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The Redenomination Risk of Eurozone Exit for Greece

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THE PERSISTENT SPECTRE OF EMU[1] EXIT

The prospect of currency redenomination emerged in the course of the Eurozone crisis and the most likely candidate was Greece as it confronted the prospect of exit in the midst of a tremendous depression in 2010-2013.[2] A form of stability has since returned to the Greek economy, but growth has been practically non-existent and there is no realistic prospect of rapid acceleration. The option of exit also emerged at the margins of policy debate for other peripheral countries. Despite the recent recovery of the Eurozone, the longer-term viability of the common currency remains highly uncertain, and the prospect of exit for both peripheral and core countries has to be calmly analysed.

An important aspect of exit is currency redenomination followed by depreciation or appreciation. Its implications can be thought of as a "balance sheet effect" altering the wealth of economic agents and giving rise to "redenomination risk". This risk is estimated below for Greece. The method followed and the conclusions drawn are also applicable to other EMU countries.[3]

REDENOMINATION RISK

The basic steps of exiting the EMU and reintroducing a new currency have been discussed elsewhere.[4] For our purposes, the trigger of an exit would probably be an Act of the Greek Parliament reasserting monetary sovereignty and redefining the unit of account under the *Lex Monetae*. The legal tender of the country would become the New Drachma, replacing the euro.

It is sufficient to assume that the Greek state would declare an obligatory rate of conversion of the new for the old legal tender at 1:1 EUR/GRD.[5] Conversion would apply to contracts falling under Greek law, but not to others. Unfortunately, the grey area between the two is substantial, and thus persistent litigation could be expected for a long time after the currency switch. It is probable, for instance, that the bulk of wage and salary contracts would fall under Greek law, but financial assets would generally be under both Greek and foreign law, as would be financial liabilities. Thus, a proportion of both assets and liabilities would be impossible to convert and would remain in euro. This is the source of the redenomination risk, arising in particular as the New Drachma is likely to depreciate.

The basic method for estimating the redenomination risk has been proposed by Nordvig and Firoozye (2012) and Nordvig (2014). For our purposes, it has been further developed by Durand and Villemot (2016). Moreover, important methodological insights can be obtained from Minenna et al. (2017), particularly with reference to Italian public debt. In this paper, the risk is estimated by identifying and summing up balance sheet entries that are not expected to fall under Greek law, thus remaining in euro on both the liability and the asset side. The difference of remaining Assets (A) minus remaining Liabilities (L) defines the Net Relevant Position, which is a measure of the net wealth at risk in case of redenomination. A positive Net Relevant Position implies gains in case of depreciation.

For the case of Greece, the risk was estimated by splitting the economy into the public sector, the private (non-bank) sector, the banking sector and the Bank of Greece. The financial accounts of each sector were

Table 1

Redenomination Risk

Assets	Liabilities
Under Greek *Lex Monetae*	Under Greek *Lex Monetae*
Remaining in euro: A	Remaining in euro: L

Net Relevant Position: A - L

[1] EMU stands for the Economic and Monetary Union of the European Union.
[2] The literature on the Eurozone and the Greek crisis is extensive and much of it is not directly relevant to our purposes. For the theoretical and empirical analysis that supports this paper, see Lapavitsas, Mariolis, and Gavrielidis (2017).
[3] The estimation and discussion are a condensed form of Lapavitsas (2018).
[4] See, for instance, Flassbeck and Lapavitsas (2015).
[5] The rate could also vary for different classes of assets if redistribution of wealth was a government objective.

Table 2

Net Relevant Position of the Greek Public Sector, December 2016, Millions (EUR)

ASSETS		LIABILITIES	
Portfolio and Other Investments	2,241.00	From Loans	
		Financial Support Mechanism	227,660.49
		Total Loans	239,879.33
		From Bonds	
		Total Bonds	29,673.59
Total	2,241.00	Total	269,552.92
Net Relevant Position		**-267,311.92**	

Source: Constructed from data from the Greek Public Debt Management Agency: http://www.pdma.gr/attachments/article/37/Bulletin%20No_84.pdf.

