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Scenarios for restructuring the Portuguese debt

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Executive summary

A. The programme for the restructuring of the debt and the ensuing debate

1. This year, at the beginning of July, the authors presented "A Sustainable Programme for the Restructuring of the Portuguese Debt", arguing that the repeal of austerity requires a restructuring of the Portuguese debt.

2. The "Sustainable Programme" proposed a public debt restructuring, changing its maturities and interest payments, in order to significantly compress its present value, as well as a systemic bank resolution, which would impact the external indebtedness, pointing out the lack of financial soundness exhibited by the Portuguese banking balance sheets. Since its disclosure, the GES (Grupo Espírito Santo) and BES (Banco Espírito Santo) crisis has highlighted the pertinence of the proposals included in the programme.

3. The Portuguese Parliament has decided to organise a debate on the debt and possible solutions. This document is a contribution towards this national reflection.

B. Alternative restructuring scenarios

4. In Portugal, the discussion about the debt has been mainly limited to the exchange of arguments, without putting forward any concrete proposals. It is true that on the side of the proponents of the thesis of debt sustainability, very long-term simulation tables are presented, assuring that the Portuguese public debt is sustainable and could be reduced to 60% of the GDP by around 2035, thus complying with the "Budgetary Treaty". But it is equally certain that these simulations are based on unrealistic assumptions regarding economic growth and interest rates. Among the proponents of a debt restructuring, to the best of the authors' knowledge, there are only two works involving detailed analysis: the "Sustainable Programme" by the authors, and the work carried out by IAC (Initiative for a Citizens Audit of the Debt).[1]

5. Therefore, the alternative restructuring scenarios hereby evaluated are interpretations of ideas or methodologies that are in the public domain, suggested by other individuals or institutions. This exercise has been carried out with prudence, explaining the interpretative hypotheses while remaining fully open to take other proposals into consideration.

6. A scenario where things remain unchanged has not been considered. As the President of Portugal has demonstrated, although without explaining his conclusion, this scenario is impossible and cannot satisfy the commitments of the Budgetary Treaty: "Assuming a nominal annual growth in GDP of 4 per cent and a public debt implicit interest rate of 4 per cent, a primary surplus of 3 per cent of GDP would be required annually in order to reach the 60 per cent threshold for

[1] Available at http://auditoriacidada.info/sites/default/files/ANEXO_I_PNPAD_0.pdf.

the debt ratio*, by 2035*. In 2014, a primary surplus is expected of 0.3 per cent of GDP."[2]

C. Conclusions on restructuring alternatives

7. The report compares two baseline scenarios (the sustainable programme published by the authors, and Scenario 1, which includes the calculation of the effects of the full preservation of Saving Certificates and Treasury Certificates with four other scenarios: Scenario 2 (a restructuring that protects official creditors, only affecting the private sector), Scenario 3 (the same as Scenario 2, but aiming for results comparable to the Baseline Scenario in terms of public debt write-off), Scenario 4 (a haircut of 50% of the face value of the outstanding debt), Scenario 5 (a version of the Juncker Plan fully financed by printing money, without indebtedness accrual) and, finally, Scenario 6 (the "Draghi Plan" for the monetisation of sovereign debts to the amount of €1 trillion).

8. If compared to the Baseline Scenario of our programme (and Scenario 1, which adapts it to the protection of Saving Certificates and Treasury Certificates), the different alternatives have very different implications: all require recourse, either permanently (Scenarios 2 and 3) or temporarily (Scenario 4) to significant external financing, in spite of the risk involved in the negotiation of its terms and conditions; every single scenario has a distinct impact upon the net external debt, which can worse the external debt burden (Scenario 5) or suffer only a negligible reduction (Scenarios 2, 3, 4 and 6); and, with the exception of Scenario 4, all the others achieve a much less intense compression of the income account deficit.

9. From the point of view of the General Government's gross external debt, the Baseline Scenario and Scenario 1, as well as the scenario of an immediate haircut over half of the amount outstanding, Scenario 4, allow for a reduction to less than 40% of GDP. On the other hand, the other scenarios maintain this debt at higher levels: 58%, 51% and 83% in the case of Scenarios 2, 3 and 5.

10. In the alternative scenarios, the levels achieved for both the net external debt of the country and the general government's external debt keep Portugal as a protectorate and, therefore, in a situation of unsustainable dependence.

11. A European investment plan, even if financed through the issue of money (what we call the Non-Juncker Plan) would have to mobilise an amount twenty-four times greater to have a comparable effect to that of our Baseline Scenario.

12. Even if the ECB initiates a plan of debt monetisation, the so-called Quantitative Easing implicit in the €1 trillion expansion of the ECB balance sheet, it only generates a marginal reduction in the present value of both the General Government and State-Owned Enterprise Sector and the country's non-consolidated gross debt and gross external debt, always requiring a Portuguese debt restructuring.

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[2] Preface to "*Roteiros VIII*", March 2014, in (http://www.presidencia.pt/?idc=22&idi=82238).

CONTENTS

1. Introduction

On 10 July this year, the authors presented "A Sustainable Programme for the Restructuring of the Portuguese Debt". Its starting point was the rejection of the austerity policy: "The imposed austerity policy, even fulfilling exactly what the Troika demands for another 20 years, will fail, because it is impossible for it to function: never before has a country been capable, through austerity, of paying an external debt with the level of the Portuguese one".

In the same report, the authors expressed their drive and commitment to an "open national debate on proposals for the debt restructuring", considering that the "proposed restructuring of the gross debt is certainly not the only possible one. In presenting the foundations and the calculations on which they were based, the authors sought to contribute to a debate concerning solutions for the debt crisis, benefiting from other suggestions and enabling a national decision in line with our collective responsibilities."

In the meanwhile, the Portuguese Parliament, having discussed two popular petitions on the subject – following the initiatives of the IAC (Initiative for a Citizens Audit of the Debt) and the Manifesto of the 74 – took the decision to organise a debate on debt alternatives. This document is a contribution towards this national reflection.

The different scenarios considered here result from the authors' interpretation of arguments, suggestions and ideas that, although present in public debate, have never been explained in the form of a programme showing their calculations or expressed in terms of the terms and conditions of their negotiation. There is, however, some subjectivity in this description of scenarios, Therefore, we reiterate our full availability to consider any corrections, alternatives and methodologies that other authors wish to propose.

For each simulation, we indicate the goals achieved, the available tools and the basic calculations. This was the level of requirement and transparency that we established for the presentation of our own Sustainable Programme and that we hope will be followed by those presenting other programmes and proposals.

2. International initiatives for the restructuring of sovereign debt

Since the publication of the *Sustainable Programme,* some institutional initiatives have appeared concerning either the need for sovereign debt restructuring or its appropriate legal format. These initiatives stemmed from the discontent felt by the countries that form part of the G77 about the IMF intervention in resolving the sovereign debt crises of developing countries, as well as from the recent developments in the Argentinean public debt restructuring, specifically between that country and the vulture funds that refused to participate in the public debt exchange auction, a situation that led to important developments, to be covered below.

On the one hand, on 9 September, the General Assembly of the United Nations approved a resolution[3] seeking to establish, within a period of one year, a multilateral legal framework for sovereign debt restructuring, emphasising that sovereign States have the right to unilaterally declare a debt moratorium, which should not be frustrated by any other sovereign State or commercial creditors' acts. On the contrary, the debt restructuring process should provide a wide-ranging, effective and durable solution, which takes into consideration the interests of all stakeholders. In addition to considering the co-responsibility between debtors and creditors, this mechanism should also take into account solutions that protect and prevent any setback in terms of fundamental human rights, in line with the provisions of the Monterrey Consensus.[4]

On the other hand, the International Capital Market Association (ICMA), which represents the international institutional investors and bankers, has proposed the adoption of aggregation clauses as an alternative to the usual collective action clauses (CACs), which would prevent a tiny group of investors invalidating a sovereign debt restructuring operation, and the subsequent clarification of the concept of *pari passu*.[5] With the new CACs, the decisions agreed between the issuer and 75% of the creditors will be automatically applied to all creditors, while the *pari passu* will ensure that equal treatment among creditors does not imply payment obligations to creditors who refuse to participate in any debt restructuring operation. Although not binding on its members, the IMF[6] advocated the same approach in an article approved by its Executive Board.

