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Target2: The silent bailout system that keeps the euro afloat

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Abstract

Target2 is the Eurozone's cross-border payment system and is mandatory for the settlement of euro transactions involving Eurozone central banks. It is being used to save the Eurozone from imploding. A key underlying problem is that the Eurozone does not satisfy the economic conditions for being an Optimal Currency Area, a geographical area over which a single currency and monetary policy can operate on a sustainable long-term basis. The different business cycles in the Eurozone, combined with poor labour and capital market flexibility, mean that systematic trade surpluses and deficits will build up – because inter-regional exchange rates can no longer be changed. Surplus regions need to recycle the surpluses back to deficit regions via transfers to keep the Eurozone economies in balance. But the largest surplus country – Germany – refuses formally to accept that the European Union is a 'transfer union'. However, deficit countries including the largest of these – Italy – is using Target2 for this purpose. Further, the size of the deficits being built up is causing citizens in deficit countries to lose confidence in their banking systems and they are transferring funds to banks in surplus countries. Target2 is also being used to facilitate this capital flight. However, these are not viable long-term solutions to systemic Eurozone trade imbalances and weakening national banking systems. There are only two realistic outcomes. The first is full fiscal and political union – which has long been the objective of Europe's political establishment. The second is that the Eurozone breaks up.

Keywords: Target2, payment system, Optimal Currency Area, Eurozone, euro

JEL classifications: E02, E42, F45

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Introduction

The European Union (EU)¹ began the process of Economic and Monetary Union (EMU) by introducing the European Exchange Rate Mechanism (ERM) in 1979. Its purpose was to reduce exchange rate variability and achieve monetary stability in the EU, in preparation for the introduction of a single currency – the euro – which took place on 1 January 1999.

To support its introduction, a Eurozone-wide payments system was needed. Target2² is a real-time gross settlement system that settles euro-denominated cross-border transactions within the Eurozone.³ It is operated by the central banks of France, Germany, and Italy. Its use is mandatory for the settlement of any euro transaction involving the Eurosystem, which comprises the European Central Bank (ECB) and the national central banks (NCBs) of the Eurozone member states. Target2's objectives are to:

- support the implementation of the Eurosystem's monetary policy and the functioning of the euro money market
- minimise systemic risk in the payments market
- increase the efficiency of cross-border payments in euros, and
- maintain the integration and stability of the Eurozone money market.⁴

We will show that Target2 is critical to the survival of the Eurozone as a currency union – a geographical area that uses the same single currency. We will also show that a currency union will only survive in the long term if it satisfies the conditions for being an Optimal Currency Area. Until (or unless) it does so, the more efficient economies in the Eurozone will build up systematic trade surpluses against the weaker economies – and residents in the weaker economies will move their capital to banks in the stronger economies whenever confidence in their banking systems collapses.

There are four specific questions we seek to answer:

- Is the Eurozone an Optimal Currency Area?
- How long can the euro survive if it is not?
- What role does Target2 play in prolonging the euro's survival?
- Can a political solution save the euro?

¹ Or the European Economic Community as it then was.

² Trans-European Automated Real-time Gross Settlement Express Transfer System.

³ The Eurozone is the subset of EU states that use the euro: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.

⁴<https://www.ecb.europa.eu/paym/t2s/about/html/index.en.html>

What is an Optimal Currency Area?

A single currency (or currency union) will only survive long term in a specific geographical area if that area satisfies the four conditions laid down by Nobel prize winning economist Robert Mundell in his Theory of the Optimal Currency Area (OCA).⁵ These are: (1) the different parts of the area are not subject to asymmetric macroeconomic and financial shocks, which, in practice, means that the different areas have similar business cycles, so that a single monetary policy in the form of a single interest rate will be effective across the whole area – with the interest rate raised in a boom to reduce inflation and reduced in a slump to prevent recession,⁶ (2) sufficient wage flexibility and labour mobility to eliminate unemployment quickly, (3) sufficient price flexibility and capital mobility to remove trade imbalances quickly, and (4) a counter-cyclical stabilisation mechanism, e.g., a system of officially agreed regional redistributions whereby regions with balance of payments surpluses redistribute them via fiscal transfers to regions with balance of payments deficits; the normal way in which regional trade imbalances are removed – changes in inter-regional exchange rates – is no longer possible when there is a single currency which effectively fixes these exchange rates permanently at the levels at which the countries joined the single currency.