Table 3

Net Relevant Position of the Greek Private (Non-Banking) Sector, Q3 2016, Millions (EUR)

ASSETS		LIABILITIES	
Portfolio and Other Investment	63,406	Portfolio and Other Investment	24,768
Of which Currency and Deposits	52,206		
Net Relevant Position		**38,638**	

Source: Constructed from BoG, International Investment Position, Quarterly Data, available at: http://www.bankofgreece.gr/Pages/en/Statistics/externalsector/international.aspx.

examined for the third and fourth quarter of 2016 to establish the net relevant position.

Public Sector

The Greek public sector has by far the largest liability exposure to non-Greek law. A highly simplified picture is shown in Table 2.

The strongly negative position of the Greek public sector is entirely due to the bail-out policies whereby the governing law of the vast bulk of Greek public debt was systematically switched from Greek to foreign law. There is no doubt that in the event of EMU exit, the Greek government would have to declare default.

Private (Non-Banking) Sector

Since there is no aggregated balance sheet for the private (non-banking) sector, the redenomination risk was estimated by deploying data from the Greek international investment position, as is shown in Table 3.

The limited exposure of the Greek private sector to international financial markets, together with the relatively large amount of currency and deposits held by the private sector imply that the net relevant position is actually substantially positive. This is a large buffer that would protect the private sector from the shock of redenomination, but its effectiveness would also depend on its distribution among households, enterprises and other institutions. The available data is not detailed enough to estimate the distribution.

Banking Sector

A highly simplified picture of the net relevant position of the Greek banking sector is given in Table 4.

The great bulk of Greek bank assets comprises domestic loans, although banks also hold a substantial volume of non-domestic securities, most of which were probably issued by official lending institutions to replace Greek government bonds at the time of private sector involvement (PSI) in 2011-2012. Similarly, most bank liabilities are owed to domestic agents, typically private deposits and liabilities to the BoG. The latter obviously relates to the huge provision of liquidity to Greek banks throughout the crisis, which is discussed in greater detail below in connection with the BoG. The low exposure of the Greek banking sector to international markets and the relatively high holdings of bonds that cannot be redenominated, entail a large positive net relevant position.

Bank of Greece (BoG)

The most complex problems are posed by the BoG. The liquidity provided by the BoG to Greek banks has been ultimately supplied by the Eurosystem, to which the BoG has become heavily indebted. The basic mechanism was TARGET2, the importance of which is considered below. A highly simplified picture of the BoG's net relevant position is shown in Table 5.

The asset side of the balance sheet of the BoG contains non-domestic securities worth roughly EUR 53

Table 4

Net Relevant Position of the Greek Banking Sector, December 2016, Millions (EUR)

ASSETS		LIABILITIES	
Cash	1,754	Liabilities to MFIs other euro area	10,157
Claims on MFIs other euro area	3,428	Liabilities to MFIs other countries	13,606
Claims on MFIs other countries	13,412	Securitisation Liabilities	17,246
Securities other euro area	32,764	Financial derivatives	4,424
Securities other countries	18,352		
Shares other euro area	2,193		
Shares other countries	2,907		
Financial derivatives	3,236		
Total	78,046	Total	45,433
Net Relevant Position		**32,613**	

Source: Constructed from BoG, Aggregated Balance Sheet of MFIs excluding the BoG, available at: http://www.bankofgreece.gr/Pages/en/Statistics/monetary/nxi.aspx.

Table 5

Net Relevant Position of the Bank of Greece, December 2016, Millions (EUR)

ASSETS		LIABILITIES	
Securities, Other Euro Area	36,784	Liabilities to MFIs, Other Euro Area	72,257
Securities, Other Countries	16,494		
Total	53,278	Total	72,257
Net Relevant Position, if TARGET2 could not be redenominated		**-18,979**	
Net Relevant Position, if TARGET2 could be redenominated		**53,278**	

Source: Constructed from BoG, Balance Sheet of the BoG,available at: http://www.bankofgreece.gr/Pages/en/Statistics/monetary/nxi.aspx.

billion, which it would not be possible to redenominate. This part of the balance sheet of the BoG appears to be linked to monetary policy operations conducted by the ECB and the Eurosystem, and has grown systematically since 2013. On the liability side, the most significant element for our purposes is other euro area and other country liabilities, which total roughly 72 billion euros and include the TARGET2 exposure of the Greek central bank. The legal status of that borrowing is far from clear.

