European Stability Mechanism

The 2012 private sector involvement in Greece

In March 2012, the euro area agreed a private sector involvement (PSI) to alleviate Greece's debt burden by restructuring sovereign bonds held by private investors. This background paper provides information on the restructuring arrangements and examines the macroeconomic and financial implications on Greece's fiscal sustainability and its later assistance programmes. Throughout 2019, European Stability Mechanism (ESM) researchers interviewed participants to evaluate the ESM's performance in its financial assistance to Greece and to learn lessons about the PSI procedure itself. This paper also outlines lessons learned that could apply to handling any future euro area debt restructuring.

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Introduction

The 2012 PSI in Greece formed part of a comprehensive solution to deal with the country's debt sustainability. Other financing flowed from fiscal adjustments by the Greek national authorities and official sector lenders such as the International Monetary Fund (IMF) and European institutions.

The PSI restructured sovereign bonds issued by the Greek government and selected state-owned enterprises and held by private investors in March 2012, alleviating Greece's overall debt burden. Initial discussions on the need for a sovereign debt restructuring started in mid-2011. The Greek government formally announced a final debt exchange offer on 24 February 2012 after almost a year of discussions with its creditors and official sector lenders on the restructuring feasibility and scope. The bond exchange attracted high creditor participation and by the end of April 2012 about €197 billion out of €205 billion eligible bonds were exchanged for new Greek bonds carrying longer maturities and lower coupon payments. This means that 97% of the eligible privately held Greek bonds were restructured, taking a 53.5% nominal haircut. Zettelmeyer et al. (2013) estimate the PSI reduced Greece's debt stock by €107 billion and later, in December 2012, the Greek government also undertook a bond buy-back operation as a second step to further reduce the debt-to-gross domestic product (GDP) ratio by another €20 billion.

Assessing a debt restructuring operation and identifying economic implications is very difficult. Buchheit et al. (2019) note that no single rulebook exists to determine when a sovereign government should seek debt relief, how to design required measures, or how to progress debtor-creditor negotiations; nor is there a single jurisdiction with a global competence. Each debt restructuring case in history is different – as to the overall debt amount, burden-sharing among different creditor types, exemptions granted, incentives and deterrents, and the final participation rates. Circumstances vary from one country to another and many variables are determined endogenously.

In this exercise, we use past debt restructuring events as reference points, to record how the Greek PSI adopted many useful design elements from past restructurings but developed some financial and legal innovations to ensure a high creditor participation rate. In the absence of any global statutory sovereign debt restructuring approach, we refer to basic principles that could contribute to an orderly restructuring process. Good faith, transparency, and an equitable treatment of creditors are all identified in the UN Basic Principles on Sovereign Debt Restructuring Processes, the Institute of International Finance (IIF) principles for Stable Capital flows and fair debt restructuring,[1] and selected IMF policies such as the Lending into Arrears policy. And, since 2012, extensive literature has been written on the analyses of the economic, political, and legal aspects of the Greek PSI, with authors already answering key questions, such as whether the PSI was necessary or could have been handled better. And we will refer to existing literature, especially the seminal contribution from Zettelmeyer et al. (2013), throughout this paper. Consensus among academics and policymakers suggest the Greek PSI was orderly and swift, delivering by far the largest restructuring of sovereign debt held by private

[1] Refer to https://www.iif.com/Advocacy_old/Policy-Issues/Principles-for-Stable-Capital-Flows-and-Fair-Debt-Restructuring and https://unctad.org/meetings/en/SessionalDocuments/a69L84_en.pdf.

creditors, with communications on the deal deemed both transparent and timely.

This background paper aims to absorb lessons from experience and high-level principles to provide insightful context to the ESM evaluation of financial assistance to Greece. Section 1 will recap information on the 2012 PSI arrangements and focus on the interaction between the PSI and the European Financial Stability Facility (EFSF) financial assistance. Section 2 will highlight macroeconomic and financial implications of the debt operation on Greece's fiscal sustainability and later assistance programmes to the country. And the paper will draw lessons on how to handle other potential euro area debt restructurings in Section 3.

Compared to existing literature, this paper benefits from interviews conducted by an ESM evaluation team with players involved in dealing with the Greek crisis, including creditor institutions, Greek authorities, and private sector representatives. The input from participants involved in the PSI adds original perspectives that help in drawing lessons for the future.

1. From proposals to implementation: recap of the basic facts

Initial conditions

In the months leading up to the June 2011 PSI discussions, Greece had been facing severe economic circumstances. Therefore, we first highlight the economic, political, and legal landscape in Greece before considering the option to restructure private debt.

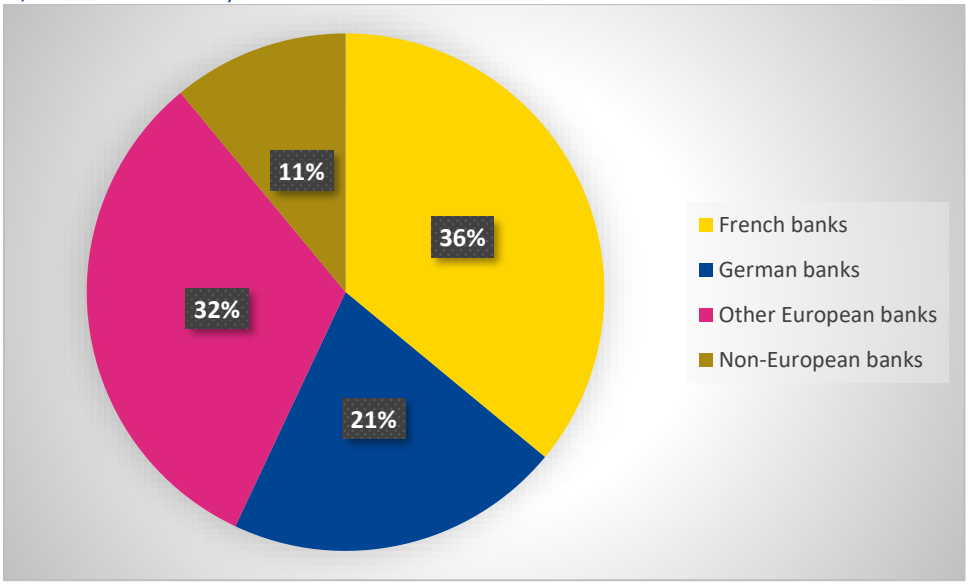
Greece suffered economic recessions in 2010 and was excluded from international financial markets, prompting the IMF and the EU to mobilise substantial financial resources to rescue the Greek state. In May 2010, the IMF approved a Stand-By Arrangement (SBA) of SDR26.4 billion, equivalent to €30 billion, while the EU assembled €80 billion in bilateral loans from Member States to put together the Greek Loan Facility.

A debt sustainability analysis (DSA) prepared when Greece requested the IMF SBA in May 2010 emphasised extremely high Greek public debt, the annual debt service burden, and vulnerabilities to contingent liabilities as prominent downside risks. The 2010 IMF Staff Report on the Request for an SBA (IMF, 2010a) pinpointed public debt in Greece at 115% of GDP in 2009, and forecast an increase to 149% of GDP in 2013 before any decline.

In addition to the baseline scenario above, the IMF analysis outlined an adverse scenario that took account of possible weaker economic growth, lower inflation, and worsened contingent liabilities, which estimated the debt could exceed 220% of GDP (IMF, 2010a). IMF staff felt they were not able to conclude that Greek debt was "sustainable with high probability" – a requirement normally needed for the country to avail itself of the IMF exceptional access framework. Even if Greek debt were not deemed unsustainable, widespread uncertainties persisted.

Among investors, European banks held the largest exposure, as shown by the IMF (2010a).