Collectively, these conditions test the degree of economic and monetary integration of the geographical area in question, through either the operation of market forces or the effectiveness of policy tools. An increase in trade between the members of the currency union – as measured by an increase in the ratio of traded to non-traded goods and services – would be a direct test of whether the currency union had increased the degree of economic integration and hence moved its members closer to being in an OCA.⁷

It is possible that intra-EU trade could be harmed by exchange rate fluctuations and a currency union eliminates this volatility: ‘Removing “borders” broadly intended as impediments to trade, but also financial flows, as well as sharing a single currency, are a powerful magnet for deeper economic and financial integration. Such endogeneity [of the OCA criteria] could also result from deeper financial integration and risk-sharing, increased symmetry of shocks and similarly output synchronisation, and an increased pace of product and labour market reforms to enhance flexibility’.⁸ Supporters of a single European currency argue that by disregarding the endogenous effect of currency union,⁹ Mundell’s criteria were likely to bias downwards the expected net benefits from monetary integration.¹⁰

⁵ Robert A. Mundell (1960) The Monetary Dynamics of International Adjustment under Fixed and Flexible Exchange Rates, *Quarterly Journal of Economics*, 74, 227-57.

⁶ In a single economic area, there can only ever be one single currency and one single (risk-free) interest rate – and not multiple currencies with multiple (risk-free) interest rates – as was pointed out a long time ago by, for example, Tim Congdon (1992) The Logistical Requirements of a Single European Currency, *Gerrard & National Monthly Economic Review*, June.

⁷ Ronald I. McKinnon (1963) Optimum Currency Areas, *American Economic Review*, 53, 717-725.

⁸ Francesco Paolo Mongelli (2008) *European Economic and Monetary Integration, and the Optimum Currency Area Theory*, Economic Papers 302, Directorate-General for Economic and Financial Affairs, European Commission.

⁹ For the benefit of non-economists, ‘endogenous’ means originating or developing from within a system. So the phrase ‘the endogenous effect of currency union’ means that the very existence of the currency union could

Some historical examples of unsuccessful and successful OCAs

Keynes argued that the Sterling Area – which he defined as the system under which members of the British Commonwealth conduct their international banking through London – would not make a successful OCA: ‘[I]f the Sterling Area is turned into a Currency Union, the members in credit would have to make a forced and non-liquid loan of their favourable balances to the members in debit....It is improbable that South Africa or India would accept such arrangements’.¹¹

By contrast, the US is considered to be a successful OCA, although it took around 150 years from independence in 1776 for full currency and monetary union to be realised.¹² The process of monetary union began with the introduction of the Constitution in 1789. The dollar was introduced in 1792. The 1863 National Bank Act established a national banking system, although at the time three currencies were in circulation: a greenback dollar issued by the Federal government, a Confederate dollar (backed by cotton) issued by the Confederacy, and a Pacific states dollar (backed by gold). With the defeat of the Confederacy in the Civil War 1865, the southern states switched to the greenback. In 1879, a single currency emerged when the US moved to the Gold Standard at the pre-Civil War parity level. However, the Gold Standard turned out not to be flexible enough to provide liquidity during the frequent banking and stock market crises that occurred in the US during the remainder of the 19th Century and the beginning of the 20th. In 1913, the Federal Reserve Act was passed and this introduced a US central bank, the Federal Reserve or Fed. Initially, the Fed’s powers were limited to control of the banking system and issuing dollars.

Over the years, the powers of the Fed have changed, especially following the stock market crash of 1929 which led to the worst banking crisis in US history. The Fed’s policy response was to tighten monetary conditions, rather than provide liquidity to the banking system. As a result, one third of US banks became insolvent and this contributed to the Great Depression which lasted throughout the 1930s. The Fed now has responsibility for a monetary policy that takes into account the level of unemployment and the growth of real gross domestic product, as well as the rate of inflation.¹³ Nevertheless, a single (Federal Funds) interest rate operates across the whole US, regardless of regional unemployment differences.

The Great Depression led the Roosevelt government to introduce a system of federally funded transfer programmes – such as social security and unemployment insurance – in the

encourage the OCA criteria to develop and ultimately be satisfied, even if they were not operating effectively prior to its introduction.

¹⁰ M. Emerson, D. Gros, A. Italianer, J. Pisani-Ferry and H. Reichenbach (1992) *One Market, One Money: An Evaluation of the Potential Benefits and Costs of Forming an Economic and Monetary Union*, Oxford University Press, Oxford; J. Frankel and A. Rose (1998) The Endogeneity of the Optimum Currency Area Criteria, *Economic Journal*, 108, 1009-1025.

¹¹ John Maynard Keynes (1942, Paras 28 and 29) Proposals for an International Currency (or Clearing) Union, 11 February, reproduced in J. K. Horsefield (ed) (1969) Part I: Before Bretton Woods - The Keynes Plan, *The International Monetary Fund 1945-1965: Twenty Years of International Monetary Co-ordination, Volume III: Documents*, International Monetary Fund, Washington DC.