Likewise, the G20 also introduced the issue of debt restructuring as part of its concerns. Following the Brisbane Summit on 15 and 16 November, the G20

[3] See http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/68/304&Lang=E
[4] See http://www.un.org/en/events/pastevents/pdfs/MonterreyConsensus.pdf
[5] See http://www.icmagroup.org/resources/Sovereign-Debt-Information/
[6] See http://www.imf.org/external/np/pp/eng/2014/090214.pdf

leaders announced their appreciation for the recent progress in the strengthening of the debt restructuring processes, although they only mentioned the IMF proposals in line with the market stance.

3. Scenarios

3.0 Baseline Scenario: the Sustainable Programme.

Sustainable Programme for the Restructuring of the Portuguese Debt, 10 July 2014.

The Baseline Scenario, which will be compared with the different proposals, is the "Sustainable Programme", with one notable change: the 2013 GDP was revised upwards (€171.359 billion) by the Portuguese National Statistics Office (INE), which slightly alters all the previously estimated debt ratios to GDP.

The main measures of the programme are:

(1) reduction of the public debt's present value, by reducing interest rates and rescheduling maturities,
(2) restructuring of bank liabilities, through a systemic resolution to ensure banking solvency and stability,
(3) tax modernisation to ensure other means to stimulate economic recovery.

The effects of the measures included in this programme (Baseline Scenario) are: (i) the present value of the general government's non-consolidated gross debt will be reduced to 79% of GDP; (ii) the programme also determines the reduction of the banking system's debt to 24% of bank liabilities (calculated at the end of 2013), resulting in a reduction of the net external debt of the sector by about 30% of GDP; (iii) both measures would lead to an annual reduction of the income account deficit of €4.7 billion and would be translated into an equivalent reduction in the present value of net external debt from 100% (end of 2013) to 23% of GDP.

Therefore, the present value of the consolidated debt, the relevant measure for the Maastricht debt, would be reduced to 71.8% of GDP, while the present value of the debt net of deposits would be reduced to 61.7% of GDP.

The impact of the restructuring of public debt in the domestic banking system would be significant. In fact, according to the Statistical Bulletin of the Bank of Portugal (Annex K), the non-consolidated gross debt of the General Government and the State-owned Enterprise Sector owed to the domestic financial sector was €73.4 billion, at the end of 2013 (Treasury Bills, Treasury Bonds and bank loans, the latter having been mainly granted to Local Administrations and the State-owned Enterprise Sector).

Assuming an implicit interest rate of 3.5%, it is estimated that the General

Government and the State-owned Enterprise Sector currently have €2.57 billion in annual interest payments owed to the financial sector.

After the public debt restructuring, the State would have €734 million in annual interest payments to the financial sector, which would represent a reduction of roughly €1.8 billion in banking revenue.

On the other hand, the reduction in the present value of the debt of the General Government and State-owned Enterprise Sector owed to the banking sector, post-restructuring, would be €40.5 billion (55.2%).

In short, the public debt restructuring would reduce the present value of bank assets by €40.5 billion while reducing the sector's annual revenue by €1.8 billion.

It should be pointed out that the bank resolution proposed in the Programme is larger than what is strictly required because it seeks to restore the solvency of the national banking system (instead of merely responding to the public debt restructuring). It has, however, the advantage of protecting the banking system from new systemic risks by ensuring balance sheet robustness and thereby protecting depositors and restoring confidence in the banking system.

As mentioned in the original report, implementing this programme requires difficult negotiations with creditors, a bank resolution executed with great rigour, and also a number of supplementary measures (which were indicated in the text and in our calculations), such as those aimed at protecting small savers that are holders of Saving Certificates and Treasury Certificates.[7] All of this will be explained below. Other supplementary measures would be designed to guarantee the success of the bank resolution process, including the capitalisation of CGD and other initiatives.

For the reasons laid out in the Sustainable Programme, the main criterion used to assess the impacts of any programme on debt is the measurement of its impact upon the Portuguese external debt.

We will now evaluate the other scenarios.

[7] The protection of Saving Certificates and Treasury Certificates has very significant impacts both in terms of the liquidity of Treasury balances and the requirements of equal treatment among creditors. However, in most countries, this type of investor is treated in a privileged way to institutional investors. On the other hand, it is our understanding that the impact of any requests for the redemption of these Certificates and the functioning of this instrument post-restructuring would be minimised if this debt becomes fully protected from restructuring, also relieving the post-restructuring management of Treasury balances.

3.1 Scenario 1. Debt restructuring, with full protection of Saving Certificates and Treasury Certificates

Terms for Scenario 1

If Saving Certificates and Treasury Certificates are fully protected from the debt restructuring, what is the impact upon the levels of public and external debt and what is the viability of this restructuring programme?

The Baseline Scenario did not define how the Saving Certificates and Treasury Certificates would be restructured, but instead indicated two alternatives and their respective risks, while suggesting a methodology to be adopted to restructure the Certificates and thus protect these investors. However, for the sake of simplicity, the Baseline Scenario calculations did not take the impact for their protection into consideration, applying identical terms for the whole debt restructuring. Here, Scenario 1 puts forward the calculations underpinning the full protection of Saving Certificates and Treasury Certificates.

The protection of Saving Certificates and Treasury Certificates has a very significant impact upon both the liquidity of Treasury balances and the equal treatment among creditors proviso, which were highlighted in the original document. Indeed, this debt represents only 4.4% of the public debt to be restructured. However, it represented 70% of the cash and deposits holdings in late 2013. In other words, the State could fully redeem (amortise) this debt, although this would result in a significant reduction in its cash and deposit holdings. If this occurred, the State would probably be pressurised into immediately returning to the capital markets, in an operation whose success would be uncertain, something that the sustainable programme seeks to avoid in order to secure a successful debt restructuring.

The proposal inherent in Scenario 1 suggests an alternative solution, which appears to offer fewer risks. It involves keeping the existing Saving Certificates and Treasury Certificates and excluding them from the debt restructuring, rather than shortening redemption maturities as suggested in the initial document (40% redemption in 3 years and 60% at the end of 6 years). The aim is to ensure that small investors feel safe enough to keep investing in the Certificates, thus preventing a run to redeem outstanding Certificates.

The problem with differential treatment lies in the fact that other creditors could argue in favour of a breach of the equal treatment proviso, and thereby legally challenge the debt restructuring. In addition, the official sector could also consider that domestic creditors were being protected against non-resident creditors.

However, in most countries, retail investors and small savers are treated in a different way from institutional investors. On the other hand, the impact of any

requests for the redemption of these Certificates and of the functioning of this instrument after restructuring would be minimised if this debt were to be fully protected from restructuring, while at the same time easing the post-restructuring management of Treasury balances

If Saving Certificates and Treasury Certificates were protected from debt restructuring, the face value of the direct State debt subject to debt restructuring would be €192.2 billion (= 204.3 - 12.2).

The non-consolidated gross debt of the General Government and State-owned Enterprise Sector was €286.8 billion, at the end of 2013. If, in addition to deposits, debt to suppliers, factoring and coins, Saving Certificates and Treasury Certificates were not restructured, the face value of the debt to be restructured would be €259.5 billion (= 286.8-15.2 -12.2).

The present value of this debt, after restructuring, would be €115.5 billion. The reduction in the present value of the restructured debt would be 55.3%. Therefore, the present value of the non-consolidated gross debt, post-restructuring would be €142.4 billion (= 115.5 + 15.2 + 11.7), and would represent 83.1% of GDP.

Therefore, the debt restructuring would result in a reduction of €144.4 billion (= 286.8-142.4) in the present value of the non-consolidated gross debt.

It should be noted that part of the gross debt would continue to be held by Public Administration bodies, such that the present value of the consolidated debt of the General Government and the State-owned Enterprise Sector (i.e. the "Maastricht debt" or the "Excessive deficit procedure" debt) would be lower – around €129.3 billion,[8] including General Government deposits (75.5% of GDP).

