MPRA
Munich Personal RePEc Archive

Behind the Greek default and restructuring of 2012

Porzecanski, Arturo C.

American University

30 September 2012

Online at https://mpra.ub.uni-muenchen.de/42432/
MPRA Paper No. 42432, posted 06 Nov 2012 11:15 UTC

Behind the Greek Default and Restructuring of 2012

Arturo C. Porzecanski

American University

September 2012

Forthcoming in *Sovereign Debt and Debt Restructuring*, ed. by Eugenio A. Bruno (London: Globe Business Publishing, 2013).

In March 2012, the government of Greece defaulted on approximately €200 billion (about $265 billion) of its bonded debt, the largest sovereign default in recorded history and the first by an advanced country boasting an annual income per capita exceeding $25,000 and membership in the very wealthy European Union.[1]

The default was precipitated by persistently negative attitudes coming out of the authorities in Berlin, which ended up destroying the confidence of the credit-rating agencies and of fixed-income investors necessary to keep funding the Greek government. The subsequent debt restructuring, which imposed all-in losses on bondholders in excess of 70 percent on a net-present-value (NPV) basis, put Greece on the same league with Argentina and Ecuador – serial defaulters which have likewise inflicted up-front losses of that magnitude on their creditors.[2]

In each of these three cases, and to a greater or lesser extent, the sovereign debt workout was driven largely by considerations of a non-economic nature, and creditor rights and the rule of law were trampled.[3] Moreover, the scale of the losses imposed by the government of Greece under pressure from its Eurozone partners and the International Monetary Fund (IMF) were based on questionable estimates and judgments. It is no wonder that the Greek default and restructuring set a troubling precedent that has been worrying investors ever since who are involved in other vulnerable countries around Europe's periphery.

---

[1] Greece had previously defaulted in 1932, as other countries in Europe and most in Latin America had done in the midst of the Great Depression. See Carmen M. Reinhart and Kenneth S. Rogoff, *This time Is Different: Eight Centuries of Financial Folly* (Princeton, NJ: Princeton Univ. Press, 2009), p. 96. The world's second-largest default was staged by Argentina beginning in late 2001, and it involved about $80 billion of bondholder debt plus several billion more in obligations to official and various other private-sector creditors.

[2] Juan J. Cruces and Christoph Trebesch, "Sovereign Defaults: The Price of Haircuts," draft, March 2012, p. 36. The authors summarize various alternative calculations of investor NPV losses generated by them and other experts, and they average 74 percent in the case of Argentina and 68 percent for Ecuador. The Greek restructuring involved a 53.5 percent reduction in the nominal face value of existing government bonds held by private investors, but considering the payment terms of the new bonds issued to investors after this "haircut" was applied and prevailing market conditions, the debt exchange imposed an NPV loss of over 70 percent. See Credit Suisse, "Greece's Debt Exchange," February 27, 2012, which estimated a 74 percent NPV loss, and Morgan Stanley, "On the Greek Debt Restructuring, Part I," February 22, 2012, which estimated a 73-78 percent NPV haircut.

[3] For more on Argentina, see Arturo C. Porzecanski, "From Rogue Creditors to Rogue Debtors: Implications of Argentina's Default," *Chicago Journal of International Law*, Summer 2005. For more on Ecuador, see Arturo C. Porzecanski, "When Bad Things Happen to Good Sovereign Debt Contracts: The Case of Ecuador," *Law & Contemporary Problems*, Fall 2010.

1. The Greek Tragedy, Act I

The pedestrian narrative about the Greek financial crisis and default is that the country was fiscally mismanaged for a long time and failed to carry out needed structural reforms that could have improved economic growth prospects and enhanced the country's creditworthiness. Therefore, a default and debt restructuring were inevitable sooner or later—and certainly so once the financial markets were informed, as happened in October 2009, that prior governments had underestimated their budget deficit and public debt figures. The prosaic tale of the supposed inevitability of the Greek tragedy has been endorsed, for example, by a prominent economic historian: "Since independence in the 1830s, Greece has been in a state of default about 50 percent of the time. Does that tell you something?"[4]

In reality, Greece's road to default and debt restructuring in 2012 was not at all straightforward—and there was no historical inevitability about it, either. Consider some of the facts. In the last five decades, successive governments in Greece managed their public finances without a hitch, including servicing a very high level of public debt that averaged the equivalent of nearly 100 percent of GDP from 1990 until 2009.[5] In 2009, the public debt was structured very favorably: the average interest rate on the debt was a low 4.2 percent per annum, and its weighted-average residual maturity was eight years, the second-longest among advanced economies (after the United Kingdom).[6] It is difficult to argue that this exceedingly benign debt structure in Greece was the poisoned fruit of moral hazard; after all, the European Union enshrined a well-known prohibition on bailing out its members, designed to protect it from shouldering the cost of fiscal indiscipline in any one country, thereby encouraging bondholders to assess and bear the risk of any potential default and restructuring.[7]

It is true that Greece raised eyebrows in October 2009, when an incoming government announced that the fiscal deficit for 2008 had been revised from the equivalent of 5 percent to 7.7 percent of GDP, and that because of an election-related drop in tax revenues and a splurge in fiscal spending, the deficit for 2009 would end up closer to 12.5 rather than 3.7 percent of GDP. (In the event, the actual figures were 6.5 percent and 15.8 percent of GDP, respectively.) It is

[4] "Q&A: Carmen Reinhart on Greece, U.S. Debt and Other 'Scary Scenarios,'" *Wall Street Journal Blogs*, February 5, 2010. Greece was in default throughout much of the 19th century. The flippant view expressed is reminiscent of skeptical attitudes among academics toward Mexico's financial crises at the end of seemingly every six-year presidential term—at least until a dozen years ago, that is, when Mexico "outgrew" them.