¹² HM Treasury (2003) *The United States as a Monetary Union*, HMSO, Norwich.

¹³ As laid out in the Humphrey–Hawkins Full Employment and Balanced Growth Act 1978.

New Deal. Federal government fiscal policy as a stabilisation tool has continued in existence since then. One of its aims is to help the different regions of the US adjust to differential business cycles and macroeconomic shocks. When some parts of the US are experiencing a boom, others can be experiencing a recession; when there is a shock to the oil price, Texas will be affected more than other states. The revenues of the US federal government amount to 21% per cent of GDP and 12% of federal government expenditure comprises transfers to state and local governments. States are able to set budgets without federal interference. They are restricted by their own constitutions from running current account deficits, although deficits are, in practice, tolerated during recessions. However, there are no restrictions on states' abilities to finance capital expenditures on, say, roads and school by borrowing.¹⁴

The Constitution also allowed free trade, travel, migration and capital flows between the states from the very beginning. Labour mobility in the US has always been fairly high since its foundation, beginning with the westward migration in the 19th Century in search of agricultural land. Further, labour mobility is an effective mechanism for adjusting to longer-term structural changes and to regional shocks in the US.¹⁵ In addition, wages tend to fall in regions experiencing unemployment.¹⁶ Labour and indeed capital mobility are, of course, helped, by the US having: a common language; common or similar laws for contracts, property, insurance and insolvency; common or similar professional practices and standards; universities with common academic standards; and nation-wide federally run programmes of social security and elderly health care.

It is therefore clear that the US, at least since the 1930s, satisfies three of the four conditions for an OCA and this is good enough to classify the US as an OCA.

Looking at the Eurozone as a possible OCA

The Eurozone is sufficiently geographically large and economically heterogeneous that the different regions are subject to different business cycles and to asymmetric macroeconomic and financial shocks – even more so than in the US.¹⁷ More precisely, in the case of the Eurozone, it is the peripheral members that appear to experience the most extreme outcomes.

One study found that:

¹⁴ Currency Unions: Europe vs. the United States, James Tobin Policy Options, Institute for Research on Public Policy, 1 May 2001, <http://policyoptions.irpp.org/magazines/one-world-one-money/currency-unions-europe-vs-the-united-states/>

¹⁵ O.J. Blanchard and L.F. Katz. (1992) Regional Evolutions, *Brookings Papers on Economic Activity*, 1: 1-75.

¹⁶ K. McMorrow (1996) *The Wage Formation Process and Labour Market Flexibility in the Community, the US and Japan*, European Commission Economic Paper No. 118.

¹⁷ Tamim Bayoumi and Barry Eichengreen (1992) *Shocking Aspects of European Monetary Unification*, National Bureau of Economic Research Working Paper # 3949. This study finds that macroeconomic supply and demand shocks are 'significantly more idiosyncratic across [EU] countries than across US regions...[EU] countries also exhibit a slower response to [these] shocks than US regions'.

Joining a single European currency dominated by and centred around a strong economic core (focused on Germany) may be beneficial to peripheral member regions in good economic times (such as the boom years of 2000-2007 when capital flowed from the core to the more peripheral parts of Euroland¹⁸), but it may prove highly disadvantageous once a major shock like the financial crisis of 2007-08 occurs, since the scope for independent monetary intervention no longer exists. At the same time, the Eurozone lacks a centralised fiscal stabilisation mechanism by which to provide counter-cyclical intervention.¹⁹

Another study found that:

Some of [the OCA] conditions were satisfied at the inception of the EMU, others were missing at the beginning, but improved over time as expected by the endogenous approach to the OCA theory. The common fiscal capacity was the main missing element of the initial construction of the Eurozone, and still is. The common budget is so exiguous that its effectiveness as a shock absorption mechanism is negligible....Some of the concerns raised on the eve of the euro did actually materialise, even if not immediately. First, in its first decade, the Eurozone did not experience major turbulences, because growing financial integration was compensating the need for fiscal transfers, channelling the excess of saving from the 'core' to the 'periphery'. Second, the mechanism generated record-high private indebtedness in the 'periphery' and exposure of the banks in the 'core', making the whole system more fragile as it relied upon financial market stability. Third, once the long-feared shock [i.e., the Global Financial Crisis (GFC)] hit, the mechanism proved weak and non-resilient. The inherent weaknesses of the EMU became evident. Fourth, as it had been foreseen, the cost of the adjustment after the shock fell mainly on labour, with much higher and longer unemployment in the Eurozone than both non-Eurozone EU and the US. Fifth, as the [OCA] theory suggested, the lack of common mechanisms of adjustment dramatically increased the socio-economic divergences within the EMU.²⁰

The ECB's sole formal monetary policy objective is price stability, which is much more restrictive than that of the Fed. And, like the Fed, the ECB is not able to apply a different monetary policy in different member states.