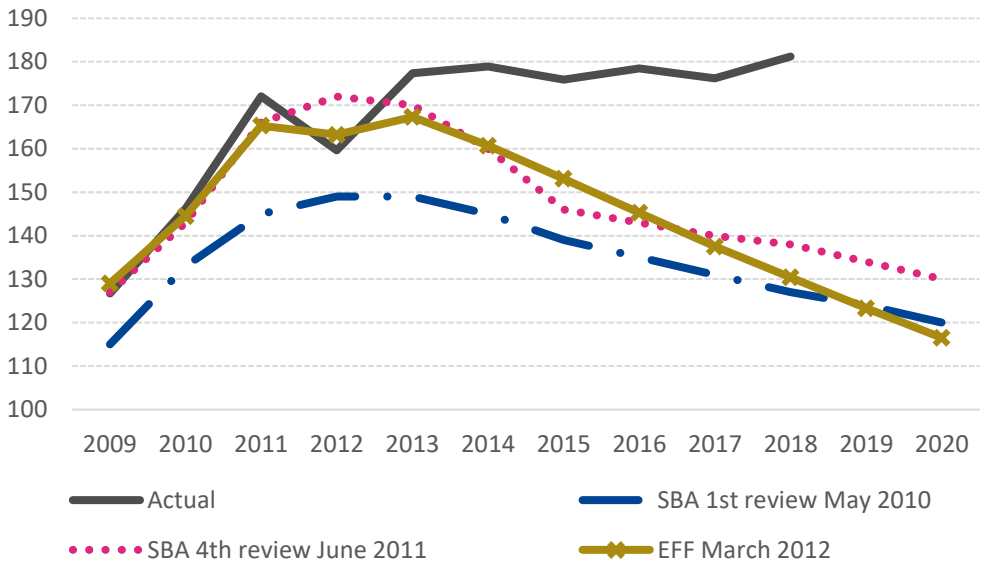
Figure 1
Decomposition of banks' exposure to Greece
(end 2019, in % of total claims)



Source: IMF (2010a), using Bank for International Settlements consolidated banking statistics

Greek debt sustainability became more alarming during subsequent IMF SBA reviews as the debt projections increased, underlining a need for additional financing (Figure 2). A fourth IMF programme review spelled out the need to consider, "the modalities of a strategy to place debt on a more sustainable path, including the involvement of the private sector and/or stronger official sector support" (IMF, 2011b). By the end of 2011, public debt in Greece had increased to 172% of GDP, far beyond the plateau-level 149% forecast for 2013 in the IMF's May 2010 DSA.

Figure 2
Evolution of public debt level in Greece
(in % of GDP)



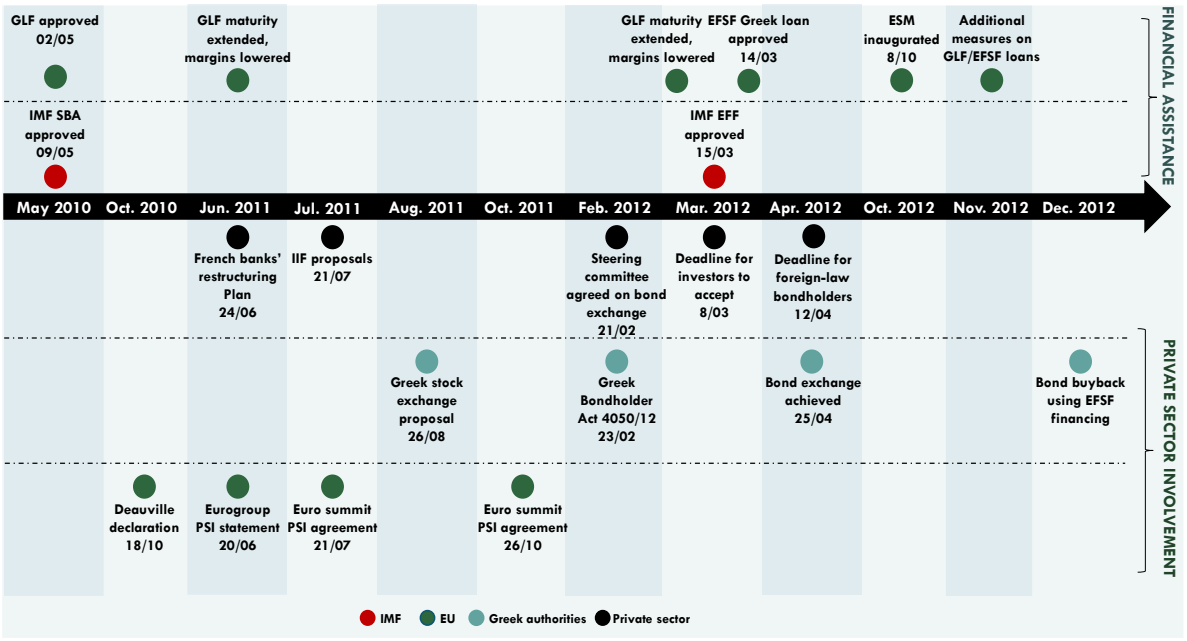
Sources: Haver Analytics, Greece SBA programme reviews, and author's depiction

But Greece faced political, legal, and institutional constraints as it approached any possible private sector debt solution. Little political will existed in the monetary union to encourage a sovereign debt restructuring, due to a fear that any talks on the potential need for a restructuring could trigger adverse market sentiment and contaminate the sovereign assets of peripheral member states. Another institutional constraint pertained to the European Central Bank's (ECB) role, because it had announced a securities market programme in May 2010 that increased its holdings of Greek bonds, so sovereign debt workout plans might place the ECB in a difficult position.

Nine-month marathon to strike a PSI deal

Euro area members, Greek authorities, and bank representatives holding Greek sovereign bonds started PSI discussions in June 2011. Figure 3 summarises the main steps in the preparation, design, negotiation, and implementation of what became the 2012 PSI. Key IMF and EFSF/ESM lending dates are also represented because of the close interaction between official sector financing and the PSI debt restructuring.

Figure 3
Timeline of the Greek PSI



Source: Author's depiction

At a Eurogroup meeting on 20 June 2011, euro area finance ministers agreed Greece, now facing difficult financing circumstances, would need additional official and private funding. The ministers portrayed the restructuring format as only a soft re-profiling through, "informal and voluntary roll-overs of existing Greek debt at maturity"[2] with some specific considerations, notably a necessity to preserve Greek bank eligibility for ECB refinance and to minimise any contagion risks to the euro area. Four days later, the French Banking Federation sent a detailed restructuring proposal to the French Ministry of Finance (Kopf, 2011).

At a 21 July 2011 euro summit, euro area governments and EU institutions announced PSI details alongside new official sector financing, with the summit statement noting, "A new programme for Greece and, together with the IMF and the voluntary contribution of the private sector [will] fully cover the financing gap." Support involved an EFSF programme worth an estimated €109 billion and a net private sector contribution worth an estimated €37 billion. Also, a bond buy-back programme was expected to shrink the debt stock by another €12.6 billion.[3] The day after the European summit, the Institute of International Finance (IIF) unveiled a proposal to restructure Greek public bonds with four options. Supported by 39 financial institutions, it assumed a gross contribution of €135 billion through a voluntary exchange of bonds maturing from 2011 to 2020, and forecast 90% bondholder participation.

In the end, none of the June and July 2011 proposals were adopted because economic conditions in Greece worsened and the plan was deemed no longer appropriate. Widespread concerns emerged to suggest the IIF proposal was too lenient for Greece's creditors, given the absence of any face-value reduction. Economic publications' commentary was sceptical about the

[2] See https://ec.europa.eu/commission/presscorner/detail/en/MEMO_11_426.

[3] See euro summit statement https://www.consilium.europa.eu/media/21426/20110721-statement-by-the-heads-of-state-or-government-of-the-euro-area-and-eu-institutions-en.pdf.

description, "significant contribution from the private sector."[4]

On 26 October 2011, another euro summit convened to outline a revised deal with euro area country leaders proposing "a voluntary bond exchange with a nominal discount of 50% on notional Greek debt held by private investors"[5] to bring the debt-to-GDP ratio to 120% by 2020. The euro area members agreed to provide up to €30 billion in cash incentives to attract creditor participation.

Over the next few months, the Greek government, with its legal and financial advisers, negotiated the PSI deal with creditors represented by a steering committee chaired by the then-IIF managing director Charles Dallara. A bond exchange agreement was agreed on 21 February 2012, with the final nominal haircut increased slightly to 53.5%. To encourage creditor participation, a Greek Bondholder Act 4050/12 passed on 23 February retrofitted a collective action clause (CAC) into Greek-law government bonds.