[5] IMF, *Historical Public Debt Database*, September 2011. The precise two-decade average was 99 percent of GDP. The government of Greece defaulted on its obligations during the Great Depression, as did some 30 other governments around the world, more than a fifth of total sovereign issuers, and the default was finally cured in 1964. See Standard & Poor's, "Sovereign Defaults at 26-Year Low, to Show Little Change in 2007," September 18, 2006.

[6] Average implicit interest rate calculated by the author from Eurostat, *Government Finance Statistics, Summary Tables 1996–2010*, December 2011, p. 13; maturity data from IMF, *Fiscal Monitor*, November 2010, pp. 27–32.

[7] Article 125 of the Treaty on the Functioning of the European Union, often referred to as the "no-bailout clause" of the Maastricht Treaty ratified in 1992, states that the EU and any of its member state "shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of another member state, without prejudice to mutual financial guarantees for the joint execution of a specific project." European Union, "Consolidated Version of the Treaty on the Functioning of the European Union," *Official Journal of the European Union*, C-83/99, March 30, 2010.

also the case that the incoming prime minister promised at the time to impose austerity measures, but that he was short of convincing detail and political support.

However, Greece was the rule rather than the exception: every one of the 17 member countries of the Eurozone experienced a major fiscal deterioration between 2007 and 2009 as a consequence of Europe's economic downturn. While Greece's fiscal deficit widened by 9.3 percentage points of GDP during the two years, the fiscal position of the Eurozone as a whole widened 5.7 percentage points. Britain's own 2009 budget deficit was equivalent to 11.3 percent of GDP.[8]

And largely because of the added fiscal cost of various bank bailout plans, the ratio of government debt to GDP increased by 13.5 percentage points in the whole of the Eurozone between 2007 and 2009, and a more limited 5.6 percentage points in Greece. (In the United Kingdom, meanwhile, it jumped by more than 25 percentage points of GDP.) Among other heavily indebted countries in the Eurozone, the ratio of debt to GDP went up as much as 11.8 percentage points in Belgium and as little as 2.7 percentage points in Italy. The Eurozone average debt-to-GDP ratio exceeded 87 percent in 2011; it had been 66 percent in 2007.[9]

Figure 1: Selected Fiscal Indicators

	2007	2009	Change
Fiscal balance/GDP			
Eurozone	**-0.7**	**-6.4**	**-5.7**
Belgium	-0.3	-5.8	-5.5
Italy	-1.6	-5.4	-3.8
Greece	-6.5	-15.8	-9.3
Govt. Debt/GDP			
Eurozone	**66.3**	**79.8**	**13.5**
Belgium	84.1	95.9	11.8
Italy	103.1	105.8	2.7
Greece	107.4	113.0	5.6
Govt. Debt/Eurozone GDP			
Belgium	3.1	3.7	0.6
Italy	17.7	19.7	2.0
Greece	2.6	3.4	0.8
Govt. Debt/Eurozone Govt. Debt			
Belgium	4.7	4.6	-0.1
Italy	26.7	24.7	-2.0
Greece	4.0	4.2	0.2

Source: Eurostat and author's calculations.

[8] Unless otherwise noted, all fiscal data cited here and appearing in the nearby table are the author's calculations from Eurostat, *Government Finance Statistics, Summary Tables 1996–2010*.

[9] Eurostat, *Newsrelease 62/2012*, April 23, 2012, and *Newsrelease 20/2012*, February 6, 2012.

The news that the 2009 fiscal deficit in Greece would be much larger than previously projected actually did not lead to a measurable loss of investor confidence in Greece's ability to refinance its debt and access new funds to cover ongoing deficits. Yields on Greek two-year and five-year benchmark government bonds were slightly lower in the five working days after, than in the five days prior, to the October 20 announcement by George Papaconstantinou, then finance minister in the new Socialist government, that the budget deficit would be far higher than estimates provided by the former Conservative administration.[10]

The erosion of investor confidence that would take place later on could have been prevented if Greece's Eurozone partners had seized the initiative and worked constructively with the new government in Athens to come up with a preemptive plan to introduce fiscal austerity and implement structural reforms that was backed by Europe and the IMF. After all, the public debt of Greece was minuscule by Eurozone standards: it represented as of end-2009 a mere 3.4 percent of Eurozone GDP, or 4.2 percent of total Eurozone government debt. Early on, Greece could have been stabilized—and for a fraction of what it has cost so far.

Instead, initial hesitation in Athens on the part of Prime Minister George Papandreou, combined with inertia and indecision that gripped the Eurozone in assembling a stabilization program for Greece until six months later, would plant the seed of doubt among the credit-rating agencies, market analysts, and investors—and not just about Greece's fate, but also about the vulnerabilities of other countries sharing the single European currency. This is why a few months after Greece was provided with official funding, Portugal and Ireland also had to be supported by the EU and the IMF.[11] In essence, Greece unwittingly played the role of the child in Hans Christian Anderson's famous tale, pointing out that the Eurozone "Emperor" was stark naked.[12]

The slide in investor confidence in Greece began in December 2009, when all three of the leading rating agencies downgraded the sovereign (Fitch and Standard & Poor's from A- to BBB+ and Moody's from A1 to A2, all with a negative outlook). That fanned concerns that Greek government bonds would be excluded from ECB (European Central Bank) market operations when collateral credit-quality rules returned to pre-crisis levels at the end of 2010—concerns that were aggravated in mid-January when President Jean-Claude Trichet said that the bank would not change its collateral policy for the sake of "any particular country."[13] (In the event, the ECB would announce in late March that it was extending its emergency collateral

[10] Greek bond yield data courtesy of Bloomberg. "The news was delivered at a meeting of European Union finance ministers, was unpleasant but not unexpected for Greece's 15 Eurozone partners. They had suspected that the financial crisis would have a more serious impact on Greece's deficit and debt than had been admitted in Athens." See Tony Barber, "Greeks Aim to Cut Deficit," *Financial Times*, October 21, 2009.