The present value of the Maastricht public debt net of deposits held by Central Government entities would represent 65.4% of GDP.[9] In other words, the protection of the Saving Certificates and Treasury Certificates in the debt restructuring would result, after restructuring, in a deterioration of around four percentage points in the public debt to GDP ratios. Insofar as we use the Maastricht debt for comparison purposes (as used nowadays), public debt would become 75.5% of GDP, whereas in the original proposal it had been 71.7% of GDP.

[8] The present value, after restructuring, of the Treasury loans and the amounts held by various Central Government funds (e.g. Social Security, the General Pension Fund- *Caixa Geral de Aposentações)* is estimated at €13.1 billion (previously: €29.9 billion).

[9] At the end of 2013, the General Government held around €17.3 billion in deposits, most of which were entrusted to the management of the IGCP (Treasury, €15.3 billion), with the rest being directly deposited in commercial banks.

Table **1**
Comparison between the Baseline Scenario and Scenario 1 (restructuring excluding Saving Certificates and Treasury Certificates)

	Before		After (Baseline Scenario)		After (Scenario 1)	
	(Bn€)	% of GDP	(Bn€)	% of GDP	(Bn€)	% of GDP
General Government and State-owned Enterprise Sector						
Non-consolidated gross debt						
Face value	287	167%	287	167%	287	167%
Present value	285	166%	136	79%	142	83%
Gross external debt						
Face value	148	86%	148	86%	148	86%
Present value	148	86%	67	39%	67	39%
Other Monetary Financial Institutions (OMFIs) resident in Portugal						
Aggregate balance	515	301%	427	249%	427	249%
Equity	51	30%	62	36%	62	36%
Aggregate gross liability, of which	464	271%	365	213%	365	213%
Gross external debt	87	51%	37	22%	37	22%
Debt to the Eurosystem	51	30%	51	30%	51	30%
Portugal						
Gross external debt (face value)	371	217%	320	187%	320	187%
Gross external debt (present value)	371	217%	238	139%	238	139%
Net external debt (present value)	171	100%	39	23%	39	23%

The most important impact of protecting the holders of Saving Certificates and Treasury Certificates would be on the management of Treasury liquidity in the short and medium term, significantly reducing the State's financial cushion. Thus:

- In the public accounts: The consolidated interest expenditure and the budget balance would deteriorate by around €120 million, per year, from 2016 onwards (€240 million in 2015), an amount that would increase as this debt was refinanced in the markets. Nevertheless, the impact on cash flows would be minimal;
- In the Balance Sheet of Other Monetary Financial Institutions (i.e. the national banking system): The public debt restructuring would have an effect identical to the Baseline Scenario, namely a reduction of €40.5 billion in the present value of the assets (the reduction in the market value would be greater) and a reduction of €1.8 billion/year in terms of annual revenues;

- The measure would have no effect on the external balance (current and capital account) since Saving Certificates and Treasury Certificates are held almost exclusively by residents;
- In the refinancing of the public debt stock: the State might need to seek financing in capital markets to repay part of the debt, on a small scale;
- As far as the impact on the sustainability of public debt is concerned: this would amount to roughly 4 percentage points of GDP, so it would not be large enough to call the sustainability of public debt into question.
- As for external debt: level of external debt of the Baseline Scenario would be maintained since that debt is held by residents;
- There would be no direct impact on the current and capital account.

3.2. Scenario 2. Debt restructuring, excluding debt to the official international sector (IMF, ESM, EU).

Terms for Scenario 2

If the debt to the official sector is protected (IMF, ESM, EU), keeping all the other characteristics of the proposed restructuring of debt within the "sustainable programme" (repayments in 10 identical instalments, 1/10 of the face value, between 2045 and 2054, 1% coupon), what is the impact on the levels of public and external debt and what is the viability of this restructuring programme?

The present value of the debt owed to the official sector is estimated, before restructuring and assuming a discount rate of 4%, at €67 billion, at the end of 2013, therefore lower than its face value of €72 billion. Consequently, this Scenario only protects the "Troika loan", while the public debt acquired by the ECB under the Securities Market Programme, estimated at €23 billion, at the end of 2013, will be left unprotected.[10]

If the debt owed to the official sector is protected from the debt restructuring, the face value of direct State debt subject to debt restructuring will be €132.2 billion (=204.3-72.1) and its present value will be equivalent to €137.6 billion (= 204.6-67).

After restructuring, the present value of the current direct State debt will become €125.8 billion, €58.8 billion corresponding to the present value of the restructured direct State debt and €67 billion to the debt owed to the official sector, left unrestructured.

The General Government and the State-owned Enterprise Sector's non-consolidated gross debt was €286.8 billion at the end of 2013. If, in addition to deposits, debt to suppliers, factoring and coins, the debt owed to the official sector is left unrestructured, the face value of the debt to be restructured will be €199.5 billion (= 286.8-15.2 -72.1).

The present value of this debt, after restructuring, would be €88.8 billion. The reduction of the present value of the restructuring debt would be 56.6%, without any change in relation to the initial proposal.[11] Therefore, the present value of the non-consolidated gross debt, post-restructuring, would become €171 billion (=88.8 +15.2 +67), and would represent 100% of GDP.

[10] It is also worth considering that this hypothesis may not be obvious, because in the case of the restructuring of the Greek debt the ECB successfully demanded, in violation of the practices that ensure equal treatment among creditors, that the Greek debt held by the ECB should be excluded from the debt restructuring.

[11] The average reduction in the present value increases from 55.5% to 56.6%, but for each type of debt the reduction of the present value between the original proposal (Baseline Scenario) and Scenario 1 is maintained.

This would mean that the debt restructuring would result in a reduction of €115.8 billion (= 286.8-171) in the present value of the non-consolidated gross debt.

Table **2**
Comparison between the Baseline Scenario and Scenario 2 (restructuring excluding the official sector)

	Before		After (Baseline Scenario)		After (Scenario 2)	
	(Bn€)	% of GDP	(Bn€)	% of GDP	(Bn€)	% of GDP
General Government and State-owned Enterprise Sector						
Non-consolidated gross debt						
Face value	287	167%	287	167%	287	167%
Present value	285	166%	136	79%	171	100%
Gross external debt						
Face value	148	86%	148	86%	148	86%
Present value	148	86%	67	39%	100	58%
Other Monetary Financial Institutions (OMFIs) resident in Portugal						
Aggregate balance	515	301%	427	249%	427	249%
Equity	51	30%	62	36%	62	36%
Aggregate gross liability, of which	464	271%	365	213%	365	213%
Gross external debt	87	51%	37	22%	37	22%
Debt to the Eurosystem	51	30%	51	30%	51	30%
Portugal						
Gross external debt (face value)	371	217%	320	187%	320	187%
Gross external debt (present value)	371	217%	238	139%	272	159%
Net external debt (present value)	171	100%	39	23%	73	43%

It should be pointed out that part of the gross debt would continue to be held by General Government entities, so that the present value of the General Government and State-owned Enterprise Sector's consolidated debt (i.e., the "Maastricht debt" or "Excessive deficit procedure" debt) would be lower – around €157.9 billion,[12] including deposits from the Central Government (92.1%

[12] The present value, after restructuring, of the Treasury loans and the debt securities held by several Central Government funds (e.g. Social Security, the General Pension Fund- *Caixa Geral de Aposentações)* is estimated at €13.1 billion (previously: €29.9 billion). This amount is subtracted from the above amount (€171 billion) to obtain the (simplified) estimate of the General Government's consolidated debt (157.9=171-13.1), the Maastricht debt. It should be noted that, as a result of the methodology adopted for the debt restructuring, the State-owned Enterprise Sector's debt (including the State-owned Enterprise Sector not included within the scope of the

of GDP).

The present value of the Maastricht debt net of deposits would represent 82% of GDP.[13]

In other words, the protection of the official sector from the debt restructuring would result in a deterioration of 21 percentage points in public debt to GDP ratios, after restructuring.

Insofar as we have been using the Maastricht debt for comparison purposes (as is the case at present), the public debt would become 92.1% of GDP, whereas in the original proposal it had been 71% of GDP.