Fiscal policy is also more restrictive in the European Union (EU) than in the US. The central revenues available to Brussels are limited to 1.7% of GDP. Eurozone rules – as formulated in the 1993 Maastricht Treaty and introduced as part of the 1997 Stability and Growth Pact

¹⁸ This capital flowed in the belief that it was safe against the peripheral countries leaving the euro. It dried up when the markets became concerned that some countries might leave or be forced to leave the euro.

¹⁹ Bernard Fingleton, Harry Garretsen and Ron Martin (2015) Shocking Aspects of Monetary Union: The Vulnerability of Regions in Euroland, *Journal of Economic Geography*, 15, 907-934.

²⁰ Paolo Pasimeni (2014) An Optimum Currency Crisis, *European Journal of Comparative Economics*, 11, 173-204.

(SGP) – restrict member states from running budget deficits exceeding 3% of their GDP,²¹ or having national debts exceeding 60% of their GDP.²² These rules apply whether their breach is due to an economic recession beyond the control of the member state or due to government spending profligacy. Further, no distinction is made between current and capital expenditures.

The underlying philosophy within the EU justifying these restrictive monetary and fiscal policies is that the required adjustments to any adverse economic fluctuation will operate principally through market forces. The hope is that prices and wages will adjust to counter shocks in production and employment. Similarly, labour and capital will move between regions and industries in response to wage and price signals. In the process, the rest of the EU would be pulled up to German levels of productivity, living standards will converge throughout the Eurozone and this will encourage EU members not in the Eurozone²³ to adopt the euro.

The EU does have a number of structural and investment funds whose purpose is ‘to invest in job creation and a sustainable and healthy European economy and environment’ as part of the SGP. There are five funds in total:²⁴

- European Regional Development Fund (ERDF) – ‘promotes balanced development in the different regions of the EU’.
- European Social Fund (ESF) – ‘supports employment-related projects throughout Europe and invests in Europe’s human capital – its workers, its young people and all those seeking a job’.
- Cohesion Fund (CF) – ‘funds transport and environment projects in countries where the gross national income (GNI) per inhabitant is less than 90% of the EU average. In 2014-20, these are Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia and Slovenia’.
- European Agricultural Fund for Rural Development (EAFRD) – ‘focuses on resolving the particular challenges facing EU’s rural areas’.
- European Maritime and Fisheries Fund (EMFF) – ‘helps fishermen to adopt sustainable fishing practices and coastal communities to diversify their economies, improving quality of life along European coasts’.

²¹ They can be fined 0.5% of their GDP if they do so.

²² These were also two of the ‘convergence criteria’ than member states had to satisfy before they could join the euro.

²³ Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden, and the UK.

²⁴ https://ec.europa.eu/info/funding-tenders/european-structural-and-investment-funds_en

All these funds deal with the long-term sustainability of different regions of the EU, as well as aiming to reduce long-term regional income inequalities. While they involve a redistribution of resources from richer to poorer regions, none of them is intended to address the shorter term economic problems that arise because of differential regional business cycles or asymmetric macroeconomic and financial economic shocks.²⁵

So the EU does not have the monetary or fiscal policy tools – either automatic or discretionary – nor the formal system of regional redistributions needed to deal with the possibility that some regions will be booming, while others will be in a slump. It is reliant on wage and price flexibility and on labour and capital mobility for this purpose. Its principal vehicle for delivering this flexibility and mobility is the Single Market.

Yet despite the EU claiming to operate the Single Market²⁶ with its ‘four freedoms’ – the freedom of movement of goods, services, workers and capital – there is no effective ‘single market’ in services, workers, or capital. EU workers are, of course, free to look for work in any member state and both unskilled and very highly skilled workers are able to find work if they are willing to accept the working conditions involved. However, a whole range of professional workers in between these two groups find it difficult to get jobs in their own profession, because there is frequently no mutual recognition of qualifications. There are, in addition, other barriers, such as language differences, the non-portability of pension rights etc. Labour mobility within the EU is estimated to be one-third the level found in the US,²⁷ and there are significant wage rigidities in European labour markets.²⁸ Similarly, despite numerous attempts to create a Capital Markets Union, the European capital markets are far from integrated, and, further, it is arguable that financial regulations being introduced at EU level are impeding rather than promoting the process of integration, reflecting the widespread hostility to the Anglo-Saxon capital markets model on the continent.