On 1 March 2012, the European Commission, the Greek state, and the Bank of Greece entered into a memorandum of understanding governing the PSI, which specified elements of the PSI deal, including the bond buyback offer, bond interest transactions using EFSF notes, and funds earmarked for bank recapitalisations.

The Greek government concluded the bond exchange in April 2012, effectively exchanging about €197 billion of an eligible total of €205.6 billion in bonds, meaning 95.7% of privately held Greek bonds took up the offer. The final PSI act involved a bond buy-back in December 2012 at market prices, financed by the EFSF. The net private sector contribution reached €107 billion according to Zettelmeyer et al. (2013). Table 1 provides an overview of the key 2012 final PSI deal.

Greece conducted the bond buyback with its domestic and foreign private creditors by December 2012. The operation aimed to buy back debt instruments issued or guaranteed by the Greek government, especially the bond series issued in April for the PSI bond exchange. The PSI design had envisaged this operation, but it also became a necessity by the end of the year during EFSF and IMF programme reviews, because the IMF could not disburse the Extended Fund Facility (EFF) programme funds unless the Greek government further reduced its debt.

The EFSF and ECB supported the bond buyback operation, with the EFSF providing a loan to the Greek government and the ECB providing credit enhancement and acting as Greece's agent.

Greece completed the bond buyback on 18 December, retiring €31.8 billion of bonds issued in April using €10.8 billion of EFSF funds to undertake a Dutch auction at fixed ranges of maximum and minimum prices that averaged 33.8% of the par value. Of the €31.8 billion total, €14.1 billion originated from Greek banks and the rest from foreign creditors. The operation reduced the Greek debt stock by another €20 billion, equivalent to 8% of Greek 2012 GDP.

[4] See Credit Suisse (2011) and Zettelmeyer et al. (2013).

[5] See euro summit statement https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/125644.pdf.

Table 1

Overview of the 2012 PSI deal

2012 PSI – bond exchange		
Scope of eligible bonds		€177.3 billion Greek law bonds €18.2 billion foreign law bonds €9.8 billion performing state enterprise debt guaranteed by the Greek government
Nominal haircut		53.5% Old bonds exchanged for new bonds with a face value equal to 31.5% of the face amount of the debt exchanged plus cash-equivalent EFSF notes maturing within 24 months for 15% of the face value of the debt exchanged
New bond	Maturity	20 separate tranches with staggered bullet maturities, equivalent to a bond of a 30-year maturity and a 10-year grace period
	Coupon	2% up to 2015; 3% up to 2020; 3.65% in 2021; 4.3% thereafter
	GDP-linkers	A notional amount equal to the face value of the new bonds The securities will be detachable and, beginning in 2015, will deliver up to 1% of their notional amount if real GDP growth and nominal GDP exceed specified targets
	Financial sweetener	The proposed legal terms would link repayments of the new bonds to EFSF repayments. (i.e., on the €30 billion loan provided by the EFSF for the financing of the cash incentives). This would entail, among other features, a common paying agent and debt service payments on the same dates and on a pro rata basis Short-term EFSF notes provided in discharge of all unpaid interest accrued up to 24 February 2012 on exchanged bonds
	Governing law	English law
	Legal enhancement	Euro area two-limb CAC Negative pledge
Bond buyback		On 12 December 2012, €10.8 billion of EFSF financing was used to retire €31.9 billion of Greek bonds, hence reducing the face value of Greece's debt by €20 billion (8% of GDP).

Sources: Author's depiction based on IMF (2012), Darrow and Hans (2012), and Zettelmeyer et al. (2013)

2. Assessment of the 2012 PSI

Having presented basic information about the 2012 PSI arrangement, this section assesses the debt restructuring from three angles: the design and implementation; the immediate economic implications; and its interaction with the EFSF programme for Greece, comparing the 2012 PSI arrangement, where possible, with earlier alternative proposals in 2011.

Design elements

Scope, forms, and perimeter of debt treated

Table 2 compares the 2012 PSI with two earlier proposals, one by the French Banking Federation in June 2011 and another by the IIF in July 2011. The final PSI implemented in 2012 shares some common ideas but extensive changes, too. In scope, it covers all bonds issued before 2012, rather than targeting a specific range of maturities as proposed by earlier proposals, which meant it embraced a larger total amount of debt, at €206 billion.

The PSI 2012 debt treatment terms entailed a large nominal 53.5% haircut, taking into account the discounted face value of new bonds issued and cash payments. Coupon rates on the new bonds offered in the 2012 PSI were much lower than all the 2011 proposals. And the nominal haircut and lower coupon payments yielded a much bigger debt reduction in net present value terms, at about 75% (Darrow & Hans, 2012). The French banks' and IIF's proposals aimed to provide debt relief by adjusting maturities and interest rates. Haircuts or face-value reductions were mostly absent.

Many economists believe these changes reflected worsening economic circumstances in Greece between mid-2011 and early 2012, which legitimised the much stronger debt treatment. However, costs arose that were associated with time lost between June 2011 and March 2012 – because a no-payments standstill was imposed on the debt stock and the Greek government continued to pay investors in full as the PSI negotiations dragged on.

Table 2
Comparison of different PSI proposals

	French banks 2011	IIF 2011				PSI 2012
		Option 1	Option 2	Option 3	Option 4	
Nature	Bond exchange	Bond exchange	Rollover	Bond exchange	Bond exchange	Bond exchange
Total targeted bonds	€85.5 billion	€135 billion				€205.7 billion
Eligible old bonds	Bonds maturing from Jul 2011 to Jun 2014	Bonds maturing from Aug 2011 to Jul 2020				All bonds issued prior to 2012
Nominal haircut	0	0	0	20%	20%	53.50%
Net present value reduction		21%	21%	21%	21%	75%
New bond maturity	30 years	30 years	30 years	30 years	15 years	30 years

New bond face value (over old bond)	70%	100%	100%	80%	80%	31.50%
Cash payments (over debt treated)	30%	0%	0%	0%	0%	15%
Coupon	5.50%	1 – 5y: 4% 6-10y: 4.5% 11-30y: 5%	1 – 5y: 4% 6-10y: 4.5% 11-30y: 5%	1 – 5y: 6% 6-10y: 6.5% 11-30y: 6.8%	5.90%	1 – 4y: 2% 6-9y: 3% 10y: 3.65% 11-30y: 4.3%
GDP-linkers	Yes	No				Yes
Collateral	Full principal at maturity	Principal at maturity			Principal (partially) from day 1	N/A
CAC	No	Yes				Yes
Negative pledge	No	Yes				Yes
Governing law	Greek law	English law				English law
ECB participation	No	No				No

Sources: Author's depiction based on Kopf (2011), Credit Suisse (2011), IMF (2012), Darrow and Hans (2012), and Zettelmeyer et al. (2013)

The array of bonds in the restructuring did not change with the different proposals, and excluded trade credits and treasury bills to ensure continued trade financing and short-term government financing, adhering to common practices highlighted by Buchheit et al. (2019). One problem concerned special treatment for the Eurosystem – the ECB and national central banks (NCBs) – together with the European Investment Bank (EIB); all their Greek bond holdings were exchanged for a new series with identical payment terms and maturity dates, and were thus exempted from the 2012 PSI.

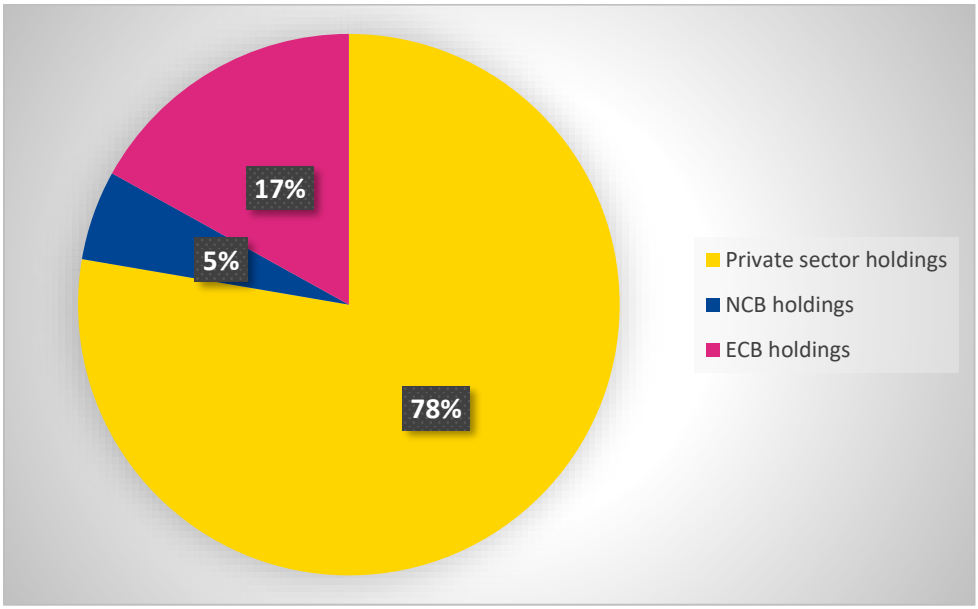
The decision to carve out the Eurosystem and EIB holdings raised two concerns.