Table **3**
Impact of Scenario 2

	Before (4Q2013)			
	Gross external debt (face value)	Implied gross interest rate (average)	Interest payments	
	(M€)	%	(M€)	(% GDP)
Portugal	370622	2.2%	8139.2	4.7%
General Government	141854	3.7%	5291.2	3.1%
Commercial banking	86759	1.5%	1301.4	0.8%
Bank of Portugal	59565	0.3%	148.9	0.1%
Other sectors	57333	2.0%	1146.7	0.7%
Foreign Direct Investment	25111	1.0%	251.1	0.1%

	After restructuring (1.1.2015)				
	Gross external debt (face value)	Nominal interest rate (post-restructuring)	Interest payments		Annual reduction of interest payments
	(M€)	(%)	(M€)	(% GDP)	(M€)
Portugal	320318	1.5%	4887.3	2.9%	3251.9
General Government	148400	2.0%	2925.0	1.7%	2366.2

General Government's consolidation) becomes direct State debt and, consequently, Maastricht debt.

[13] By the end of 2013, General Government held €17.3 billion in deposits, most of which was entrusted to the management of the IGCP (Treasury, €15.3 billion), while the remainder was directly deposited in commercial banks.

Commercial banking	36509	1.5%	547.6	0.3%	753.8
Bank of Portugal	59565	0.3%	148.9	0.1%	0.0
Other sectors	50733	2.0%	1014.7	0.6%	132.0
Foreign Direct Investment	25111	1.0%	251.1	0.2%	0.0

The impact of the debt restructuring upon the Balance Sheet of Other Monetary Financial Institutions (i.e. the national banking system) would be identical to that of the Baseline Scenario, namely a reduction of €40.5 billion in the present value of banking assets (the reduction in the market value would be greater) and a reduction of €1.8 billion/year in the banking system's annual revenue.

Besides the significant deterioration in the public debt to GDP ratio, the protection of the debt owed to the official sector would have a very significant impact on the viability of the sustainable programme for Portuguese debt restructuring, due to these effects:

- In the public accounts: The consolidated interest payments and the budget balance would deteriorate by at least €1.5 billion per year from 2016 onwards (€2.2 billion in 2015), an amount that would tend to increase as the debt owed to the official sector became refinanced in the markets. In other words, from 2016 onwards, the General Government's annual consolidated interest payments would decrease from €7.9 billion to €4.1 billion while those of the General Government and State-owned Enterprise Sector would decrease from €9.0 billion to €4.1 billion. In relation to the General Government, instead of a reduction of €5.3 billion/year in interest payments, the restructuring would result in a reduction of only €3.8 billion/year. Instead of a small primary balance, the General Government would record a budgetary deficit (of less than 1% of GDP);
- But the effects on the external balance (current and capital accounts) would be even more significant: the annual consolidated interest payments of the General Government and State-owned Enterprise Sector, transferred to non-residents (Income Account) would decrease from €5.3 billion to €2.9 billion annually. In other words, this would result in an external saving of €2.4 billion per year, instead of a saving of €3.9 billion under the Baseline Scenario;
- In the refinancing of the public debt stock: if the debt owed to the official sector was protected from restructuring, the State would need to seek funding in the markets to both amortise the official sector debt (and, in particular, the debt to the IMF that has shorter maturities) and to finance the budget deficit shortly after debt restructuring. This would not be possible and, even if it were possible, it would result in very high interest rates for the new financing. Thus, if the creditors of the official sector are to be protected, Portugal will be obliged to return earlier to the financial markets. If this is not possible, a new external bailout would be required. Under the Baseline Scenario, the State would not have any

financing needs in the short term, while those in the medium term would remain diminished;

- In the case of the sustainability of public debt: after restructuring, the present value of the Maastricht consolidated public debt would represent 92.1% of GDP. Therefore, the level of public debt would still be too high.
- In relation to external debt: after the debt restructuring, the net external debt would become 43% of GDP, and therefore slightly above the threshold considered sustainable for external debt, which may not be sufficient to prevent a further external debt crisis in the short term;
- In relation to the current and capital accounts, the external imbalance would improve as a result of the debt restructuring, reducing their deficit to €3.3 billion (previously €4.7 billion), i.e. 1.9% of GDP (previously 2.7% of GDP).

In conclusion, this format for debt restructuring would not ensure that the public debt would embark on a sustainable path.

3.3. Scenario 3. Restructuring, excluding the international official public sector, with the aim of reducing net external debt to 23% of GDP (the same results obtained through the Baseline Scenario).

Terms for Scenario 3

If the debt to the official sector (IMF, ESM, EU) is protected, what would be the amount of debt owed to the private sector to be restructured in order to achieve a debt relief close to the Baseline scenario (the present value of the Maastricht consolidated debt of 71.8% of GDP and the present value of the consolidated debt, net of deposits, of 61.7% of GDP).
What is the impact on the levels of public and external debt and the viability of the sustainable programme for Portuguese debt restructuring?

In this case, a possible option would be to change the private sector creditors' terms of exchange: the maturities would be extended to 35-44 years (previously: 30 to 39 years) and the debt coupons would be reduced to 0.27% (previously: 1%). In other words, the New Treasury Bonds would be due between 2050 and 2059, while the interest rate would be reduced to 0.27%.

Assuming a discount rate of 4%, the present value of the debt owed to the official sector, before restructuring, is estimated, at €67 billion at the end of 2013, therefore, less than its face value of €72 billion. Consequently, only the debt resulting from the "Troika bail-out" would be protected, while the public debt acquired by the ECB under the Securities Market Programme, estimated at €23 billion, by the end of 2013, would be left unprotected.[14]

The General Government and State-owned Enterprise Sector's non-consolidated gross debt amounted to €286.8 billion at the end of 2013. If, in addition to deposits, debt to suppliers, factoring and coins, the debt to the official sector was left unrestructured, the face value of the debt to be restructured would be €199.5 billion (= 286.8-15.2 -72.1).

The present value of the debt after restructuring would be €53.2 billion. The reduction of the present value of the debt to be restructured would be 73.3% (previously: 56.6%). Therefore, the present value of the non-consolidated gross debt, after restructuring, would become €135.4 billion (= 53.2+ 15.2 +67), and would represent 79% of GDP.

[14] This hypothesis would not be viable, because, in the case of the restructuring of the Greek debt, the ECB successfully demanded, in violation of the practices that ensure equal treatment among creditors, that the Greek debt held by the ECB should not be restructured. In this case, the restructuring of the public debt held by private sector and national public creditors would experience an even greater write-off in its present value. This means that, the maturity extension would have to be even longer and the new interest rate lower than 0.27%.

This would mean that the debt restructuring would result in a reduction of €151.4 billion (=286.8-135.4) in the present value of the non-consolidated gross debt.

It should be pointed out that part of the gross public debt (€29.9 billion) is held by General Government entities. The present value of this debt, after restructuring, would be €8 billion (in the Baseline Scenario: €13.1 billion). As a result, the present value of the General Government and State-owned Enterprise Sector's consolidated debt (i.e. the "Maastricht debt" or "Excessive deficit procedure" debt), after restructuring, would be around €127.4 billion (=135.4-8.0), and would represent 74.3% of GDP, 2.5 percentage points above the results achieved through the initial proposal (Baseline Scenario).

The present value of the Maastricht public debt net of deposits would represent 64.2% of GDP. In other words, the protection of the debt owed to the official sector would result in a massive increase in the losses incurred by both private creditors and State institutions (which would suffer losses in their present value that were €5 billion greater than those resulting from the Baseline Scenario). In present value terms, both private and public sector investors instead of recovering 44.8% of the outstanding amount, would only recover 26.7%, holding losses of 73.3%.