[11] Domenico Lombardi, "The Euro-Area Crisis: Weighing Policy Options and the Scope for U.S. Leverage," *U.S. Senate Subcommittee on Security and International Trade and Finance Hearing*, September 22, 2011, p. 2.

[12] This is a reference to serious flaws in the Eurozone's governance structure that have become obvious during the past few years as a result of the handling of the European banking and sovereign crises—and not only to the hesitant leadership of German chancellor Angela Merkel. For an incisive analysis, see Matthias Matthijs and Mark Blyth, "Why Only Germany Can Fix the Euro," *Foreign Affairs Snapshots*, November 17, 2011.

[13] European Central Bank Press Conference, January 14, 2010.

rules into 2011, and in May it dropped all restrictions on Greek bonds to ensure they did not become ineligible after the country was downgraded to "junk" level by Standard & Poor's.) Yields on two-year Greek government bonds rose from below 2 percent in early December 2009 to a peak of 6.5 percent in early February 2010, before subsiding to around 5.5 percent later that month.

Investor confidence was undermined again in April 2010 ahead of an agreement between Greece and the IMF, ECB, and European Commission—the so-called Troika—on an economic stabilization and reform plan backed by a joint European Union-IMF financing package worth €110 billion. Yields on two-year Greek government bonds increased from 4.5 percent in late March to above 18 percent in early May before dropping below 7 percent by mid-May, on the heels of both the financing package and news that the ECB would buy government and private debt in the biggest attempt yet to end the European financial crisis. The European Financial Stability Facility (EFSF) was born, the region's "temporary" bailout mechanism, with an initial capital of €440 billion.

Another investor scare took place in mid-June 2010, when Moody's concurred with Standard & Poor's move in late April and downgraded Greece's government bond ratings to "junk" (to Ba1 from A3), a level "which incorporates a greater, albeit, low risk of default."[14] Yields on two-year Greek government bonds rose from 7.5 percent to 10 percent prior to easing down to 9.5 percent in early July. There followed an additional, temporary loss of investor nerve in mid-August, but then the bond market calmed down partly owing to praise from the IMF for Greece's continuing effort to rein in its fiscal deficit. Yields on the two-year bonds fell to as low as 7.25 percent by mid-October.

2. The Greek Tragedy, Act II

What turned out to be the destruction of investor confidence on a permanent basis began on October 18, 2010, when German chancellor Merkel and French president Sarkozy met in Deauville (France) and agreed that private investors must "contribute" to future European sovereign bailouts—a demand that was rightly interpreted as meaning that bondholders would have to accept adverse modifications to the payment terms on their securities. This would be the price of a deal to set up a larger, permanent bailout fund to replace the EFSF, because according to Merkel the current system of state-funded rescues had allowed for too much "moral hazard" to creep into the bond market.

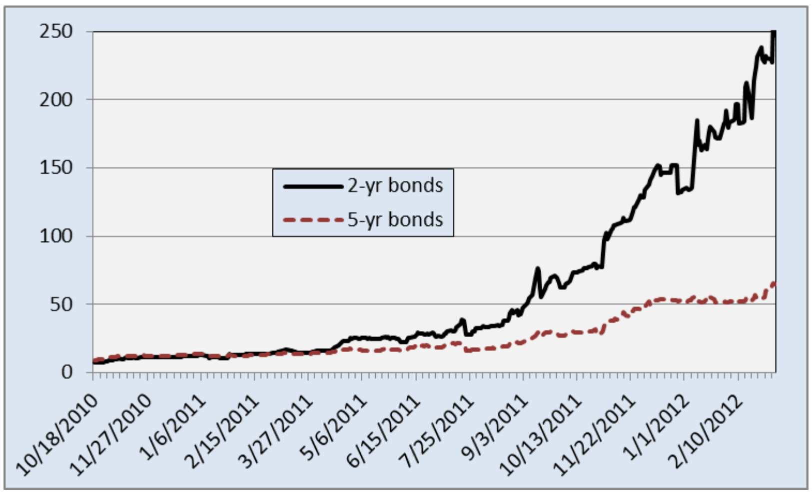
The financial markets were understandably roiled. In Greece, two-year bond yields jumped from 7.25 percent back up above 10 percent. On November 4, the ECB's Trichet expressed public concern that forcing bondholders to take losses would drive up borrowing costs. On November 12, seeking to calm the financial markets, the finance ministers of Europe's five largest countries issued a statement clarifying that any private-sector involvement (PSI) would not apply to any

[14] Moody's Investors Service, "Moody's Downgrades Greece to Ba1 from A3, Stable Outlook," June 14, 2010.

outstanding debt, and would only come into effect from 2013. However, irreparable damage to confidence was done.

The following March (2011), Moody's became the first of the major rating agencies to slash Greece down to single-B status, citing in part "the lack of certainty surrounding the precise nature and conditions of support that will be available to Greece after 2013, and its implications for bondholders."[15] It was followed by Standard & Poor's and Fitch two months later, after the top European finance ministers gathered in Luxembourg (in May) to discuss further aid for Greece—but on condition that it would be accompanied by "sacrifices" made by private creditors. The ECB's Trichet walked out, refusing to participate in any meeting that discussed such "haircuts."[16]

Figure 2: Greek Government Bond Yields (percent per annum)



Source: Bloomberg and author's calculations.