First, the ECB and NCB holdings within the total outstanding Greek debt were not negligible and Greece could have benefitted from bigger debt relief had the ECB participated. Based on a list of eligible bonds for the 2012 PSI collected by Trebesch and Zettelmeyer (2018), the ECB had acquired €42.7 billion in Greek bonds, mainly through its securities market programme, representing 17% of –total outstanding Greek public debt as Figure 4 illustrates. Another €13.5 billion of Greek bonds, or 5% of the total, were held in NCB investment portfolios.

Second, some investors questioned commitments to inter-creditor equity given the special treatment delivered to the Eurosystem and EIB. In 2015, some investors opened a case at the European Court of Justice because the ECB Governing Council decision clearly indicated that the ECB was ranked on an equal footing – pari passu – with private investors in its asset purchase programmes. However, the court ruled in favour of the ECB saying in justification that public interest objectives guided the ECB and NCB interventions (European Court of Justice, 2015). Also, a few other official creditors, notably some Asian central banks, objected to the Eurosystem being excluded from the PSI; as public investors, these foreign central banks

suffered credit losses like private bondholders. These questions about inter-creditor equity persist in the midst of an upgrading of euro area CACs to single-limb aggregation.

Figure 4
Eurosystem vs. private creditors: split of total Greek outstanding debt



Source: Author's depiction based on Trebesch and Zettelmeyer (2018)

Carrots and sticks to encourage creditors' participation

The 2012 Greek PSI offered considerable insight into how to design incentives and deterrents – or carrots and sticks – to encourage creditor participation in bond exchanges because, after all, the PSI was supposed to be voluntary. The PSI adopted many conventional practices, as highlighted in Buchheit et al. (2019), and developed many legal and financial innovations to engineer the orderly debt exchange with private creditors.

As a financial incentive, the debt exchange offered a cash payment equivalent to 15% of the face value of old debt, which Zettelmeyer et al. (2013), identified as the largest cash sweetener ever offered in a debt restructuring. Cash payments were disbursed in the form of EFSF notes in two series – 50% due in March 2013 with a coupon of USD0.4%, and 50% due in March 2014 with a coupon of USD1. The plan also provided EFSF notes to clear unpaid interest on old bonds that had accrued up to 24 February 2012. The staged coupon payments are detailed in Table 1.

The bond exchange also provided GDP-linked warrants of an initial notional amount equal to the face value of the new bonds. These warrants aimed to deliver additional interest payments should real GDP growth and nominal GDP exceed pre-set targets.[6] However, the targets were deemed high, thus lowering expectations that these GDP-linkers would offer topping-up in the years after the PSI. Realised Greek GDP data corroborated this view. These GDP-linked securities are callable by the Greek government any time after 1 January 2020.

The new bonds were issued in a 'co-financing agreement' with the EFSF. This created an exact symmetry between Greece's debt service to new bondholders and its debt service to the EFSF

[6] For details on the thresholds, refer to Annex 1 Zettelmeyer et al. (2013).

for the EFSF notes and bills it had received for the debt exchange. In addition to the €109.1 billion rescue programme, the EFSF in March 2012 contributed to Greece's first voluntary liability management exercise.[7] The plan also appointed a trustee, Wilmington Trust (London) Limited, for the new bond holders to ensure payments. And the buyback of Greek marketable debt instruments was agreed before the PSI started, scheduled for December 2012 at market prices. All these were financial innovations that could guide future debt restructurings.

Contractual improvements meant English law governed the new bonds and they incorporated standard creditor protections such as a pari passu, negative pledge, and cross-default clauses, terms that until then had hardly existed under Greek law.

Alongside legal and financial sweeteners – carrots, Greece also used legal deterrents – sticks – to discourage holdout behaviour. The legislature introduced the Greek Bondholder Act on 23 February 2012 to introduce retroactively CACs into the Greek-law governed bond contracts, representing 93% of the country's total outstanding sovereign bonds. This endorsed the restructuring of bonds governed by Greek law with qualified majority consent, based on a quorum of votes representing 50% of the outstanding bonds face value, and 66.7% supermajority of participating bondholders; the quorum and consent threshold were to be calculated from the Greek-law-governed bonds total amount.

The Greek Bondholder Act did not change any payment terms but gave rise to a credit event – technically a default – announced by the International Swaps and Derivatives Association on 9 March 2012. This meant bondholders who bought credit default swap (CDS) protection against a Greece default could expect to receive payments from the CDS dealers to recover any losses from the debt restructuring. However, no material impact arose, given the small notional amount outstanding after netting out long and short positions. Darrow and Hans (2012) estimated that total at approximately €3 billion.

The PSI designed carrots and sticks to attract the maximum creditors possible to agree on the bond exchange and bind any potential holdout creditors. Zettelmeyer et al. (2013) report the PSI achieved a €199.2 billion record high participation, or 96.9% of eligible principal. New bonds worth €62.4 billion were issued and the EFSF provided €29.7 billion of short-term notes. Deducting costs of issuing new bonds and EFSF notes from the total amount of old bonds treated yielded €107 billion in face value debt reduction.

Researchers have asked whether it might have been possible to squeeze investors a little harder, by lowering the incentives yet reducing restructuring costs to reach a similar economic outcome. Zettelmeyer et al. (2013) analysed seven other potential scenarios, for example adopting a tougher approach to holdout creditors that could have generated €3 billion more in debt relief. The inclusion of the Eurosystem in the restructuring would have produced €33 billion in extra relief. And had the bond buyback programme been conducted at a pre-set price instead of market prices, the face value of outstanding Greek debt stock would have further shrunk by €7 billion if secondary market prices of 23 November 2012 had been used as negotiated prices, or by €17 billion if 11 October 2012 prices had been used.

Modalities of negotiation

The debt restructuring negotiations between the Greek government and its private creditors involved a 32-creditor committee representing banks, insurers, and asset managers that held an estimated 30% to 40% of Greece's privately held debt, represented by a 12-strong steering

[7] Under the PSI Facility Agreement, the EFSF financed Greece with around €30 billion of EFSF notes to be exchanged under the PSI operation. The EFSF also signed the bond interest facility agreement with Greece, under which it disbursed around €4.9 billion to finance accrued interest on the bonds subject to the exchange under the PSI operation.

committee (see Table 3, reproduced from Zettelmeyer et al., 2013).

The Greek case proved to be another example of using a credit committee in a sovereign debt workout, an approach that had waned since the 1990s (Buchheit, 2009). This author has also documented the advantages and disadvantages of employing such committees: a formal creditor negotiating committee can help verify financial data and economic assumptions used in any debt restructuring design. Such a committee also offers a sovereign debtor appraisal to assess how the broader, more diverse creditor group might react to any proposed restructuring plan, and it serves as a single point of contact to avoid negotiations with an array of important creditors. However, it also imparts power to a handful of creditors who could use it to promote their own interests in any debt workout or exert strong restructuring pressure on the debtor country.

This approach effectively rendered the March 2012 restructuring as a hybrid organisation between a London Club negotiation led by a steering group of banks – typical of bank loan restructurings in the 1980s and early 1990s – and a take-it-or-leave-it debt exchange offer typical for most bond restructurings since the late 1990s.