Table **4**
Comparison between the Baseline Scenario and Scenario 3

	Before		After (Baseline Scenario)		After (Scenario 3)	
	(Bn€)	% of GDP	(Bn€)	% of GDP	(Bn€)	% of GDP
General Government and State-owned Enterprise Sector						
Non-consolidated gross debt						
Face value	287	167%	287	167%	287	167%
Present value	285	166%	136	79%	135	79%
Gross external debt						
Face value	148	86%	148	86%	148	86%
Present value	148	86%	67	39%	87	51%
Other Monetary Financial Institutions (OMFIs) resident in Portugal						
Aggregate balance	515	301%	427	249%	427	249%
Equity	51	30%	62	36%	62	36%
Aggregate gross liability, of which	464	271%	365	213%	365	213%
Gross external debt	87	51%	37	22%	37	22%
Debt to the Eurosystem	51	30%	51	30%	51	30%
Portugal						
Gross external debt (face value)	371	217%	320	187%	320	187%
Gross external debt (present value)	371	217%	238	139%	258	151%

Net external debt (present value)	171	100%	39	23%	59	34%

The protection of the public debt held by the ECB would result in even greater losses.

Consequently, the impact of the public debt restructuring upon the Balance Sheet of Other Monetary Financial Institutions (i.e. the national banking system) would be heavier than the Baseline Scenario, leading to a reduction of €53.8 billion (Baseline Scenario: €40.5 billion) in the present value of the bank assets (the reduction of the market value would be greater) and a reduction of €2.37 billion/year (Baseline Scenario: €1.8 billion/year) in the annual income of the banking system.

In addition to the significant deterioration in the value of the public debt held by private creditors, the protection of the debt to the official sector would have a very significant impact upon the viability of the sustainable programme for Portuguese debt restructuring, due to its effects:

- In the public accounts: the impact would be minimal. The consolidated interest payments and the budget balance would deteriorate by €2.2 billion in 2015 (interest paid on the debt owed to the official sector) and by a negligible amount from 2016 onwards, an amount that would tend to grow once the official sector debt became refinanced in capital markets. In other words, from 2016 onwards, the General Government's annual consolidated interest payments would decrease from €7.9 billion to €2.7 billion, while the General Government and State-owned Enterprise Sector's interest payments would decrease from €9.0 billion to €2.7 billion. In other words, from 2016 onwards, reductions in interest payments would be very similar to the original proposal (Baseline Scenario), but would tend to decrease as the debt became refinanced;
- In the Balance Sheet of Other Monetary Financial Institutions (i.e. the national banking system): The public debt restructuring impact would be worse than the Baseline Scenario with a reduction of €53.8 billion in the present value of the banking assets (the reduction of the market value would be greater) and a reduction of €2.37 billion/year in the banking system's annual revenue;
- But the effects upon the external balance (current and capital accounts) would be even more significant: the General Government and State-owned Enterprise Sector's annual interest payments transferred to non-residents (Income Account) would decrease annually from €5.3 billion to €2.4 billion. In other words, there would be an external saving of €2.9 billion per year, instead of the saving of €3.9 billion in the "sustainable programme" (Baseline Scenario);
- In the refinancing of the public debt stock: if the debt owed to the official sector was protected from restructuring, the State would need to seek funding in the markets to both amortise the official sector debt (and, in particular, the debt to the IMF that has shorter maturities) and to finance its budget deficit, shortly after debt restructuring. This would not be possible and, even if it were possible, it would result in very high

interest rates for the new financing. Thus, if the creditors of the official sector were to be protected, Portugal would be obliged to return earlier to the financial markets. If this were not possible, a new external bailout would be required. Under the Baseline Scenario, the State would not have any financing needs in the short term, while those in the medium term would remain diminished;

- In the case of the impact on the sustainability of public debt: after restructuring, the present value of the Maastricht consolidated public debt would represent 74.3% of GDP, very similar to the original proposal (Baseline Scenario), thus ensuring that the debt would be following a sustainable trajectory. However, the present value of the public debt held by non-residents would represent 51% of GDP;
- In relation to external debt: after restructuring, the net external debt would be 34% of GDP;
- The current and capital accounts would improve as a result of the debt restructuring. The external imbalance would be reduced to €3.8 billion (previously €4.7 billion), i.e. 2.2% of GDP (previously 2.7% of GDP).

In this scenario, the external borrowing requirements make the programme vulnerable, making it difficult to establish a trajectory that will bring an end to the protectorate situation that Portugal now faces.

3.4. Scenario 4. Reduction of outstanding capital, with higher interest rates and maturities shorter than in the Baseline Scenario

Terms for Scenario 4

Several economists have argued for a debt restructuring that reduces the outstanding amount by imposing capital haircuts while preserving higher interest rates (which would become 2%) and shorter maturities instead of the proposed debt restructuring, based on the extension of maturities and the reduction of the interest rate.

In this scenario, it is considered that the debt restructuring would result in an exchange offer for New Treasury Bonds with an identical face value of 1/10 of the original face value, maturities between 5 and 9 years (falling due between these dates), with a 2% coupon and a grace period in 2015. Only the debt due between 2020 and 2024 would be subject to the debt restructuring while avoiding the bank resolution process. The debt owed to the official sector would be included in the debt restructuring.

What is the impact on the levels of public and external debt and the viability of the sustainable programme for Portuguese debt restructuring?

The General Government and State-owned Enterprise Sector's non-consolidated gross debt was €286.8 billion at the end of 2013. The protection of deposits, debt to suppliers, factoring and coins, would reduce the face value of the debt to be restructured to €271.6 billion (= 286.8-15.2).

In the simulation of Scenario 4, determined by a 50% haircut of the face value of the outstanding capital, with a 2% coupon reduction and an extension of maturities,[15] the present value of the debt after restructuring would decrease to €119.6 billion. The reduction in the present value achieved with the debt restructuring would be 55.6%. Therefore, the present value of the non-consolidated gross debt, after restructuring would be €134.8 billion (= 119.6+15.2), representing 79% of GDP.

[15] This Scenario, along with the others, is defined by the authors, since no concrete proposal has been submitted by any of its proponents. As a safety measure, we are proposing a reduction of 50% in the face value of outstanding capital, which would correspond to 3 to 6 times more than the value referred to in the various suggestions for the elimination of what has until now been considered "illegitimate debt". This would include expenditure resulting from any possible corruption, such as the purchase of submarines, the interest rate differential between the Troika's loan and the interest rate bearable by the economy, the rents transfer underpinning the implicit interest rate excess in public-private partnership contracts, and other expenses).

This would mean that the debt restructuring would result in a reduction of roughly €152 billion (=286.8-134.8) in the present value of the non-consolidated gross debt.

It is worth pointing out that part of the gross public debt (€29.9 billion) is held by General Government entities. The present value of this debt, after restructuring, would be €13.2 billion (in the Baseline Scenario: €13.1 billion). As a result, after restructuring, the present value of the General Government and State-owned Enterprise Sector's consolidated debt (i.e. the "Maastricht debt" or the "Excessive deficit procedure" debt) would be around €121.6 billion (=134.8-13.2), and would represent 71% of GDP (similar to the Baseline Scenario).

The present value of the Maastricht public debt net of deposits would amount to 61% of GDP.

In other words, it would be possible to design a public debt restructuring based on a 50% haircut in the outstanding amount of the debt, a coupon reduction to 2% and a maturity rescheduling that would lead to a reduction in the present value of the public debt identical to the reduction estimated in the initial proposal (Baseline Scenario).

Indeed, according to the Statistical Bulletin of the Bank of Portugal (Annex K), the General Government and State-owned Enterprise Sector's non-consolidated gross debt owed to the domestic financial sector was €73.4 billion at the end of 2013 (Treasury Bills, Treasury Bonds and bank loans, with the latter mainly resulting from Local Administrations and the State-owned Enterprise Sector).

Assuming an implicit interest rate of 3.5%, the General Government and State-owned Enterprise Sector's interest payments to the financial sector are estimated at €2.57 billion per year.

According to the framework defined in Scenario 4, the State would pay the financial sector €734 million per year in interest payments after the public debt restructuring, which would represent a reduction of €1.8 billion in banking revenue.

On the other hand, the reduction in the present value of the General Government and State-owned Enterprise Sector's debt to the banking system, after restructuring, would be €41.1 billion (56%), a value that is slightly higher than that of the Baseline Scenario (€40.5 billion).