Later that May, European finance ministers for the first time floated the idea of talks with bondholders to extend Greece's debt-repayment schedule. Two weeks later, Moody's downgraded Greece to Caa1, consistent with a 50 percent probability of default, in part because of the likelihood that the Troika would "make the provision of financial assistance to Greece over the medium term conditional on a debt restructuring, in which private-sector creditors would absorb some economic losses."[17]

In early June, Berlin proposed extending the maturities on Greek bonds by seven years. Within days, Standard & Poor's responded by downgrading Greece to CCC, citing that "the risk of default … within the next 12 months has increased significantly," and that in the event of a default, bondholders would recover only 30–50 percent of what they were owed.[18] For his part,

[15] Moody's Investors Service, "Moody's Downgrades Greece to B1 from Ba1, Negative Outlook," March 7, 2011.
[16] Asked about the likelihood of a potential Greek default, Trichet said, "It is not in the cards." Stephen Castle and Landon Thomas Jr., "Ministers Meet to Study Fixes on Greek Debt," *New York Times*, May 6, 2011.
[17] Moody's Investors Service, "Moody's Downgrades Greece to Caa1 from B1, Negative Outlook," June 1, 2011.
[18] Standard & Poor's, "Long-Term Sovereign Rating on Greece Cut to 'CCC'; Outlook Negative," June 13, 2011.

Mario Draghi, the incoming president of the ECB, warned during his confirmation hearings against forcing private investors to take part: "All in all, the costs outweigh the benefits," he said.[19]

As the IMF would admit in a July 2011 report, the very public, protracted debate in Europe over this issue would take a heavy toll in Greece, not only by propelling bond yields ever higher, but by encouraging a flight of bank deposits and also, via rating downgrades, to a decrease of value on Greek collateral with the ECB, necessitating banks to post additional collateral when they could least afford it. Bank stress, in turn, was encouraging a major credit contraction and aggravating the country's deepening recession.[20]

Negotiations between Troika officials and some forty mainly European banks represented by the Institute of International Finance (IIF) finally reached agreement on a bond exchange that would deliver financing to Greece of €54 billion from mid-2011 to mid-2014, and a total of €135 billion from mid-2011 to end-2020. It was a Brady Plan vintage 2011, involving the voluntary exchange of outstanding Greek bonds for par and discount bonds entailing an extension of maturities and either reduced coupons or principal forgiveness. Bonds maturing in 2030 would be fully collateralized and one maturing in 2015 would be partially collateralized. All instruments were to be priced to impose an NPV loss of 21 percent.[21] Needless to say, the rating agencies responded promptly by cutting their assessments yet again (Moody's to Ca, S&P to CC, and Fitch to CCC).

3. The Greek Tragedy, Act III

The ink was barely dry on this debt restructuring deal when its adequacy began to be questioned. The gloom about the future of the Eurozone that became pervasive starting in August 2011 caused many officials to revise their economic forecasts (including for Greece) in a direction that suggested the debt relief on offer would be insufficient, the cost of purchasing collateral to back the new bonds would be too high, and the voluntary participation rate of creditors would prove insufficient.[22] This led to a hardening of official attitudes and to an October demand that private creditors agree to a new plan entailing the forgiveness of at least half of what they were owed, with lowered coupons and no collateral backing. One of the (circular) arguments put forth was that since the prices of Greek bonds had plunged to about 36 percent of face value from 75 percent since the deal had been forged in July, the terms of the original deal were now too generous to bondholders.[23]

[19] Stephen Castle, "Mario Draghi Holds E.C.B. Line against Restructuring for Greece," *New York Times*, June 14, 2011.
[20] IMF, "Greece: Fourth Review under the Stand-By Arrangement," July 4, 2011.
[21] IIF, "IIF Financing Offer," July 21, 2011.
[22] It was originally estimated that Greece would have to borrow €35 billion from Eurozone member states to buy the AAA bonds needed to back the new securities to be created for the debt swap, but the intervening global rally in high-quality debt had made the intended bonds pricier, such that Greece would now need to borrow an extra €12 billion. See Landon Thomas Jr., "European Banks Face Huge Losses from Greek Bonds," *New York Times*, October 4, 2011.
[23] Ibid.

There followed several months of negotiations between the Troika, Greece, and creditor representatives, but most of the time was taken up by various Troika-Greece economic and political issues. A confrontation between European leaders and Greek prime minister Papandreou over his desire to submit the latest austerity and financing plan to a national referendum elicited an ultimatum from EU leaders (on November 2). Papandreou decided to step aside and give way to a new unity government headed by Lucas Papademos, a former ECB vice president.