Table 3
Steering committee and Greece's major private creditors
(in € billion)

Steering committee members		Other members of the creditor committee			
Allianz (Germany)	1.3	Ageas (Belgium)	1.2	MACSF (France)	n.a.
Alpha Eurobank (Greece)	3.7	Bank of Cyprus (Cyprus)	1.8	Marathon (USA)	n.a.
AXA (France)	1.9	Bayern LB (Germany)	n.a.	Marfin (Greece)	2.3
BNP Paribas (France)	5	BBVA (Spain)	n.a.	Metlife (USA)	n.a.
CNP Assurances (France)	2	BPCE (France)	1.2	Piraeus (Greece)	9.4
Commerzbank (Germany)	2.9	Credit Agricole (France)	0.6	RBS (UK)	1.1
Deutsche Bank (Germany)	1.6	DekaBank (Germany)	n.a.	Societe Generale (France)	2.9
Greylock Capital (USA)	n.a.	Dexia (Belg/Lux/Fra)	3.5	Unicredit (Italy)	0.9
Intesa San Paolo (Italy)	0.8	Emporiki (Greece)	n.a.		
LBB BW (Germany)	1.4	Generali (Italy)	3		
ING (France)	1.4	Groupama (France)	2		
National Bank of Greece (Greece)	13.7	HSBC (UK)	0.8		

Note: Estimate of bond holdings refer to June 2011, creditor committee composition to December 2011.
Source: Information taken from Zettelmeyer et al. (2013)

Generally, views about using a creditor committee have been mixed at best. The ESM evaluation team found that many of those interviewed expressed a desire for more impartial negotiation moderators should similar circumstances arise in future.

Implications on fiscal sustainability and EFSF programming

Implications on fiscal sustainability

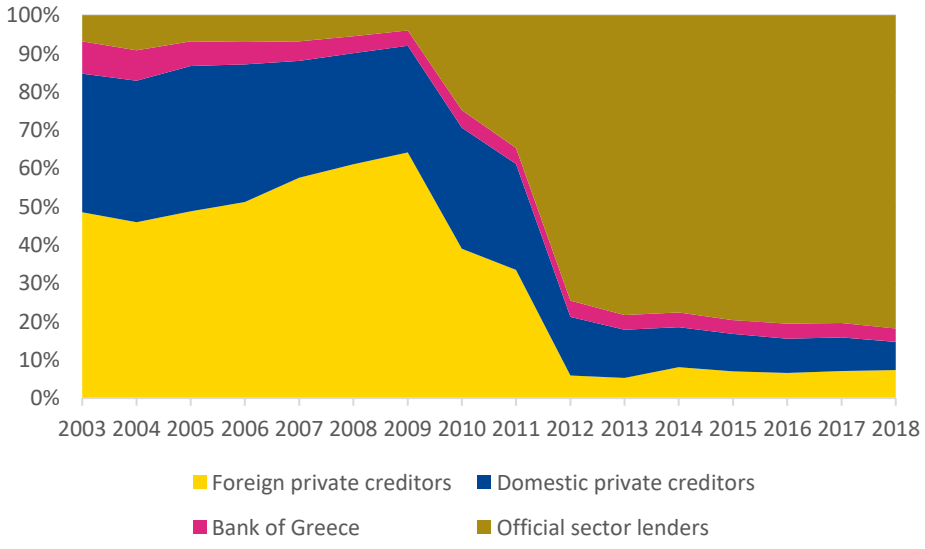
Did the PSI help the Greek government improve fiscal sustainability? We can examine this two ways – looking at the debt stock and identifying the gross financing needs.

Looking at the debt stock, the position is far from promising, because the public debt-to-GDP ratio did not fall back much, despite the €107 billion of nominal terms debt relief offered by the bondholders. Figure 2 shows the debt stock fell to 159.6% of GDP by end-2012 from 172.1% a year earlier, but then surged to hit 177.4% by end-2013. This surpassed the debt level established before the PSI, mainly because any private debt reduction was offset by the €130 billion increase in EFSF and IMF official loans to Greece, as Figure 5 illustrates.

However, the Greek sovereign debt profile has since evolved, to enjoy much longer average maturities and far lower service costs. The lower gross financing needs stemmed from the way the PSI switched costly private debt to less expensive official debt while EFSF financing transformed maturities. Figure 6 shows that after the PSI, annual service costs dropped to 1.92% from 4.54% in 2011 while average remaining maturities lengthened to 15.29 years from 6.3 years. The combined effects of these lower debt service costs and longer maturities led to a gradual and substantial decline in the government's gross financing needs, as Figure 7 illustrates.

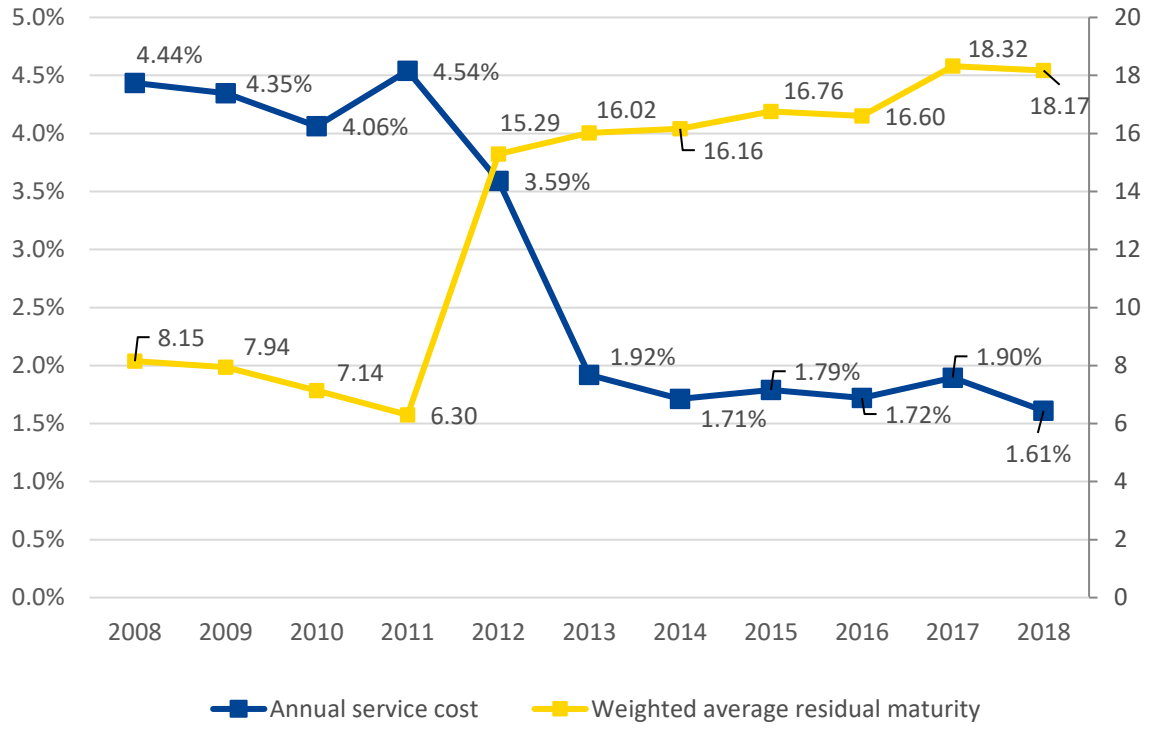
In designing Greece's EFSF and ESM financial assistance programmes, the ESM Greece country team emphasised a flow approach to debt sustainability, measured by gross financing needs. However, the debt position is still expanding and Greece solicited further relief on EFSF and ESM loans in the years 2017 and 2018.