Overall, the net relevant position of the BoG appears surprisingly robust, firstly, due to the large volume of foreign bonds held; and secondly, because the legal status of TARGET2 liabilities is unclear and requires detailed consideration.

TARGET2 AND THE ACQUISITION OF FOREIGN SECURITIES BY THE BoG

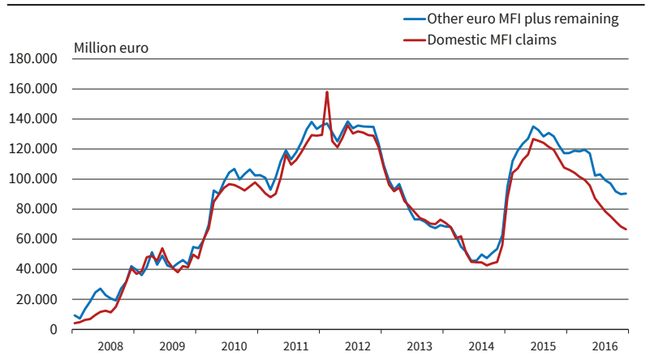
Large scale acquisition of other euro area and other country securities by the BoG began towards the end of in 2013 and accelerated sharply after the summer of 2015. It appears to have been related to the monetary policies of the ECB, and above all to quantitative easing.

Further insight could be gained by considering the BoG's borrowing from the Eurosystem relative to its own lending to Greek banks in Figure 1.

Figure 1

Key BoG Assets and Liabilities

BoG liabilities to other euro MFIs plus remaining liabilities compared to claims to domestic MFIs



Source: Balance Sheet of the BoG. © ifo Institute

Liquidity provision by the BoG to Greek banks was almost perfectly matched by the BoG's borrowing from the Eurosystem. The latter comprises primarily of TARGET2, plus the remaining liabilities of the BoG, which largely include additional banknotes hoarded by the Greek public, which are the liability of the Eurosystem. The fit, however, became less perfect after the summer of 2015, as the liabilities of the BoG to the Euro area began to exceed its provision of liquidity to Greek banks. The gap between the two curves reflects the substantial foreign bond accumulation by the BoG.

Thus, a large volume of bonds that would not be redenominated in case of Greek exit from the EMU corresponds to the liabilities of the BOG that include TARGET2. The question that arises is: what would be the status of TARGET2 liabilities in case of redenomination? There has been a lively academic and public debate over TARGET2 since the outbreak of the crisis, as claims and liabilities within the system reached 1 trillion euros in 2016-2017.[6] While the EMU continues to exist, TARGET2 assets and liabilities are merely clearing entries among central banks of little significance within the Eurosystem. What would happen, however, if a country exited?

TARGET2 operates on a single technical platform, but is legally structured as a multiplicity of systems.[7] Each NCB owns its TARGET2 component and operates it under national law. The TARGET2 components of individual central banks encompass the payment module and the dedicated cash accounts on their books. The ECB also owns its own TARGET2 component and operates it under German law. Each TARGET2 component is designated under the relevant national legislation implementing the settlement finality directive (98/26/EC).

[6] See Sinn and Wollmershäuser (2012), Whelan (2012), Buiter and Rahbari (2012) and Cecchetti, McCauley and McGuire (2012). See also Tuori (2016).

[7] See Decision of the European Central Bank, 24 July 2007, creating TARGET2 (ECB/2007/7), available at https://www.ecb.europa.eu/ecb/legal/pdf/l_23720070908en00710107.pdf

However, the net positions of the payment modules operated by NCBs are settled at the ECB payment module accounts that NCBs hold with the ECB. The ECB holds assets for each net debtor liability of NCBs and vice-versa. Settlements of NCBs with the ECB constitute a bilateral relation between NCBs and the ECB, as part of TARGET2-ECB. This makes it quite clear that such relations would be governed by German Law. Should an NCB default on its obligations under TARGET2 to the ECB, there would be a process of mobilising collateral subsequent to which the ECB would actually recognise a loss and write it off as a bad debt. The ECB would then call on its shareholders, i.e., the remaining NCBs of the Eurozone to participate in the loss according to their shares in the ECB's capital.