The gloom in official circles about Greece's incapacity to pay the bulk of its obligations falling due in 2012 and beyond became more pervasive with the realization that the economy was shrinking faster and deeper than anticipated, government revenues were falling short of target, and the public debt was growing more burdensome than expected. In late 2010, the IMF had forecast that Greece's GDP would drop 3 percent in 2011, but by early 2012 it was clear that it had contracted nearly 7 percent—and that it would keep shrinking in 2012, as it has. The unemployment rate had been expected to peak at 15 percent in 2012, up from 7¼ percent in mid-2008, yet it had reached nearly 21 percent already by the end of 2011. It would keep soaring to almost 23 percent during the first quarter of 2012. Government revenues had been anticipated to hit an all-time high of €97 billion in 2011, but by early 2012 it was evident that they had actually come in below the prior year, at €88 billion. The public debt was supposed to expand to no more than €347 billion in 2011, the equivalent of 152 percent of projected GDP; in the event, the year closed with the debt stock at €356 billion, representing 165 percent of a much-reduced GDP.[24]

The negotiations with the creditors resumed in February (2012) and a new debt-relief plan was finally agreed on February 21, reportedly prompted by the impression conveyed to creditor representatives that the Eurozone leadership might countenance a unilateral default on Greece's part.[25] Under the terms of the deal, investors were "invited" to forgive 53.5 percent of what they were owed under 135 series of bonds, and to exchange 31.5 percent of their remaining principal for new, low-coupon Greek bonds with maturities of 11 to 30 years, and the rest (15 percent) into two-year notes issued by the European Financial Stability Facility.[26]

The resulting debt relief is equivalent to about half of Greece's 2011 GDP, and all-in NPV losses to investors were mostly estimated to be between 70 and 75 percent, depending on the discount rate applied (9–12 percent). The restructuring proposal was part and parcel of a €130 billion loan program that Europe and the IMF agreed to in return for a new round of Greek austerity and reform measures. Acceptances were requested by the close of business on March 8, but the

---

[24] Projected figures for 2011 from IMF, "Greece: Second Review Under the Stand-By Arrangement," December 6, 2010, pp. 41-43; actual figures from Hellenic Statistical Authority, *The Greek Economy*, July 13, 2012, pp. 11-33.

[25] "The Greek bailout appeared to hang in the balance when rumors circulated that Germany's finance minister, Wolfgang Schäuble, was willing to contemplate a Greek default." See Stephen Castle, "Europe Agrees on New Bailout to Help Greece Avoid Default," *New York Times*, February 20, 2012.

[26] Holdings of Greek Treasury bills were excluded. The coupon on the new bonds was set at 2 percent until February 2015, 3 percent for the following five years, and 4.3 percent until 2042. See IIF, "Press Release: Greek Debt Exchange," February 28, 2012. Creditors were also offered GDP-linked bonds that will pay interest if the economy grows by more than 2 percent per annum during 2020–2041, and faster than 2.25–2.90 percent before that (depending on the specific year). The complete details were provided to investors in The Hellenic Republic's *Invitation Memorandum dated 24 February 2012.*

deadline was later extended into April. In the end, €199 billion (the equivalent of about $263 billion) worth of Greek government debt was written off and restructured, representing 96.9 percent of the €205.5 billion face amount of government debt held by private-sector creditors – the target of the selective default.[27]

The debt restructuring was billed as a "voluntary transaction" involving private-sector holders of approximately €206 billion (face amount) of Greek government bonds.[28] However, it was not to be really voluntary in various respects. First, most of the bonds were held by Greek banks, or else by dozens of European banks and insurers, all of whom operate under the thumb of their respective government regulators—and most of whom have become dependent for funding on the ECB. Realistically, they had no choice but to participate.

Second, the Greek parliament hastily passed a law retroactively introducing "collective action clauses" (CACs) into the €177 billion of targeted bonds governed by Greek law, specifying that by tendering into the exchange, every bondholder was automatically voting to make the terms of the exchange applicable to all other bonds.[29] Therefore, once consents from €152 billion of bonds representing almost 86 percent of holders were received, the terms of the remaining €25 billion were amended as if they too had consented. The introduction of CACs in sovereign bonds is no novelty, but to our knowledge it has never been done retroactively—a clear violation of the "sanctity" of contracts. It is no wonder that the new bonds arising from the debt exchange are subject to English law; otherwise, their indentures would have no credibility.

Third, the Greek authorities made it plain that nonparticipants into the exchange should not expect any payments. At a March 5 meeting with investors in Frankfurt, the head of Greece's Public Debt Management Agency stated that the country's economic program "does not contemplate the availability of funds to make payments to private sector creditors that decline to participate."[30]

The message was presumably intended for investors in the €29 billion of bonds issued under foreign law, or by state-owned enterprises under government guarantees, whose terms could not be amended unilaterally. As of the first due date, €20 billion (69 percent) of these bonds were tendered into the exchange, since many of them already included CACs, but even after an extension, an untendered remainder of €5.5 billion worth of government or government-guaranteed bonds was left in the hands of holdout investors. Thus, the question arose as to what the Greek authorities would do: refuse to pay the holdouts, as Argentina has done for a dozen years now despite many court judgments against it ordering it to pay, or behave honorably and pay up. A first answer was provided on May 15, when Greece announced that it had made a €436

[27] Hellenic Republic Ministry of Finance, *Press Release*, April 25, 2012.
[28] Hellenic Republic Ministry of Finance, "PSI Launch Press Release," February 21, 2012.
[29] Under the Greek Bondholder Act (Law 4050/2012), if holders of at least 50 percent of outstanding Greek law bond vote and two-thirds of them are in favor of a proposed amendment— in this case, the debt exchange offer— it becomes binding on all bondholders.
[30] Hellenic Republic Ministry of Finance, "Public Debt Management Agency Press Release," March 6, 2012.

million bond payment to the hold-out investors who owned it. Another such payment is due in September, although for a lesser amount.[31]

It is noteworthy that the €206 billion in government bonds subject to debt forgiveness and restructuring accounted for less than 60 percent of the Greek public debt, which totaled, as mentioned earlier, €356 billion as of end-2011. Treasury bills, which the authorities excluded in order not to taint this short-term segment of the market, represented a mere €15 billion of that. Loans from the European Union and the IMF accounted for €74 billion, and it is understandable that these creditors, who were providing new funding under debtor-in-possession circumstances—especially the traditionally senior IMF—would likewise have been excluded. That left some €61 billion that was potentially up for grabs.[32]

However, most of that figure (an estimated €50 billion) involved European Central Bank holdings of Greek government bonds purchased through the Securities Market Program (SMP), the ECB's window to support the secondary market for Eurozone sovereign bonds. The working assumption among many observers had been that the ECB, or possibly individual national central banks, would find a way to contribute to Greece's debt-relief exercise by exchanging their existing bonds for new ones paying, for instance, lower interest rates.