Figure 5
Changing debt composition
(in % of total sovereign debt)



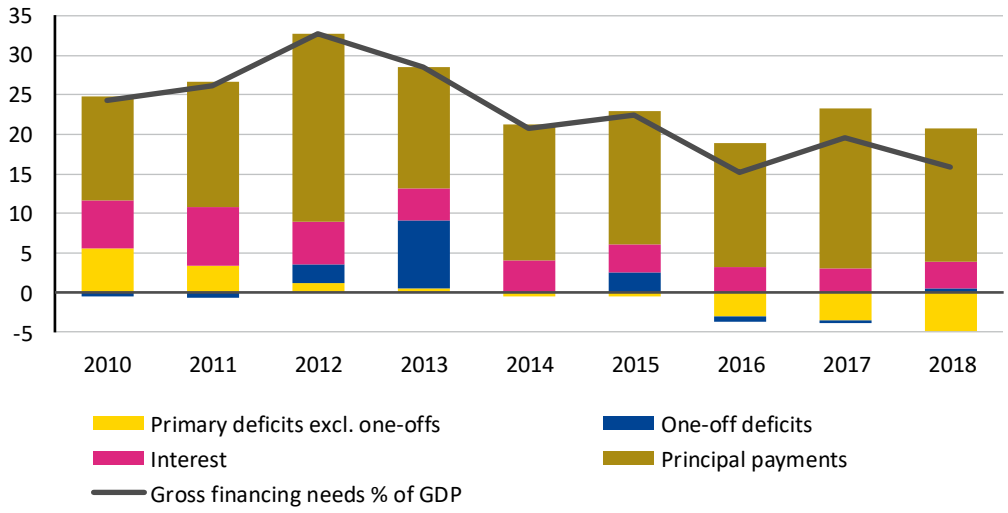
Source: Author's depiction using data from Arslanalp and Tsuda (2014)

Figure 6
Changes in service costs and maturity following the PSI
(left-hand axis in %, right-hand axis in number of years)



Source: Author's depiction based on data from the Public Debt Management Agency of Greece

Figure 7
Evolution of Greece's gross financing needs
(in % of GDP)



Note: One-offs are reported as defined in the AMECO database, principal payments refers to consolidated government debt with one year residual maturity lagged by one year.
Sources: Eurostat, Directorate-General Economic and Financial Affairs, ECB

Burden on the financial sector

The PSI generated other financial costs, notably impaired loans to Greek banks because of their

government bond holdings, prompting the IMF and EFSF to prepare funds specifically to recapitalise and restructure banks.

The EFSF/ESM programme database[8] shows the EFSF disbursed €25 billion to Greece for bank recapitalisation on 19 April 2012, immediately after the PSI was concluded, then another €16 billion for bank recapitalisation on 19 December 2012.

The well-designed PSI meant new funds from official creditors offset Greek bank losses immediately, but a side effect meant Cypriot banks suffered extensive damage from their Greek sovereign bond holdings. Unlike their Greek counterparts, the Cypriot banks were not compensated for restructuring-related losses and this contagion from the Greece PSI triggered a banking crisis in Cyprus that later required ESM financial assistance.

Interaction with EFSF financial assistance

The PSI should be regarded as a dynamic interactive relationship with EFSF financial assistance to Greece, because the joint application of PSI and EFSF additional financing helped transform the maturities spread on the Greek sovereign debt profile and reduced the debt service cost substantially. Indeed, a successful PSI agreement was a pre-condition for prompting the IMF and EFSF official sector lenders to extend fresh cash loans – and the EFSF package included specific financing for the PSI in return, notably a debt buyback programme and credit enhancement.

Table 4
Composition of the EFSF committed financing envelope in the light of the PSI
(ex post)

EFSF programme	in € billion
Greek deficit	47.4
Credit enhancement	34.6
PSI co-financing	*29.7*
Bond interest facility	*4.9*
Bank recapitalisation	48.2
Debt buyback programme	11.4
Total	**141.7**

Source: Author's calculations based on the ESM programme database

Table 4 breaks down the EFSF's committed financing by use, showing three of the four items that represent the cost of conducting debt relief, including compensation to Greek banks for the impairment of their sovereign securities holdings; financing for the credit enhancement or financial sweeteners; and the bond buyback. The cost of PSI-related items represent 66% of the total EFSF financing commitment, and more resources could have helped address the country's fiscal deficit had the EFSF reduced the size of financial sweeteners.

Criticisms

This paper has so far identified innovations the PSI initiated and the doubts expressed by researchers, practitioners, and policymakers. This section lays out the main criticisms from

[8] For more details, consult the online data page: https://www.esm.europa.eu/assistance/programme-database.

existing literature, to help guide Section 3 discussions on potentially applicable lessons for any approach to managing future crises.

First, academic debate on the long-term economic costs of a debt restructuring has proved inconclusive. The PSI may seem "good" in theory but long-term effects and contagion could render it "bad" in practice (Smaghi, 2011). Lorenzo Bini Smaghi, then an ECB executive board member, was a vocal opponent of the PSI in 2011, highlighting practical complications and unintended contagion costs for Greek taxpayers, its creditors, and other vulnerable euro area countries (Smaghi, 2011). Smaghi (2011) identified substantial PSI operation costs, for instance the impact on Greece's domestic financial system. He also noted that the debt stock principle repayments would still persist as a financial burden on the entire economy.

However, any PSI examination needs to consider official sector lending. The Greek government's gross financing needs declined sharply, buying time for the country to implement necessary reforms. Zettelmeyer et al. (2013) show that the operation was swift and smooth, without triggering large spillovers into peripheral euro area countries. The debate should engender an ongoing quest on how to encourage the commitment of potential holdout creditors and develop adequate sovereign debt restructuring frameworks.

Second, the 2012 PSI might have come too late and provided insufficient relief, an idea that emerged from broad academic and policy debate on the contribution of debt restructurings, from both private and official sector creditors, to debtor-country sustainability. Based on restructurings since the global financial crisis, including the Greek PSI, the IMF (2013) concluded that debt restructurings "have often been too little and too late, thus failing to reestablish debt sustainability and market access in a durable way". Many academic researchers and civil society organisations have raised similar concerns, especially in the Greek case.

In their report supporting Greece's request for an SBA in 2010, IMF staff had assessed Greek debt as "not sustainable with high probability", so IMF decision-makers needed to introduce a systemic exemption clause to its exceptional access framework for Greece so that it could receive large-scale SBA assistance.

Relief measures from both official and private lenders were frequent and repeated, as Figure 8 illustrates, because the PSI only followed official creditors' efforts to lower costs and lengthen the maturities of their own lending.

The basic facts set out in Section 1 also outline the lengthy political discussions on the feasibility of, and how to tackle, PSI in the euro area. This paper follows the line of existing literature by suggesting that the 2012 PSI failed to restore sustainability to the debt stock and market access to Greece. However, it did alleviate the country's annual gross financing needs, helped mainly by the low costs and long maturities of EFSF lending. Hindsight suggests the PSI debt reduction was too small, but could a PSI have offered more relief in 2012? Zettelmeyer et al. (2013) think so, with the greatest relief arising from a Eurosystem involvement. However, such a proposal still looks controversial today, as seen in the discussions on possible ECB disenfranchisement in the single-limb CAC discussions.

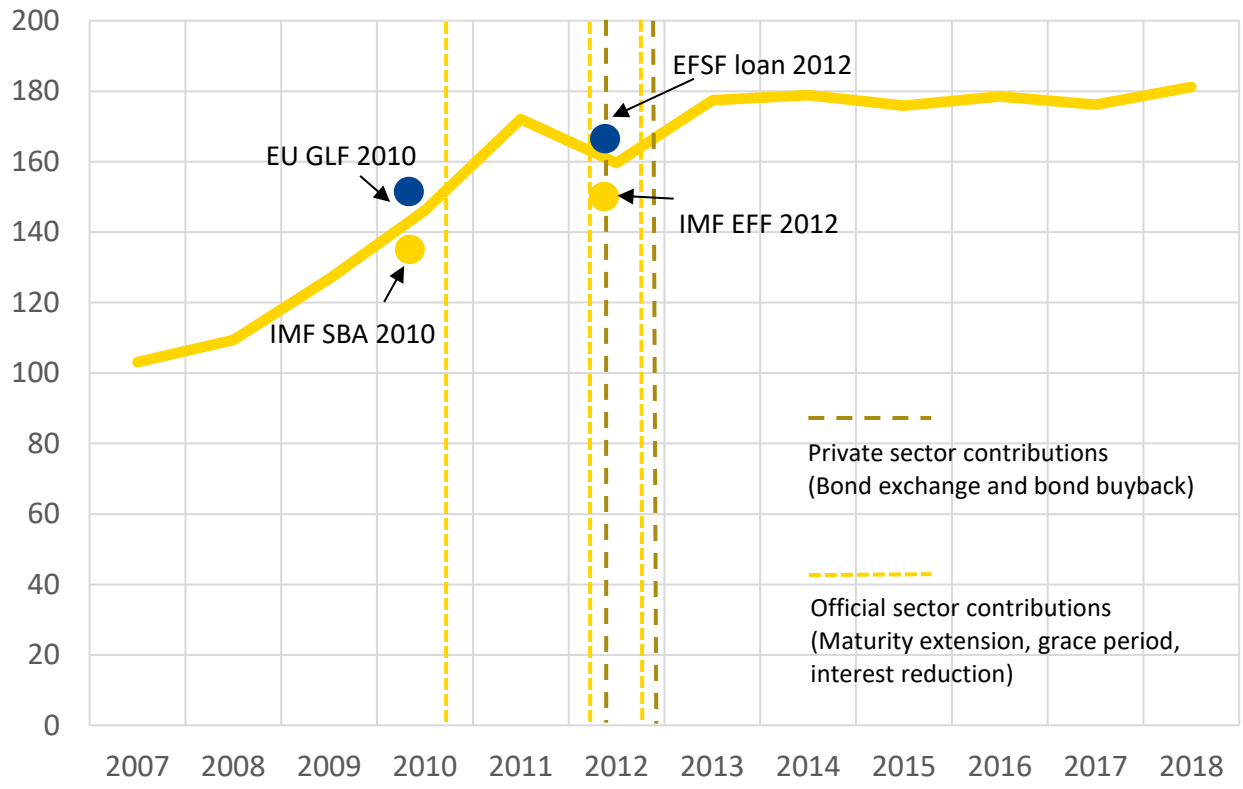
Consensus among creditor institutions, policymakers, and academics suggests the underlying assumptions in the 2010 DSA could have been challenged and subsequent analyses might have been too optimistic. This would argue that rigorous and transparent debt sustainability and market access assessments are necessary, a conclusion also reached by the IMF (2013). A related question arose as to what extent informed judgement calls should rely on DSA quantitative assessments.