As a result, the impact of the public debt restructuring on the Balance Sheet of Other Monetary Financial Institutions (i.e. the national banking system) would be very similar to the Baseline Scenario, leading to a reduction of €41.1 billion (Baseline Scenario: €40.5 billion) in the present value of the bank assets and a reduction of €1.8 billion/year in terms of the banking system's annual revenue (Baseline Scenario: €1.8 billion/year).

However, the reduction in the debt market value would probably be much

greater than that amount. Indeed, for a significant part of the public debt owed to the banking system, accounting rules require that banks record this debt in their accounts at market value. Therefore, the market value reduction of the banks' assets would probably be greater than the 56% reduction in the present value.

It is assumed that the reduction in the market value of government securities, after restructuring, would be 75% of their original face value. If so, the banks would see the market value of their claims – upon the General Government and the State-owned Enterprise Sector – deteriorate by €55 billion (Baseline Scenario: €55 billion).

Table 5
Effects of Scenario 4

	Before		After (Baseline Scenario)		After (Scenario 4)	
	(Bn€)	% of GDP	(Bn€)	% of GDP	(Bn€)	% of GDP
General Government and State-owned Enterprise Sector						
Non-consolidated gross debt						
Face value	287	167%	287	167%	151	88%
Present value	285	166%	136	79%	135	79%
Gross external debt						
Face value	148	86%	148	86%	74	43%
Present value	148	86%	67	39%	65	38%
Other Monetary Financial Institutions (OMFIs) resident in Portugal						
Aggregate balance	515	301%	427	249%	460	268%
Equity	51	30%	62	36%	-4	-2%
Aggregate gross liability, of which	464	271%	365	213%	464	271%
Gross external debt	87	51%	37	22%	87	51%
Debt to the Eurosystem	51	30%	51	30%	51	30%
Portugal						
Gross external debt (face value)	371	217%	320	187%	267	156%
Gross external debt (present value)	371	217%	238	139%	288	168%
Net external debt (present value)	171	100%	39	23%	88	51%

Considering that Scenario 4 does not include a bank resolution, the value of the banks' assets and their aggregated balance sheet would fall by €55 billion. The negative equity would require a massive recapitalisation of the banking system (over €50 billion).

The change in the debt restructuring framework would have a very significant impact on the viability of the sustainable programme for the restructuring of Portuguese debt:

- The most significant impact would take place in the refinancing of the public debt stock rescheduled to occur between 2020 and until 2024. Annual borrowing requirements would be estimated at €27.2 billion a few years after the debt default, a source of pressure similarly affecting both the private and the official sectors. It is not believable that the State could refinance this amount of debt on its own. A further default would be the most likely scenario, soon after the debt restructuring;
- The impact on the public accounts would initially be minimal. The consolidated interest payments and the budget balance would be identical to the Baseline Scenario between 2015 and 2019. However, from 2020 onwards, these would be likely to increase in an accelerated manner, insofar as the official sector debt would be refinanced in the markets. This means that, from 2016 onwards, the annual consolidated interest payment of the General Government would decrease from around €7.9 billion to €2.7 billion, while the General Government and State-owned Enterprise Sector's interest payments would decrease from €9.0 billion to €2.7 billion. In other words, the reductions in interest payments would be identical to those set out in the original proposal (Baseline Scenario), but would tend to decrease as the debt becomes refinanced;
- In the case of the current and capital accounts, the external imbalance improvement resulting from the debt restructuring would amount to €4.7 billion (previously €4.7 billion), i.e. 2.7% of GDP (previously 2.7% of GDP).

Whilst all proposals involve negotiation and enter into conflict with the interests of creditors, this is certainly one of the most difficult scenarios of them all because it imposes a face value haircut of 50% of the capital, in order to achieve results comparable to the Baseline Scenario. Even so, as can be seen in the table, instead of achieving a net external debt of 23% of GDP (Baseline Scenario), this methodology only reduces the net external debt to 51%, a figure that still remains unsustainable.

3.5. Scenario 5. Juncker Plan and Non-Juncker Plan: European financing instead of debt restructuring

Terms for Scenario 5

Some economists and politicians argue that a new non-refundable investment programme with a European scope could represent an alternative to debt restructuring, which could have unforeseeable consequences.

Jean Claude Juncker, the president of the European Commission, proposed a "public-private" investment plan worth €315 billion, lasting for three years and financed by existing funds (from the European Union) provided by European Investment Bank (EIB) loans, and predominantly by the private sector. The goals of the programme would be the creation of jobs for young people, economic growth stimulation and "European re-industrialisation". The European rules on budgetary discipline (e.g. the budgetary pact) would be maintained.

What would be the impact of this type of programme on the levels of public and external debt?

If a European investment programme suitable for the current needs of the economy was established, the key to such a programme would be the "new" money component of the programme, i.e. money over and above what has already been budgeted if nothing is done. On the other hand, the private money component of the programme should become less important. Indeed, it is only possible to mobilise private funds at a scalable level if public investment is such that it is able to provide guaranteed returns for the private sector. Such an incentive would result in a crowding out effect, with the substitution of private investment, which would be carried out even if the public investment programme did not go ahead.

However, the public funds set aside for the investment programme are radically less than the €315 billion announced and correspond to the anticipation of a private investment front-loading that nothing suggests would actually happen – and, if it occurred, it would only increase the external public debt of the beneficiary Member-States.

Moreover, the financial engineering programme proposed by Juncker is based on a much reduced level of European funding, using the Union Budget, without the reinforcement of budgeted funds (€16 billion[16]), bringing in the EIB with a

[16] Achieved by adding a guarantee of €8 billion to the €8 billion already budgeted for.

budget of €5 billion, and leveraging it to 15/1[17]. None of this financial engeneering is supported by any recent or past evidence, nor does it correspond to a reasonable expectation for private investment.

In order to calculate its impact, we do, however, assume a different scenario, a "non-Juncker plan", studying what would happen even if €300 billion corresponded in total to new non-refundable public monies. The "non-Juncker plan" assumes that the funds stem from the printing of new euros by the European Central Bank (a perpetual debt, with a 0% interest rate), instead of new funding in the capital markets (a debt with an interest rate higher than 0% and a finite maturity), as further funding would directly result in an increase of the public spending on debt (or indirectly via the European Commission's Budget).

Therefore, we assume that the "non-Juncker plan" creates €300 billion in funds through the issue of money, corresponding to €100 billion per year. The subsequent question is: what would determine the distribution of funds among eurozone member-states? If the programme was well structured, then the funds would be allocated to the areas with the greatest recession and those with higher unemployment would benefit from more funds. This would benefit countries like Portugal. But given the political nature of the eurozone and its economic governance, it is highly unlikely that this will occur. It is more likely that the funds would be allocated on the basis of the region's GDP. Thus, it is assumed in the calculations below that Portugal would receive 1.7% of the funds, as it represents 1.7% of the GDP of the eurozone. In fact, the Commission stated that the criteria for the approval of investment proposals would be their quality, without caring about national quotas, thus reserving for itself a single decision-making power. Not being able to anticipate the results of that scrutiny, we assume that the proportion of projects approved for Portugal would be 1/15, for the purpose of simulating its impacts.

In summary, such a programme could result in transfers to Portugal of €1.7 billion per year (1.0% of the Portuguese GDP) for three years, assuming that this represents non-refundable investment. It is further assumed that these funds are for private and public applications, i.e. that they result in an equivalent improvement in the current and capital accounts. The present value of such payments to Portugal (assuming a 4% discount rate) is €4.9 billion. In other words, it would be equivalent to a reduction in the net external debt of €4.9 billion (2.8% of GDP), which would be marginally reduced from 100% to 97% of GDP.

In contrast, the *Sustainable Programme for the Restructuring of the Portuguese Debt* (Baseline Scenario) would result in a permanent improvement in the Portuguese current and capital accounts of €4.7 billion per year (a reduction of interest payments in the income account). The value of this improvement in the net external debt of Portugal would be €117.5 billion (68.6% of GDP).

[17] If we consider the funds actually advanced to the European Fund for Strategic Investment, €8 billion from the Commission and €5 billion from the EIB, this multiplier effect is 30/1; however, if we consider only the Commission's efforts, the contribution is diluted to 40/1.