As it turned out, in mid-February the ECB did swap its stock of Greek government bonds for new ones—but it did so on identical terms (same face value and coupons) with a separate ISIN (International Securities Identification Number) from that of other Greek government bonds, thereby setting its holdings apart from and above all other bonds. The swap did not include bonds held by individual Eurozone central banks. All that Eurozone finance ministers subsequently agreed was that future profits made by the ECB from Greek government bonds would be distributed alongside other profits to Eurozone governments, and that these "may be allocated by Member States to further improving the sustainability of Greece's public debt."[33]

As Standard & Poor's has pointed out, however, since the ECB's newly minted Greek government bonds were exempted from the retroactively applied CACs and were thus protected from any forced write-downs, the practical effect is that all other bondholders became effectively subordinated to the ECB in terms of payment. "The ECB's swap has established a new precedent by adding another class of superior creditor to the existing group comprised of the ESM [the upcoming European Stability Mechanism], the IMF, and other multilateral development banks. We believe that this development could further weaken the prospects of peripheral Eurozone

[31] "What's news is where most of that money went. Almost 90 percent was delivered to the coffers of Dart Management, a secretive investment fund based in the Cayman Islands, according to people with direct knowledge of the transaction. Dart is one of the best known of the so-called vulture funds, which have a track record of buying the distressed bonds of nearly bankrupt countries — and if they do not get paid, suing the governments for the money. Dart and another big vulture fund, Elliott Associates, perfected that strategy during the various Latin American debt crises in years past." Landon Thomas Jr., "Bet on Greek Bonds Paid Off for 'Vulture Fund'," *New York Times*, May 15, 2012.

[32] Data from Hellenic Republic Ministry of Finance, "Public Debt Bulletin," December 2011; and from IMF, "Greece: Request for Extended Arrangement under the Extended Fund Facility," March 9, 2012.

[33] Eurogroup, "Eurogroup Statement," February 21, 2012.

sovereigns currently receiving official funding to regain the ability to access the capital markets and could raise borrowing rates of those sovereigns still accessing the primary markets."[34] Moody's concurred, because given that "the ECB holds a significant proportion of the outstanding debt of Greece, Ireland, and Portugal … the subordination of private sector creditors may make it more difficult to re-access the markets once their existing support programs run out in 2013."[35]

Moreover, the European Investment Bank was also exempted from any haircut to principal or interest on its (relatively small) investment portfolio of Greek government bonds, thereby subordinating private bondholders just as the ECB had done – and likewise setting a precedent that will factor in the risk assessments made by private creditors.[36] And yet, the EIB is a regional development bank – namely, an end-investor – and its holdings of Greek government bonds were not part of the Eurozone's emergency financing for Greece. Therefore, a number of private investors understandably complained about why the EIB's portfolio was spared alongside the ECB's when their respective roles as providers of financing for Greece were so different.[37]

Finally, it is notable that the extent of debt relief required of private creditors was a function of at least two judgment calls that certainly can be questioned. The first was the decision to recapitalize the Greek banking system with EU and IMF funds—and to do so very generously. This recapitalization became necessary largely because of the hit to Greek bank balance sheets from the punishing sovereign debt restructuring. For example, Greece's four biggest banks reported a combined loss of €27.9 billion (nearly $37 billion) for having participated in the country's debt exchange.[38] The decision to recapitalize the banks with public funds increased the size of the official-sector loan package by €50 billion, and thus the extent of losses imposed on private creditors—to minimize the burden on the government of servicing all the new official debt the sovereign was taking on. The irony is that a less punishing restructuring would have reduced the hit taken by Greek banks, and thus the magnitude of the recapitalization bill.

As a March 2012 IMF staff report freely admits, "a typical recapitalization program would see viable banks recapitalized using [Greek] government bonds (with perhaps some regulatory forbearance on capital ratios while problems are worked out) and the unwinding of unviable banks." In the case of Greece, there was a political decision to depart from the customary "owing

[34] Standard & Poor's, "ECB Greek Bond Swap Results in Effective Subordination of Private Investors," February 24, 2012.
[35] Moody's Investor Service, "Greek Bond Pact Confirms Seniority of Eurosystem's Sovereign Debt Holdings," February 27, 2012.
[36] The EIB has confirmed to this author that Greek government bonds held as part of its treasury assets were exchanged for new bonds that are out of the scope of the PSI offer and that don't include CACs in their documentation. Email message from EIB's Investor Relations and Marketing Office, July 20, 2012, available upon request.
The financial terms of the new bonds are identical to the former ones. The exchange doesn't generate any profit or loss in the Bank's accounts.
[37] John Glover and Esteban Duarte, "EIB Privileges in Greek Debt Plan Spur Complaints from Private Investors," *Bloomberg News*, March 2, 2012.
[38] Marcus Bensasson, Maria Petrakis and Natalie Weeks, "Greek Banks Post $37 Billion Losses on Debt Restructuring," *Bloomberg News*, April 20, 2012

to the need to secure liquidity support from the Eurosystem, and to reassure regulators of Greek bank subsidiaries in neighboring jurisdictions."[39]

Moreover, it was decided that all bank deposits would be protected and so would all the senior unsecured creditors of Greek banks. This is a very expensive way to nurse an insolvent banking system back to health, and it yielded a stunning result: those who had bought bonds issued by Greek banks fared much better than those who had bought sovereign bonds—the inverse of the usual outcome. During the 2010 bailout of Irish banks, which had become victims of a property rather than a sovereign meltdown, the ECB had insisted that senior bondholders in bailed-out banks should not suffer losses, such that the Troika's position on Greece had a precedent. But the ECB would go on to change its mind not even six months later, when faced with the prospect of having to rescue Spain and its banking system.