However, neither the German Banking Act, nor European or national laws mention the possibility of the Eurozone break-up, nor do they specify the procedure for redenominating claims and liabilities relating to the ECB. The texts refer solely to default. In the case of a break-up and redenomination, it is arguable that no technical default of a national central bank would actually take place, and thus the provisions for dealing with disputes within the Eurosystem framework would not be pertinent. In that case the national *Lex Monetae* could be applicable to NCBs liabilities with the ECB. It is thus conceivable that, if the BoG stopped being part of the ECB and Greece changed its national legal tender, the BoG's TARGET2 liabilities would not be governed by German law, leaving open the option of redenomination.

To conclude, the redenomination risk of Greece's exit from the EMU would be relatively modest as long as the country was prepared to confront the prospect of unavoidable state default. Indeed, from the perspective of the private economy, the "balance sheet effect" of exit is likely to be positive, though its distribution across the non-financial and the banking sectors is likely to be uneven, and hence some agents would be adversely affected. The more unpredictable and complex part of the redenomination risk refers to the BoG. Its TARGET2 liabilities have a complex and unclear status, while its assets include substantial volumes of foreign securities. It is conceivable that even for the BoG, the net relevant position might be positive.

REFERENCES

Buiter, W. and E. Rahbari (2012), "TARGET2 redux: the simple accountancy and slightly more complex economics of Bundesbank loss exposure through the Eurosystem", *CEPR Discussion Paper* no 9211, November.

Ceccheti S., R. McCauley and P. McGuire (2012), "Interpreting TARGET2 balances", *BIS Working Papers* no 303.

Durand C. and S. Villemot (2016), "Balance Sheets After the EMU: An Assessment of the Redenomination Risk", *OFCE, Sciences-Po, Working Paper* 2016-31, October.

Flassbeck, H and C. Lapavitsas, 2015, *Against the Troika: Crisis and Austerity in the Eurozone*, with H. Flassbeck, Verso: London and New York.

Lapavitsas, C. (2018), "The redenomination risk of exiting the Eurozone: An estimation based on the Greek case", *European Law Journal,* forthcoming.

Lapavitsas, C., T. Mariolis, with K. Gavrielidis (2017), Rosa Luxemburg Stiftung Publikationen: Eurozone failure, German policies, and a new path for Greece: Policy analysis and proposals, , http://www.rosalux.de/fileadmin/rls_uploads/pdfs/sonst_publikationen/Online-Pub_Eurozone_Failure.pdf (last accessed 7.3.2018).

Minenna, M., A. Guglielmi, J. Suárez, C. Signani (2017), *Italy: Re-denomination risk down as time goes by*, Mediobance Securities country Update, 17 January.

Nordvig, J. (2014), Risks and Benefits of Eurozone Breakup: The role of contract redenomination and balance sheet effects in policy analysis,

http://jensnordvig.com/wp-content/uploads/2016/01/RiskBenefits-Breakup.pdf (last accessed 10.3.2018).

Nordvig, J. and N. Firoozye (2012), Wolfson Economics Prize, Final Submission: Rethinking the European monetary union,

https://ftalphaville-cdn.ft.com/wp-content/uploads/2012/07/Rethinking-the-European-Monetary-Union-Adapt.pdf (last accessed 10.3.2018).

Sinn, H.W. and T. Wollmerhäuser (2012), "TARGET loans, current account balances and capital flows: The ECB's rescue facility", *International Tax and Public Finance* 1 (4), 468-508.

Tuori, K. (2016), "Has Euro Area Monetary Policy Become Redistribution by Monetary Means? 'Unconventional' Monetary Policy as a Hidden Transfer Mechanism", *European Law Journal,* 22 (6), 838-868.

Whelan. K., (2012), "TARGET2: Not why Germans should fear a euro breakup", *VoxEU* 29, April.