Finally, one technical controversy arose concerning the market auction prices struck for Greece's debt buyback. This operation seems to have been offered only to avoid another PSI, because Greece needed to remain on track with its IMF programme and to receive subsequent

disbursements. Many commentators also think that this operation did not serve its purpose of lowering the country's debt stock, because bond prices rose just before the auctions, requiring the Greek government to borrow more resources from an official lender – the EFSF – to redeem its debt from private creditors. This raises concerns about wasting public resources to bail out private creditors. Zettelmeyer et al. (2013) proposed three alternatives to set different buyback option reference prices instead of using auctions.

Additional relief could have been €17 billion higher than the actual face value reduction achieved at €20.6 billion had the buyback taken place on 11 October 2012 using the prevailing market price before any official announcement. It seems market participants inflated the bond price when the actual bond buyback took place, an observation recorded at similar earlier events (Bulow, Rogoff, & Dornbusch, 1988).

Figure 8
Evolution of Greek public debt and repeated official and private sector interventions
(in % of GDP)



Source: Author's depiction

3. Lessons for the future

This section offers broad reflections on lessons to be drawn about orderly debt restructuring from the 2012 experience in Greece. It highlights the revived debate on different approaches to sovereign debt restructurings, the importance of an independent, technically sound DSA, and reviews the interaction between the PSI and official sector financing from the ESM.

Statutory vs. contractual approach to potential debt restructurings

Despite its swift completion, the 2012 PSI also uncovered a missing element in the architecture of the euro area needed for an orderly restructuring of unsustainable sovereign debt (Andritzky, Christofzik, Feld, & Scheuering, 2018). Recent experiences have revived an old debate; at the beginning of the 2000s, IMF staff and management strongly advocated a treaty-based sovereign debt restructuring mechanism[9] to encourage creditors' participation in restructurings and to reduce risks to taxpayers' funds. This would require incentives to promote both the proper pricing of risk in sovereign bond markets and prudent management of fiscal finances.

The United States and influential emerging market issuers opposed the statutory approach, prompting the IMF to promote a contractual alternative, namely CACs, in sovereign bond contracts, that incorporated majority-restructuring provisions to allow sovereign bonds to be restructured despite any opposition from minority creditors. A few IMF papers then encouraged greater use of CACs in sovereign bond contracts (IMF, 2002; IMF, 2003).

The Greek experience demonstrated that any orderly debt restructuring would need to mitigate the damage of holdout creditors and secure high creditor participation. The euro area has thus dedicated considerable resources to developing contractual arrangements to moderate the potential impact from any holdout creditors. Euro area governments then decided to introduce mandatory two-limb euro area CACs from January 2013 to cover all euro area sovereign bonds with a maturity of more than one year. Now member states are pushing towards a euro area model CAC with single-limb voting aggregation.

Before the euro area model CAC emerged, a standard bond CAC meant that changes required approval by a 75% bondholder majority for each series. Now the euro area model CAC has cut this majority threshold in exchange for introducing an additional majority requirement that must be obtained across all bond series participating in a vote. One-limb aggregation takes a step further by removing the need for a majority within each series, provided a qualified majority is obtained across all series, which facilitates restructuring multiple series of bonds simultaneously.

Euro area leaders have now agreed to cover euro area sovereign bonds from 2020 with a single-limb CAC, using terms of references developed in 2019 and revised after public consultation.

In addition to the holdout creditor issue, a sovereign debt restructuring framework should also promote more predictable restructurings and smooth debt workout negotiations. How to achieve these objectives – through statutory or contractual approaches – is still an open question. Views differ on the feasibility and desirability of a euro area institutionalised framework for sovereign debt restructuring.

Based on the Greek PSI, two remarks can, however, be made.

First, a regime of automatic maturity extension or restructuring could be procyclical and therefore counterproductive. A regime of automatic maturity extension or restructuring whenever a country requires ESM financing, as some euro area central banks propose, seems to

[9] The sovereign debt restructuring mechanism proposal was especially supported by Anne Kruger, then the first deputy managing director of the IMF. For a comprehensive account, see Hagan (2005).

protect taxpayers' money at first sight; the downside risks could be large if a negative market reaction develops. And automatic actions might deliver too-much-and-too-often restructuring. The 2012 PSI was not an automatic mechanism but the design of it took into account much of Greek economy's specifics and the profile of its public debt.

Second, as regards debtor-creditor negotiations, the ESM evaluation exercise learned of aspirations to have an impartial public institution as negotiation moderator for private debt restructurings. Here, the IMF's policies and practices are useful.

The IMF does not apply a consistent approach to debt restructuring but deals with any issue case by case, partly because it does not have a specific tool or policy as such to deal with sovereign debt restructurings. Also, the IMF does not micromanage debt restructuring processes, but can offer advice to a debtor country. In the past, it has helped member countries define the amount of sovereign debt that needs restructuring, to increase the creditor participation rate – for example the Belize debt restructuring from 2006 to 2007, as Asonuma et al. (2018) point out. The IMF has tried wherever possible to convince a country's creditors to participate in a debt restructuring, by providing independent credible economic assessments and timely information. Such assessments, perhaps a DSA or an IMF programme design, are vital during periods of stress when investors need trustworthy information about the extent to which a restructuring is needed and a country's economic position.

The IMF's involvement also depends on the type of creditors, which is important; if debt is restructured with Paris Club creditors, the club needs an IMF programme as a prerequisite to grant debt relief. But when the restructured debt involves private sector claims, the immediate IMF restructuring role is less straightforward, depending very much on the country's circumstances, for example whether the country remains current with its creditors.

The IMF's practices set the tone for discussion on defining the role for a potential public debt talks facilitator. Debt restructuring processes are complex so any facilitator would need to use non-crisis time to maintain regular contact with investors holding euro area sovereign debt, follow market developments, and watch the implementation of CACs. In periods of distress, when sovereign debt restructuring must be considered together with potential ESM support, the facilitator could promote dialogue between the member state involved and its private creditors, while providing investors with information and confidence support.

IMF experiences suggest the debt facilitator need not adopt a very active role in the debt restructuring negotiations, and certainly should not be seen as an arbitrator between the debtor country and its private creditors to determine PSI terms. Indeed, the debt facilitator does not even actually need to be present in debt negotiations. However, in any preparations for talks a negotiator can help creditors and the beneficiary member country establish agendas; identify key issues to discuss such as the debt amount to be restructured; define negotiation objectives with timelines; and expedite any ESM decision on granting financial assistance.