This means that impact of the “non-Juncker” investment programme would represent 4.2% (= €4.9 billion/€117.5 billion) of the impact of the "sustainable programme" proposed by the authors and, therefore, would not have the scale required to change the dynamics of the external (and domestic) debt and thus to breach the country’s current constraints and economic dependence.

Moreover, in the Sustainable Programme, the State would directly benefit from the debt restructuring, by reducing the consolidated General government and State-owned Enterprise Sector’s interest payments, on a yearly basis, by €6.3 billion (3.7% of GDP). These payments would have a present value of €157.5 billion (91.9% of GDP), while the “non-Juncker” investment programme would have a negligible impact on the public accounts, at best. Debt restructuring is always essential to the correction of the structural problems of both the public accounts and the Portuguese economy.

The Juncker programme would not apparently have an effect on the Balance Sheet of Other Monetary Financial Institutions (i.e. the national banking system), given that the public debt would not be restructured.

In conclusion, even in its most beneficial form, the European investment programme, if implemented on the scale proposed by Juncker and if able to mobilise the private funds that represent the bulk of its financing, is not enough to change the Portuguese debt dynamics. The European investment programme would have to be implemented on a scale that is 24 times larger (= €117.5 billion/€4.9 billion) to have an impact similar to the sustainable programme proposed here.

3.6. Scenario 6. "Draghi Plan": Public debt monetisation ("Quantitative Easing")

Terms for Scenario 6

The ECB announced that it is studying a plan that would aim to expand its balance sheet by €1 trillion. Initially, it was envisaged that up to €400 billion of this amount was intended to be used for 4-year loans for banking, while the rest would be used to purchase private debt. But many authors[18] have argued that Draghi's goal is nothing less than the monetisation of public debt and that the programme could begin to be implemented by early 2015. In this scenario, it is assumed that Mario Draghi is able, with the support of the majority of the ECB Governing Council, to initiate a public debt monetisation programme on the scale of €1 trillion (€1T).

What is the impact of this type of programme on the levels of public and external debt? Is it the case that such a programme would be enough to avoid debt restructuring?

Many economists believe that the euro crisis can only be resolved by starting an ECB-led debt monetisation programme. In this section we analyse the effects of such a programme upon Portugal's public and external debt, while comparing its impact with that of the sustainable programme for the restructuring of the Portuguese debt.

It is assumed that the ECB would acquire €1 trillion of government debt securities of the eurozone Member State in the secondary market, proportional to the adjusted percentage of the ECB's capital for each national central bank ("adjusted capital key").

Only the direct effect [19] of public debt purchases in reducing interest payments is considered, and it is assumed that these purchases would be permanent, i.e. the acquired public debt would remain forever on the ECB's balance sheet, which means that, when the public debt reached maturity, the ECB would undertake new debt purchases.

The ECB Statutes prohibit direct purchases of government debt. In other words, the ECB would not be able to buy debt directly on the primary market. Therefore the ECB could see itself forced to buy this debt on the secondary market, at a higher price in theory than it would attain on the primary public debt market,

[18] http://www.ft.com/intl/cms/s/63384466-344f-11e4-b81c-00144feabdc0,Authorised=false.html?_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2F63384466-344f-11e4-b81c-00144feabdc0.html%3Fsiteedition%3Duk&siteedition=uk&_i_referer=#axzz3CYfYjHk3.

[19] Paragraph introduced in the document on 30/12/2014. See also footnote 21.

since the financial intermediaries (banks) would, naturally and obviously, obtain a financial margin. It is assumed that this interest differential would be 1.5% on average.

The adjusted percentage of the ECB capital held by the Bank of Portugal has been 2.49% since January 2014. Therefore, from the financial envelope of €1 trillion earmarked for the "Draghi Plan", it is assumed that 2.49% would be for the purchase of Portuguese public debt. As a result, in practice, the "Draghi Plan" would be equivalent to an acquisition of €24.52 (= €1trillion*98.52%*2.49%) of Portuguese government debt on the primary market, marginally above the purchases of bonds acquired on the secondary market under the Securities Market Programme (SMP) closed in 2012.[20]

It is assumed that the average interest rate for this debt (which would be particularly long-term) is 4%.[21]The State's interest payment on this debt would be estimated, yearly, at €980.8 million.

Under the current rules, the ECB would retain 20% of the amount deriving from the debt monetisation programme, while distributing the other 80% to the system of National Central Banks according to the adjusted capital key.

However, Portugal's public debt interest rate is higher than that of Germany's debt, for example (and greater than most of the public debts of the eurozone). As such, the question can be posed as to whether adjustments should be made or not.[22] In this scenario, it is assumed that such an adjustment would not take

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[20] The SMP acquired about €23 billion of OTs (Portuguese Government bonds), with an average maturity of 4 years at their peak. At the end of 2014, the OTs in the ECB's SMP portfolio amount to approximately €15 billion.

[21] Although the indirect effect of public debt purchases by the ECB (deriving from the (psychological) impact on the markets of these public debt purchases in reducing the average interest rate on public debt) is significant, this aspect is not considered in this simulation. This is because, in the Portuguese case, the ECB programme seeks to buy €24.9 billion of Portuguese public debt. However, by 2014, the official international sector's holdings came to about €100 billion of the Portuguese public debt. Therefore, it is assumed that future purchases of €24.9 billion of the Portuguese public debt would help to reduce the average interest rate on public debt from 2015 onwards by an amount equivalent to the official sector disbursements and the SMP secondary market purchases occurring between 2010 and 2014. In other words, the net effect of the ECB's public debt acquisition would prevent the average interest rate from rising from 2015 onwards, but would not contribute to a further reduction in the average interest rate charged on the Portuguese public debt. This footnote was introduced into the document on 30/12/2014.

[22] In a country with its own currency, the Central Bank buys government debt by issuing new currency for this effect. The Government pays interest on this debt to the Central Bank. And the Central Bank registers that interest as profit and pays that profit in the form of dividends to the Government. As such, from the point of view of public accounts, the net interest payments on this public debt may in theory become nil. In the eurozone, the situation is complicated because the ECB retains 20% of its reserves, and because the public debt interest rates among the different countries are not even. Thus, if the average interest rate for long-term monetised debt was 4% in the Portuguese case and 1% in the German case, then the net interest payments on the monetised Portuguese public debt would be positive, while the net interest payment on the monetised German public debt would be negative (in contrast to the scenario of a country with its own currency, with nil net interest payments).

place and the Bank of Portugal would return 50% of the amount of its interest payments in the form of dividends. This is an optimistic estimate, given the current prevailing framework.

Assuming a 4% discount rate, the programme of debt monetisation would therefore be equivalent to a reduction in the present value of the country's external debt of €12.2 billion (7.1% of GDP in 2013) and an identical reduction in the present value of the public debt.

Table **6**
Comparison between the Baseline Scenario and Scenario 6 ("Draghi Plan" to monetise €1 trillion in public debt)

	Before		After (Baseline Scenario)		After (Scenario 6)	
	(Bn€)	% of GDP	(Bn€)	% of GDP	(Bn€)	% of GDP
General government and State-owned Enterprise Sector						
Non-consolidated gross debt						
Face value	287	167%	287	167%	287	167%
Present value	285	166%	136	79%	273	159%
Gross external debt						
Face value	148	86%	148	86%	148	86%
Present value	148	86%	67	39%	136	79%
Other Monetary Financial Institutions (OMFIs) resident in Portugal						
Aggregate balance	515	301%	427	249%	515	301%
Equity	51	30%	62	36%	51	30%
Aggregate gross liability, of which	464	271%	365	213%	464	271%
Gross external debt	87	51%	37	22%	87	51%
Debt to the Eurosystem	51	30%	51	30%	51	30%
Portugal						
Gross external debt (face value)	371	217%	320	187%	371	217%
Gross external debt (present value)	371	217%	238	139%	359	210%
Net external debt (present value)	171	100%	39	23%	159	93%

Therefore, it is possible to register a slight reduction in the present value of both the non-consolidated gross debt and the gross external debt of both the General Government and the State-owned Enterprise Sector and overall for Portugal. In summary, Portuguese debt restructuring would always be required, even if the ECB were able to trigger a large-scale debt monetisation plan, as urgently required for the sustainability of the eurozone.