At a July 9 meeting of Eurozone finance ministers, ECB President Mario Draghi reportedly argued in favor of imposing losses on senior bank creditors in the case of Spain, especially if a bank had to be pushed into liquidation. The ministers initially rejected the ECB's view out of concern that European financial markets would react badly, but the ECB's shift became a sign that the tide was turning on the issue of how bank failures ought to be dealt with in the Eurozone.[40] Sure enough, by late August the government of Spain had approved a decree spelling out the terms of its support for banks (starting with the nationalized lender Bankia), and as part of the program investors in bank preference shares and subordinated debt will be forced to take losses before any state aid can be received by Spanish financial institutions.[41]

The second judgment that is highly questionable is the decision to demand huge debt forgiveness from private creditors so that Greece's debt burden may reach a ratio deemed to be "sustainable" (defined arbitrarily at 120 percent of GDP) by a given date (likewise set arbitrarily at 2020). The fact is that ratios of debt to GDP are reliable predictors neither of default probabilities nor of creditworthiness.[42] Moreover, it is easy to make outsized mistakes when trying to forecast a ratio of debt to GDP during exceptional circumstances, and the IMF staff is notorious for its errors in forecasting such ratios and thus its failures to predict debt sustainability—or unsustainability.[43]

---

[39] IMF, "Greece: Request for Extended Arrangement," p. 29.

[40] Gabriele Steinhauser and Brian Blackstone, "Europe's Bank Shifts View on Bond Losses," *Wall Street Journal*, July 15, 2012. Senior bondholders did suffer major losses in the September 2008 failures of Lehman Brothers Holdings Inc. and Washington Mutual Inc. Danish authorities forced write-downs on senior, unsecured bondholders when they shut down Amagerbanken A/S and Fjordbank Mors A/S in 2011. Gabriele Steinhauser, "Senior Creditors Rarely Get 'Haircuts'," *Wall Street Journal*, July 15, 2012.

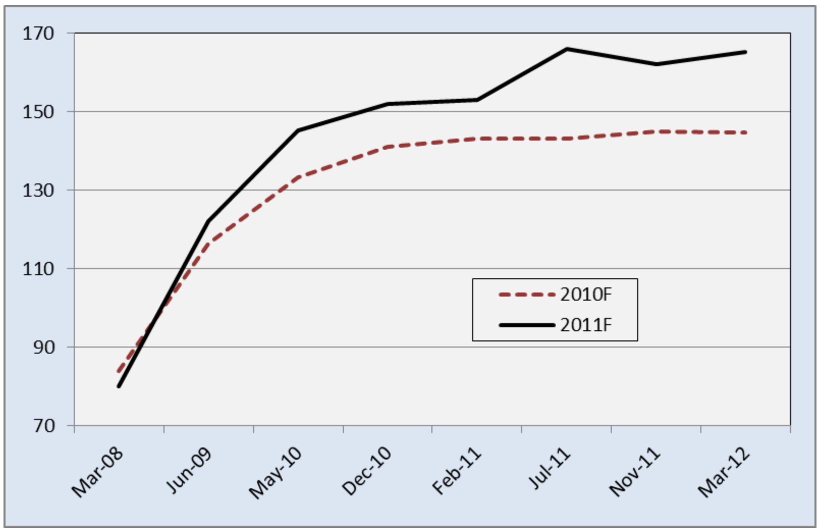
[41] Miles Johnson, "Spain Gives Bankia Urgent Cash Boost," *The Financial Times*, August 31, 2012.

[42] On the irrelevance of debt/GDP ratios for assessing the probability of default, see Paolo Manasse and Nouriel Roubini, "'Rules of Thumb' for Sovereign Debt Crises," *Journal of International Economics*, July 2009, pp. 192-205. On the irrelevance of debt/GDP ratios for the determination of creditworthiness by the credit-rating agencies, see Ricardo Hausmann, "Good Credit Ratios, Bad Credit Ratings: The Role of Debt Structure," *Rules-Based Fiscal Policy in Emerging Markets*, ed. by George Kopits (New York: Palgrave MacMillan, 2004), pp. 30-52.

[43] Charles Wyplosz, "Debt Sustainability Assessment: Mission Impossible," *Review of Economics and Institutions*, Fall 2010.

Recent experience is instructive: in May 2010, the IMF staff projected that Greece's public debt would reach €325 billion by the end of 2011—a year-and-a-half later—and that it would represent 145 percent of 2011 GDP. The staff's estimate at the time of the default and restructuring decision, made public in March 2012, was that the stock of debt had reached €329 billion in 2011, which was a very minor deviation from forecast, but that it had come to represent 165 percent of 2011 GDP—a whopping difference. And the reason was a major underestimation of the contraction in GDP that took place in a very short a time, such that while the IMF's forecast for the numerator proved quite accurate, that for the denominator was off considerably.[44]

Figure 3: Ratio of Greek Government Gross Debt to GDP (as projected by IMF staff for 2010-11)



Source: IMF and author's calculations.