The Federal Reserve Bank of New York played such a facilitator role during the 1980s Latin American debt crisis, serving as an informal intermediary between banks and debtor countries; no representative of the bank sat in on meetings between a debtor and its creditor committee, but it maintained an active discreet dialogue with both sides.

The ESM could assume a debt talk facilitator role, and euro area leaders have discussed the concept within ESM reform discussions, but operating details need to be further developed. Nevertheless, in the future the ESM may, if so requested by a relevant ESM member, facilitate dialogue between that member and its private investors on a voluntary, informal, non-binding, temporary, and confidential basis.

Debt sustainability analysis

A sound DSA provides the first element of any effective procedure to determine whether private sector contributions are needed, and a PSI should only be considered in exceptional circumstances, when a country in distress cannot close a financing gap through fiscal adjustment and official sector financing. Accordingly, a credible and transparent DSA process that enjoys public and private market consensus will contribute much to the acceptability of a debt restructuring.

Clear principles and procedures are necessary to provide guidance and clarity on methodology, critical projections, and assumptions that should underpin any DSA. A clear framework should also specify beforehand which institutions or methods would provide the relevant assumptions.

For example, long-term growth assumptions could rely on work from the Organisation for Economic Co-operation and Development, the international organisation providing regular, long-term growth forecasts for all its member states. Also, the DSA procedures should offer transparency by guaranteeing accountability about the way the exercise is conducted, and be published publicly. That would enhance credibility, creditor involvement, and buy-in. But debt sustainability is not a black-or-white issue, and 'grey zones' may appear that demand judgement calls.

During the ongoing ESM reforms, the European Commission and the ESM have jointly specified their division of labour[10] and commitment to working together on a DSA methodology to apply across the euro area. It would be beneficial to see this published for public consultation.

As Corsetti (2018) advises, a DSA should embed any potentially available official support and its characteristics, so the Greek case would point to incorporating the European framework involving long-term ESM support at very low interest rates. In contrast, the IMF does not look to a DSA far into the future, given the maturity profile of its loans.

Interaction between PSI and ESM lending

The Greek PSI reopened a long-standing debate about the need to strike a balance between bail-outs (official sector financial support) and bail-ins (adequate private sector contributions).

If official sector lending constitutes some form of solidarity and mutual insurance against tail risk, then private investors also need to shoulder any losses stemming from their investment decisions and risk pricing when lending to sovereigns. In addition, as the IMF (2013) highlights, official lenders should initiate measures to limit the risk of public resources being used simply to bail out private creditors.

The Greek example was one where the agreed PSI formed part of a package to address an economic crisis that also involved official sector lending, and followed soft re-profiling offers from official sector lenders involving maturity extensions and lower interest rates.

So just exactly when a PSI should take effect becomes an important policy question and policymakers need to consider the sequencing between any potential private sector contributions and official financial assistance.

To safeguard public resources for crisis management, the official sector should not provide lending to countries whose public debt is unsustainable. Here it might be useful to draw comparisons with the EU bank resolution framework, by considering a creditor bail-in measure

[10] Refer to https://www.esm.europa.eu/press-releases/joint-position-future-cooperation-between-european-commission-and-esm.

to be implemented in return for official sector lending.

For this reason the IMF has developed a strong "commitment device" (Jeanne & Zettelmeyer, 2001). Cheng et al. (2020) have highlighted three policy elements the IMF considers when providing assistance: (i) debt sustainability requirement, (ii) financing assurances policy, and (iii) arrears policies.

All IMF lending requires debt sustainability that becomes more stringent for higher-level access to IMF resources. In the case where private sector creditors provide debt relief, the IMF financial assurances policy normally requires debt restructuring to be implemented before the use of IMF resources is approved or at least significant progress has been made.

Until recently, the ESM legal framework only implied debt sustainability conditions for its own lending, but changes have emerged during the current ESM reform discussions, so now treaty revision would determine that the ESM could only provide stability support to members "whose debt is considered sustainable and whose repayment capacity to the ESM is confirmed".[11] Also, "in exceptional cases an adequate and proportionate form of private sector involvement, in accordance with IMF practice, shall be considered in cases where stability support is provided, […]".[12]

However, protracted debt workout negotiations or holdout creditors should not be allowed to delay timely official sector support, so a key issue becomes how to engage with private sector creditors effectively. The IMF has designed, and updated, policy frameworks that allow it to provide financial assistance in set circumstances even when a potential beneficiary country runs arrears to private creditors or bilateral official creditors. Such a "lending-into-arrears" framework does not exist in the EU but could be developed.

Another thought could be to create mechanisms to foster consensual restructuring through temporary standstills that would stop aggressive creditors from taking action to enforce their claims for a set period following a debtor request for ESM support. Such a standstill would be long enough to allow the ESM and partner institutions to consider any debtor's request and craft a suitable memorandum of understanding. It would also afford time for the debtor and its creditors to negotiate terms for a consensual PSI and to implement a comprehensive agreement to restructure the debt obligations.

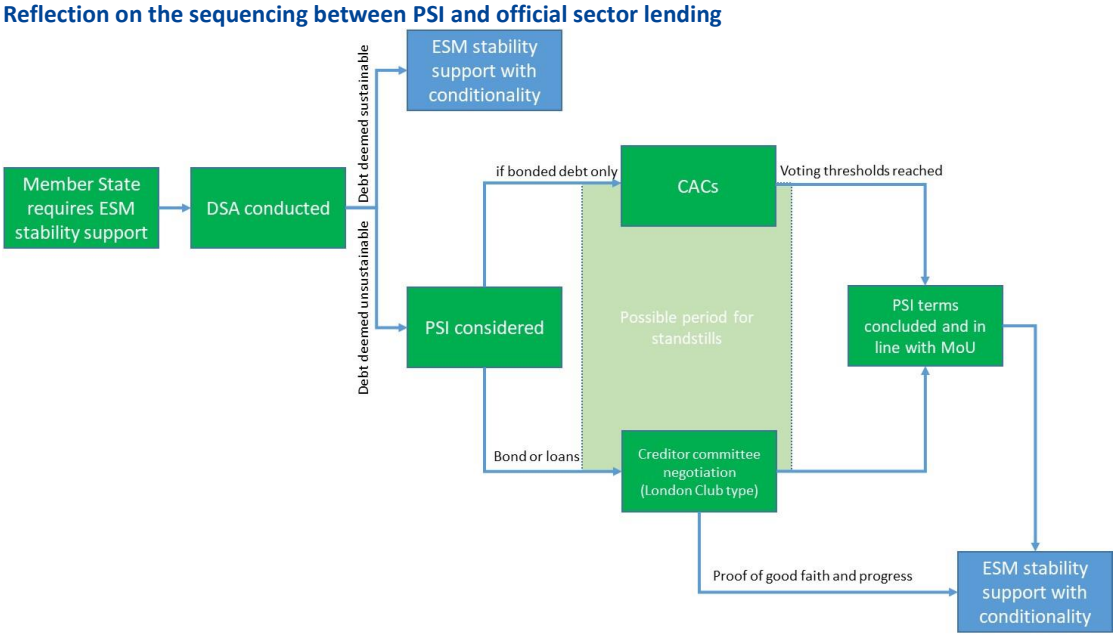
The risk in early creditor action would be a potential derailment to any orderly restructuring when aggressive creditors seek to gain advantage over other, more passive, creditors, including efforts to seize assets; the market has not forgotten how the Argentine case demonstrated that aggressive behaviour can lead to favourable treatment.

Based on these thoughts, Figure 9 provides a speculative chart on potential interactions between private sector creditor contributions and official sector lending in any future ESM programme.

[11] Preamble 12A of the draft revised text of the ESM Treaty, as agreed by the Eurogroup on 14 June 2019.

[12] Ibid

Figure 9
Reflection on the sequencing between PSI and official sector lending



Source: Author's depiction

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Acronyms

CAC	Collective action clause
CDS	Credit default swap
DSA	Debt sustainability analysis
ECB	European Central Bank
EFF	Extended Fund Facility
EFSF	European Financial Stability Facility
EIB	European Investment Bank
ESM	European Stability Mechanism
IMF	International Monetary Fund
NCB	National central bank
PSI	Private sector involvement
SBA	Stand-By Arrangement
USD	United States dollar