4. Conclusion

Throughout this report, we have used the same criteria and methodologies as we developed for the Sustainable Programme for Restructuring the Portuguese debt, indicating the goals, instruments and calculations underlying the conclusions presented in each scenario.

As such, we have explored various alternatives that have been suggested publicly, although none of them has actually materialised in the form of a concrete proposal. The following table shows the main conclusions for each scenario.

Table **7**
Comparison between the results of the various scenarios

Scenarios	Conditions	Net external debt Portugal (% GDP)	Maastricht Public debt	Income account	GG Gross ext. debt (% GDP)
Baseline Scenario	Sustainable Programme: 1% interest, holds face value, and amortising schedule spanned 45-54, with a systemic bank resolution	23%	71.7%	Income account reduction: €4.7 bn/year	39%
Scenario 1	Saving Certificates and Treasury Certificates are excluded from restructuring; other debt restructured following the Baseline Scenario	23%	75.5%	Deficit reduction of €4.7 bn/year	39%
Scenario 2	Restructuring without official sector or banking debt	43%	92.1%	Deficit reduction of €3.3 bn/year	58%
Scenario 3	Restructuring as in the Baseline Scenario, without official sector or banking debt (but 0.27% interest and a 2050-9 amortising schedule)	34%	74.3%	Deficit reduction of €3.8 bn/year	51%
Scenario 4	Restructuring of 50% of the capital, with 2% interest and a 2020-24 amortising schedule	51%	71%	Equal to the Baseline Scenario	38%
Scenario 5	"Non-Juncker" Plan, public financing of investment	97%	~130%	Reduction of €1.7 bn/year for 3 years	~86%
Scenario 6	"Draghi Plan" Monetisation of €1T of	93%	~123%	€490 M/year (and identical	~79%

	public debt for the eurozone (€24.9 bn of Portuguese public debt)			reduction in public interest payments)	

Other differences between the Baseline Scenario and the subsequent scenarios result from the fact that the former do not resort to external financing for the purposes of the restructuring programme, whereas this funding is always necessary in the other cases, as described above.

In addition, using our most important criterion, the evolution of net external debt, and comparing this with the 23% achieved by the Baseline Scenario and Scenario 1, the remaining scenarios are unsatisfactory. Thus, Scenario 2 determines a net external debt of 43%, Scenario 3, which is closed to the established target of 34%, Scenario 4, 51%, and Scenario 5, 97%. Overall, they all maintain Portugal's current condition of dependency and its condition as a protectorate. We believe that none of the alternative scenarios address the banking system excessive debt burden.

As far as the evolution of the general government's gross external debt is concerned, the alternative scenarios (compared with the 39% achieved by the Baseline Scenario and Scenario 1) reach identical values to those found in the case of Scenario 4, which imposes a 50% haircut upon the face value of the outstanding principal, but are higher in other cases (58%, 51% and 83%, respectively, in Scenarios 2, 3 and 5)

It was also found that the Scenario that most distinguished itself from the others was the Juncker Plan. Even simulating the most generous conditions that this plan could have adopted, yet rejected (what we designated as the Non-Juncker Plan, where the monetary issuance fully refinances investment), the effect on deficit reduction would be marginal and the effect on the Maastricht public debt would be nil. In contrast, the privately funded Juncker Plan, would increase the Maastricht debt.

Finally, the "Draghi Plan", which meets the eurozone sustainability requirements, but whose conditions for approval may be jeopardised due to German resistance, would lead to a monetary issue on a large scale. Nevertheless, the impact of this operation upon Portugal's external debt would be reduced, not overcoming the required debt restructuring.

All of these scenarios have an impact on banks' balance sheets. The only scenario that we have not considered – doing nothing – would equally have a colossal impact, because it would maintain uncertainty regarding the systemic risk to the banking sector, which is the worst of all alternatives.

It should be added that the successive collapses or banking crises (BCP, BPN, BPP, BES) and the need for public recapitalisation of the other major banks) has demonstrated the thesis argued in the *Sustainable Programme,* according to

which a systemic correction is necessary to protect confidence in the banking sector and restore the credibility of its operations.

The following table summarises these impacts and the solutions presented:

Table **8**
Direct effects of the restructuring of public debt on the banking system

Scenarios	Impact on the present value of Public debt owed to resident banks	Impact on the public debt's annual interest payments to banks	Reduction of the aggregated balance sheet	Problems and Solutions
Baseline Scenario	€40.5 bilion	€1.8 bn	17.1%	Systemic bank resolution to protect the banks' balance sheets, without the need for recapitalisation from private banking
Scenario 1	Identical to Baseline Scenario	€1.8 billion	17.1%	idem
Scenario 2	Identical to Baseline Scenario	€1.8 billion	17.1%	If this is not resolved, it will be necessary to recapitalise at least €51.5 billion
Scenario 3	€53.8 billion	€2.37 billion	17.1%	If this is not resolved, it will be necessary to recapitalise at least €64.8 billion
Scenario 4	€41.1 billion	€1.8 billion	10.7%	If this is not resolved, it will be necessary to recapitalise at least €52.2 billion
Scenario 5	=	=	=	=
Scenario 6	=	=	=	=

Scenarios 2, 3 and 4 assume that no bank resolution is carried out. But the national banking system recorded major losses due to the public debt restructuring and would have to be recapitalised otherwise, it would not meet its capital requirements and probably would collapse.

In the Sustainable Programme (baseline scenario) the banking recapitalization – improvement of shareholders' equity – undertaken through the banking resolution would be greater than the losses from the public debt restructuring. Indeed the losses were estimated in €40.5 billion and the total recapitalization (through the banking resolution) would be €116 billion worth, leaving the Portuguese banking system with €62 billion in equity. Table 8 shows the banking recapitalization for scenarios 2,3 and 4, which do not include any

banking resolution, required to ensure identical equity of €62 billion (nevertheless with weaker balance sheets).

It should be noted that the State would not be able to gather funds enough to recapitalise the banking system. The State would only be able to recapitalise the banking system if new government securities were issued and these were accepted by the ECB in its overnight liquidity facilities. But such a methodology would result in the complete nationalisation of Portuguese banking and a concomitant increase in public debt ratios and external debt (to over 45% of GDP). It should be added that, in a previous case (the recapitalisation of Bankia in Spain), the ECB considered that this methodology would be a form of public debt monetisation, thereby opposing this banking recapitalisation methodology. In short, Scenarios 2, 3 and 4 do not ensure the stability and viability of the national banking system.[23] In the case of Scenarios 5 and 6, there is no direct impact on the banking system's balance sheets.

The effects on the banking system should be considered for two main reasons. Firstly, because the banks receive deposits as saving and great confidence must be preserved with regard to their stability. Moreover, successive cases involving banking crises or bankruptcy (BCP, BPN, BPP, BES) or the need to recapitalise banks (BPI, BCP, Banif, CGD) highlight the importance of a correction in the banks' balance sheets. As we argued in the Sustainable Programme, a healthy banking system cannot depend on ECB overnight liquidity facility. A sound balance sheet less dependent on liquidity is a necessary condition for the recovery of confidence, while correcting the distortions and systemic risks of Portuguese banks. Secondly, the scenarios that do not include the systemic bank resolution have to result in recapitalisation, which must also be refinanced. Indeed, if the debt restructuring seeks to avoid a protectorate situation, this liquidity insufficiency is both important and threatening.

Similarly, doing nothing, or only acting in the short term with regard to the banking system, as has occurred, maintains the same degree of systemic risk or even accentuates it, as the delay in resolving the BES situation has clearly demonstrated.

After comparing all other scenarios with the Sustainable Programme, our main conclusion is that, in order to simultaneously meet the goals and obtain the margins of freedom and choice generated by the Baseline Scenario (or in Scenario 1, adapting the Baseline Scenario to include financial calculations to support Saving Certificates and Treasury Certificates), the other restructuring processes are unsustainable and would require further amendments.

[23] Corrections to the banking recapitalization of Scenario 2, 3, and 4 and addition of three new paragraphs (immediately after table 8), introduced into the document on 30.12.2014,