Who was to say that Greece's GDP could not bounce back vigorously once it found a bottom, namely, once the country succeeded in breaking the vicious cycle of undermined investor confidence driving the need for ever more stringent fiscal austerity, which in turn kept depressing economic activity? The IMF's own analysis of past experiences with large fiscal consolidation programs has shown that positive macroeconomic developments tend to accompany large fiscal adjustments, especially when initial economic conditions are exceptionally difficult—as in the case of Greece. GDP growth recovers sharply to trend during the first two years of fiscal adjustment, driven by an improvement in private investment and gradual gains in consumption and the trade balance.[45]

---

[44] IMF, "Greece: Request for Extended Arrangement," and prior IMF staff reports from the dates noted in the chart and the text.

[45] George C. Tsibouris et al., "Experience with Large Fiscal Adjustments," *IMF Occasional Paper No. 246*, 2006, p. 19.

And yet, the IMF's debt sustainability forecast for Greece, which justified the Troika's demand for massive debt forgiveness on the part of private-sector bondholders, envisioned an anemic economic recovery in 2014–17, with real GDP growth averaging less than 3 percent per annum. This was a decidedly pessimistic forecast to make for a country that has a high probability of experiencing a meaningful rebound in future years following a GDP collapse of 17½ percent during 2009-2013 (as estimated by the IMF)—a country with a track record of success as one of Europe's fastest-growing economies during the pre-crisis period 2000-2007.[46]

4. Conclusion

Greece is a country that until 2009 had learned to live—and had been allowed to live by its Eurozone partners—with a relatively high level of public debt. Successive governments in Athens were able to count on a stable, predictable demand for their bonds, such that the public debt was characterized by very low coupons and exceptionally long maturities. Investor confidence started to erode in late 2009 and early 2010, but once Greece was finally helped by its Eurozone partners and the IMF in May 2010, the financial markets began to calm down. But then, all of a sudden, the rug was pulled from under bond investors by Chancellor Merkel's insistence, starting in October 2010, that private creditors needed to "contribute" to Greece's bailout by making concessions affecting the expected return on their holdings.

As the months passed, the threatening intra-European rhetoric escalated, rating-agency downgrades multiplied, and the specter of a potentially painful default started to loom ever larger. Consequently, private-sector demand for Greek government bonds evaporated during the course of 2011. Spurred on by the Troika, the authorities had to react to the lack of affordable financing by announcing ever harsher fiscal austerity measures. The confidence of Greek households and businesses tanked, causing a retraction in consumption and investment spending. And the economy began spiraling down into what has since become the greatest depression in that country in nearly a century. In sum, it was Chancellor Merkel's very public, hard line on Greece and its private creditors that paved the road for the eventual default which imposed outsized losses on investors—an outcome that could have been avoided, or at least minimized.

What became the largest and one of the most punishing sovereign defaults in history was justified by IMF forecasts of debt unsustainability that are prone to large error, arrived at after a questionable decision to protect Greek bank creditors and depositors most generously. Along the way, private investors were subordinated to the ECB and its network of national central banks, as well as to the EIB, setting a precedent that would weigh on investors in other faltering countries around Europe's periphery. Local law was rewritten in Greece with retroactive effect to facilitate the change in payment terms via the introduction of CACs—another troubling precedent, particularly because more than 97 percent of the outstanding bonds of Spain, Italy and Portugal

[46] IMF, "Greece: Request for Extended Arrangement," p. 93. Real GDP growth in Greece averaged nearly 4.2 percent per annum during 2000-2007, see Hellenic Statistical Authority, *The Greek Economy*, various issues.

are also governed by local law, such that these countries could also enact similar legislation to facilitate the imposition of large losses on their bondholders.[47]

Greek government obligations in the hands of private investors were successfully restructured to give the sovereign an extraordinary amount of debt relief, but as of late 2012 the victory was looking Pyrrhic because of the seemingly enduring reputational and market damage done in the process. According to a June 2012 survey of major financial institutions that are primary dealers in debt issued by European governments, Greece may have to wait at least another five years before it can again sell bonds to investors: three of 20 respondents expected it to take at least a decade before Greece can place new debt again, ten said that investors would not purchase Greek bonds any sooner than 2017, while five predicted that it would be 2015 at the earliest.[48] This suggests that the default and restructuring may have turned Greece into a ward of the ECB, EU and the IMF for an extended period of time. And the sad turn of events in Greece had also scared investors away from bank and sovereign debt obligations issued in other European periphery markets, such as Cyprus, Italy, Portugal and Spain, thereby aggravating the Eurozone's financial woes.[49] This is why the Greek default and debt restructuring of 2012, and all the events that led up to it, illustrate so vividly the many grave flaws inherent in the Eurozone project—flaws that hopefully will inspire the institutional and other reforms needed to assure its viability and restore its credibility.

[47] Moody's Investors Service, "Unilateral Action Threatened by Greece Is Also Available to Other Sovereigns," February 6, 2012.
[48] Anchalee Worrachate and Lukanyo Mnyanda, "Greece Seen Blocked From Debt Markets Until 2017," *Bloomberg News*, June 25, 2012.
[49] In June 2012, Cyprus became the fifth of the Eurozone's 17 states to seek a financial lifeline from the Troika, while also attempting to obtain a large loan from Russia, claiming inability of the government to refinance its debt obligations at reasonable interest rates and the need to support its weakened banking system. Jonathan Stearns and Stelios Orphanides, "Cypriot Government Needs Aid to Refinance Debt, Shiarly Says," July 6, 2012.