²⁵ In 2011, the Eurozone states introduced a Euro-Plus Pact to deal with the weaknesses of the SGP. Three of its key aims are to foster competitiveness, to foster employment and to contribute to the sustainability of public finances (https://en.wikipedia.org/wiki/Euro_Plus_Pact).

²⁶ The Single Market was introduced in 1993, following the Single European Act 1987. It is the internal market of the EU’s Customs Union. The Customs Union imposes the Common External Tariff on imports coming into the EU, while there are no tariffs on trade between member states. The purpose of the Single Market is to reduce and eliminate non-tariff barriers – such as differential regulations and restrictive practices – on trade between member states.

²⁷ Barry Eichengreen (1991) Is Europe an Optimum Currency Area?, *NBER Working Paper No.3579*; <http://www.nber.org/papers/w3579>.

²⁸ J. Dreze and C. Bean (1990) Europe’s Unemployment Problem: Introduction and Synthesis. In J. Dreze and C. Bean (eds) *Europe’s Unemployment Problem*, MIT Press, Cambridge MA; R Layard, S. Nickell and R. Jackman (1991) *Unemployment: Macroeconomic Performance and the Labour Market*, Oxford University Press, New York; P. B. Kenen (1995) What Have We Learned from the EMS Crises?, *Journal of Policy Modelling*, 17 (5), 449–461; C.A.E Goodhart (1995) The Political Economy of Monetary Union. In P.B. Kenen (ed.) *Understanding Independence: The Macroeconomics of the Open Economy*, Princeton University Press, Princeton.

In 2010, in response to both the GFC and the consequential banking crisis in peripheral Eurozone states which began in October 2008, the EU set up the European System of Financial Supervision (ESFS).²⁹ This comprises:

- the European Systemic Risk Board (ESRB) – to oversee the EU financial system and mitigate systemic risk
- the three European Supervisory Authorities (ESAs) – to provide incentives to avoid excessive risk taking in the financial industry and to promote a level playing field in support of beneficial financial integration within the EU – namely:
 - the European Banking Authority (EBA)
 - the European Securities and Markets Authority (ESMA)
 - the European Insurance and Occupational Pensions Authority (EIOPA)
- the European Stability Mechanism (ESM)³⁰ – organised by member states of the Eurozone to preserve financial stability in Europe by providing financial assistance to Eurozone states in financial difficulty. The ESM can borrow via bond issuance up to €500bn and €190bn of this was used to bail out the Irish and Portuguese banks in 2010-11. In September 2012, the ECB introduced a programme of Outright Monetary Transactions (OMT) under which it makes purchases (‘outright transactions’) in the secondary market of bonds issued by Eurozone members, with the aim of ‘safeguarding an appropriate monetary policy transmission and the singleness of the monetary policy’. The total cost of rescuing EU banks between October 2008 and December 2012 amounted to €592bn in state aid.³¹
- the Securities Markets Programme (SMP) – to ensure depth and liquidity in malfunctioning segments of the bond markets (where transactions were having a significant effect on bond prices) and to restore an appropriate functioning of the monetary policy transmission mechanism. To avoid the SMP altering the Eurozone’s declared monetary policy, the bond purchases conducted through the SMP are sterilised and do not change central bank liquidity.³²

Stanislas Yassukovich³³ agrees that ‘there is effectively no “single market” in services in the EU, and certainly not in financial services. For example, a qualified German hairdresser must requalify to practice in France (and there are two different qualifications, domicile and shop), and an English solicitor cannot provide conveyance for a residential property sale in most EU countries. As there is ... no unified capital market and no European stock exchange, the

²⁹ https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/european-system-financial-supervision_en

³⁰ Set up in 2012 to replace two emergency funding programmes, the European Financial Stability Facility and the European Financial Stabilisation Mechanism, which both became operational in 2010. However, both these programmes continue in existence to deal with the bailouts in Ireland, Portugal and Greece.

³¹ Hugo Dixon (2016) EU enters brave new world of bank bail-ins, Reuters, 4 January;
<http://blogs.reuters.com/hugo-dixon/2016/01/04/eu-enters-brave-new-world-of-bank-bail-ins/>

³² *ECB Monthly Bulletin*, June 2010;

https://www.ecb.europa.eu/pub/pdf/other/mb201006_focus01.en.pdf?2b5c64d483a41a019fd461f595a36b46

³³ The Euromarket pioneer who was Chairman of the Securities Association, Deputy Chairman of the Stock Exchange and Chairman of Merrill Lynch Europe, Middle East and Africa during and after the 1986 Big Bang.

regulation of financial services, focused largely on investor protection, is at national not EU level'.³⁴

Where there are financial regulations at EU level, these tend to be protectionist, excessive or ineffective. Here are some examples:

- The EBA plans to implement Basle III in a consistent manner across the EU, despite Basle III being a voluntary code and estimates by the OECD that its implementation will impede global economic growth by between -0.05 and -0.15% p.a.³⁵
- Implementation of the Total Loss Absorbing Capacity (TLAC) rules. The European Commission has plans to increase EU oversight of foreign banks. Foreign banks with significant activities in Europe would be required to operate via 'intermediate holding companies'. These would have to meet additional capital requirements, to meet an internationally agreed rule, known as TLAC, and other minimum internationally agreed standards to ensure that they could be wound down safely if they fail. The banks would have to issue equity and junior debt (such as contingent convertible (CoCo) bonds), that would be written off in the event of a crisis. Philip Hammond, the UK finance minister, has described the proposals as anti-competitive and could also 'constrain prudential authorities in a way that could have an impact on financial stability'.³⁶
- Markets in Financial Instruments Directive (MiFID) II – dealing with the trading of and the provision of services by investment intermediaries relating to financial instruments (e.g., shares, bonds, units in collective investment schemes and derivatives). Jeff Sprecher, CEO of Intercontinental Exchange, has described MiFID II – which came into effect in January 2018 – as 'a terrible piece of legislation that imposes tremendous costs on the industry'. MiFID II grew out of the G20 financial regulation principles established in 2009 to reduce systemic risk following the GFC, but has been criticised as being excessively complex and its implementation was delayed by a year. One particular issue is the unbundling of investment research and transaction costs.³⁷ MiFID II, in order to achieve full cost transparency for end customers, will end the standard industry practice of brokerage firms providing investment research free of charge in return for execution business. McKinsey has estimated that the profits of European asset managers that pay for research in full could be reduced by 15-20%. Larry Fink, CEO of BlackRock, expressed concern that MiFID II could lead to a dearth of research coverage focused on smaller listed

³⁴ Stanislas Yassukovich (2017) The City has nothing to fear from Brexit, *Financial Times*, 12 January.

³⁵ Slovik, P. and Cournede, B. (2011), *Macroeconomic impact of Basle III*, OECD Economics Working Papers; DOI: 10.1787/18151973.

³⁶ Jim Brunsden (2016) Hammond clashes with Brussels over new bank oversight rules, *Financial Times*, 7 December.

³⁷ European equity research and advisory service costs are estimated at \$1.35bn, compared with \$2.9bn in cash equity commissions in the year June 2016 – June 2017 (Samuel Agini (2017) Mifid II will spark \$1.3bn-a-year research battle, *Financial News*, 23 August).

companies.³⁸ Crispin Odey, of Odey Asset Management, believes that MiFID II will lead to fewer trades, reduced price discovery and less efficient markets.³⁹ Another issue is the reporting of trades to regulators within a specified time – the cost of which has encouraged some hedge funds, such as Brevan Howard and Tudor, to register under the Alternative Investment Fund Managers Directive rather than under MiFID II.⁴⁰ The total cost to the finance industry of implementing MiFID II has been estimated at more than €2.5bn.⁴¹ Within months of its introduction, trading in a number of futures and options contracts was being shifted from London to the US and European investment banks were losing business to their US rivals.⁴²

- The Capital Requirements Directive IV is damaging for EU financial markets in terms of restrictions on cross-border lending and a bankers bonus cap.
- Solvency II. The Treasury select committee announced an inquiry into the ‘manifest shortcomings’ of the Solvency II directive dealing with insurance companies.⁴³ The inquiry’s report was published in October 2017. While the evidence submitted to the committee highlighted problems with the legislation as drafted (e.g., in respect of the risk of procyclicality and market distortion, the calibration of the Risk Margin, the approval of Internal Models and subsequent model change, and the volume and complexity of data required from firms), the report was concerned with the way Solvency II has been implemented in the UK by the Prudential Regulation Authority (PRA): ‘An excessively strict interpretation of the requirements of Solvency II, and of its own obligations, has limited the PRA’s thinking in a way which could be detrimental to UK plc’.⁴⁴

Further, Brexit is being used by EU financial regulators as an opportunity to make a power grab. We consider some examples.

The first relates to ‘delegation’. In July 2017, ESMA issued guidance to EU national regulators on how to deal with fund manager relocations from the UK after Brexit. It said that national regulators dealing with ‘authorisation’ requests should satisfy themselves that firms do not ‘perform substantially more portfolio management and/or risk management functions for the relevant funds in their original member states or third country on a delegation basis’. Under the 1985 Ucits Directive, fund managers are allowed to delegate certain functions for

³⁸ David Ricketts (2017) BlackRock’s Fink voices concern over Mifid II, *Financial News*, 12 October.

