporting in 2008–09, and expanded the coverage of the general government to include loss-making public enterprises whose sales covered less than 50% of production costs. A total of 17 loss-making entities in the rail, public transport and defence sectors, as well as some off-budget accounts, were identified. The debt of these entities (7.2% of GDP) was included in the debt data in late 2010, and their annual losses added to the fiscal deficit (IMF 2010b, p. 22).
2. CACs allow the terms of the bonds (coupon, maturity, face value) to be amended by a defined majority of holders to facilitate a debt restructuring. These amendments are binding on all holders, including those who voted against them.
3. This fact helps explain why the €3 bn five-year bond issued in April 2014 was seven times oversubscribed.
4. The new GGBs issued after the debt exchange have no cross-default clauses with the foreign-law bonds, so that a default on the foreign-law bonds would leave them unaffected.
5. Greek pension funds, which held €7 bn of new GGBs (11% of the total), did not participate in the buyback, because their claims represented intergovernmental debt that would not give rise to net debt reduction.

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