³⁹ Tom Eckett (2017) Odey warns of ‘terrifying’ MiFID II and tapering combination, *Investment Week*, 2 October.

⁴⁰ Lucy McNulty (2017) Will others follow Brevan and Tudor’s regulatory route?, *Financial News*, 21 August.

⁴¹ Attracta Mooney (2017) €2.5bn cost of Mifid II rattles asset managers, *FTfm*, 27 January; Carlo Svaluto Moreolo (2017) Briefing: MiFID II – The birth of a market, *IPE Magazine*, July/August.

⁴² David Wighton (2018) City on the defensive as regulation tilts playing field for Wall Street, *Financial News*, 30 April; Paul Clarke (2018) Morgan Stanley says EU banks are losing ground as MiFID II bites, *Financial News*, 30 April.

⁴³ Philip Georgiadis (2016) MPs to review Solvency II, *Financial News*, 13 September.

⁴⁴ House of Commons Treasury Committee (2017) *The Solvency II Directive and its impact on the UK Insurance Industry*, HC 324, 27 October; <https://publications.parliament.uk/pa/cm201719/cmselect/cmtreasy/324/324.pdf>

their EU funds – such as portfolio management and risk management – to organisations outside the EU. Peter Astleford from law firm Dechert said: ‘US managers, in particular, will have a wary eye on this new manifestation of “Fortress Europe”. The implied and overt requirements for local substance, taken literally, show a new and potentially worrying sign for ... managers’. Dan Waters, managing director of ICI Global – the trade body representing fund managers globally – said ‘any restrictions on delegation could impact fund managers globally... The language about delegation of portfolio management – and to third countries – is of huge concern. Ucits would not exist in South America or Asia if portfolio management could not be delegated. Where is the evidence it is not working?’.⁴⁵ The then City minister, Stephen Barclay, said the government ‘strongly supports the global delegation model for portfolio management, in partnership with other countries that share our views on this issue. [It allowed UK asset managers] to sit at the heart of global investment allocation [and also benefited Europe]. A restricted delegation model would cause fragmentation and prompt funds located in Europe [to] leave the continent for other financial centres, such as New York or Hong Kong’.⁴⁶

The second relates to EU attempts to influence organisations that are currently located in London. The European Commission has proposed granting ESMA regulatory powers over both central counterparties or CCPs (i.e., clearing houses) and credit rating agencies based outside of the EU, which would include London-based organisations after March 2019.⁴⁷ In the case of euro-clearing, it wants this activity re-located to the EU. Daniel Maguire, CEO of the London Clearing House (LCH), told a Treasury select committee meeting that he did not believe that forced relocation of the LCH to the EU ‘is a desirable element of the Commission's proposal’. However, he did concede that in a ‘hard’ Brexit scenario without a transition period, the LCH could be forced to relocate some, if not all, of its business. But Frankfurt might not necessarily be the victor in that scenario: ‘The answer may be relocation going the other way, to the States’.⁴⁸

The third is another example relating to EU rules on ‘authorisation’. It has been suggested that trillions of pounds worth of derivatives contracts between UK and EU counterparties could suddenly become illegal if there is ‘no deal’ (on authorisation) in March 2019. However, this has been dismissed as failing to recognise the operation of public international law, the European Convention on Human Rights and the EU Charter of Fundamental Rights. A report by law firm Shearman & Sterling concludes that by combining human rights law and taking maximum advantage of reverse solicitation regimes, there should be no material ‘cliff edge’ for the performance of existing financial contracts or the servicing of existing customers resulting from Brexit. Reverse solicitation allows wholesale market customers to opt out of EU financial regulation entirely when buying services from outside the EU.

⁴⁵ David Ricketts (2017) US fund managers jittery over post-Brexit delegation, *Financial News*, 21 August.

⁴⁶ Susanna Rust (2017) UK sets up asset management taskforce in Brexit-fuelled action plan, *IPE*, 2 October.

⁴⁷ Lucy McNulty (2017) Rating agencies plan Brexit moves as watchdog ups demands, *Financial News*, 9 October; Nick Reeve (2017) ESMA: Hard Brexit would pose 'significant stability risks', *IPE*, 10 October. The issue of CCPs is discussed later in the report.

⁴⁸ Samuel Agini (2017) LSE's clearing boss eyes New York amid Brexit row - The US, rather than Germany, could win the battle over clearing after Brexit, *Financial News*, 25 October.

Further, many pre-existing financial contracts will not be affected by local EU member state licensing requirements post-Brexit. The regulated activity will have taken place when the contract was entered into, and so any future performance after Brexit will not need a licence. In addition, many other financial contracts do not involve cross-border dealings in law: the performance of these contract will remain solely within the jurisdiction of UK regulators. For a relatively small subset of financial contracts that could involve local authorisation requirements in some EU member states, appeal can be made to property rights and international law protections. The right to property protects rights under contracts between UK and EU27 businesses that exist prior to Brexit. It arises both in the European Convention on Human Rights, to which the UK and every EU27 state will remain a party and in the EU's own Charter of Fundamental Rights. These property rights protect contracts which have an economic value on Brexit. Derivative contracts and any unexercised options contained in them will have a calculable economic value at any given point and will therefore be protected. Similar protections are provided by the international law doctrine of acquired rights.⁴⁹

As a final example, in September 2017, the European Commission recommended that the ESMA become an 'investigatory hub' for market abuse cases across the EU. Valdis Dombrovskis, the Commissioner responsible for financial stability, financial services and capital markets union, said: 'The EU needs to act as one player so that we can stay ahead of the curve. More integrated financial supervision will make the Economic and Monetary Union more resilient'.⁵⁰ Organisation based in London would inevitably be caught up in this.

In addition to the burdens imposed by EU financial regulation, there is another important factor that is limiting the growth of Europe's capital markets and that, according to Larry Fink is Europe's 'excessive reliance' (around 70%) on borrowing from banks and insurers to fund growth.⁵¹ He claims that the problems European companies face when accessing bond and equity markets have 'stifled economic recovery' on the continent: 'In the years since the crisis, much of Europe's economic potential has been locked up. Strengthening capital markets and retirement systems can help unlock that potential, and doing so will be vital to Europe's economic future'. He also argues that European bond markets are complicated by different insolvency laws across member states: 'The lack of a unified European corporate bond market raises costs for companies, deters investors and holds down liquidity'. While praising the European Commission's efforts to unify European capital markets – under the Capital Markets Union project – he warns that the EU is 'pulling itself in two directions', claiming that other initiatives, such as new capital rules for insurers under Solvency II, could 'severely restrict a key source of funding for European companies. While a long-term objective is greater funding from capital markets, limiting insurance companies' capacity for

⁴⁹ *Continuity of Contracts and Business on a 'Hard' Brexit: Human Rights and Reverse Solicitation to the Rescue!*, 31 October 2017; <http://www.shearman.com/en/newsinsights/publications/2017/10/continuity-contracts-business-on-hard-brexit>

⁵⁰ Lucy McNulty (2017) EU wants to supercharge its top financial regulator, *Financial News*, 25 September.

⁵¹ Borrowing from banks and insurers has long been the preferred financing model on the continent.

investment before capital markets are fully developed could significantly damage growth'.⁵² A 2017 study by New Financial found that Europe's share of global capital market and banking business has fallen over the previous 10 years in 20 out of 21 sectors.⁵³

So the Single Market – promoted as the jewel in the crown of the European Union – has not so far delivered the wage and price flexibility nor the degree of labour and capital mobility that would help to compensate for the lack of monetary and fiscal tools needed for the Eurozone to operate as an OCA. In addition, the European Commission has developed a limitless appetite for responding to the problems that arise from this with even more bureaucratic solutions accompanied by even more complex regulations.⁵⁴

Figure 1: Eurozone Annual GDP Growth Rate 1999-2017



So how has the Eurozone fared since its introduction in 1999?

Figure 1 shows that the Eurozone's average annual GDP growth rate between 1999 and 2017 was just 0.25%. By contrast, the average annual GDP growth rates in the UK and US were around 2%, despite both countries experiencing much bigger recessions in 2008-09 – see Figures 2 and 3.

⁵² James Shotter and Thomas Hale (2017) Larry Fink calls for Europe to bolster its capital markets: 'Excessive reliance' on banks and insurers to fund growth hobbling region's economy, *Financial Times*, 17 January.

⁵³ William Wright and Panagiotis Asimakopoulos (2017) *A Decade of Change in Capital Markets*, October. Europe's share of global equity trading, M&A activity, IPOs, stock-market value, assets under management, and hedge fund assets have fallen by between 25% and 50% since 2007. In 2006, 14 of the 20 largest banks in the world were European, with Europe accounting for 58% of global banking assets. By 2017, the share was 32% and only eight European banks were in the top 20. The total assets of the largest European banks have dropped by more than a quarter in real terms, while the assets of banks from the rest of the world have more than doubled. Revenues at European investment banks have halved in real terms, twice the size of the fall in US investment banks. Their share of global revenues is down from 45% to around a third, with no European bank in the top five for revenues in 2017 (William Wright (2017) The decline and fall of European capital markets, *Financial News*, 18 October).

⁵⁴ MiFID II contains 1.4 million paragraphs.

Figure 2: UK Annual GDP Growth Rate 1999-2017

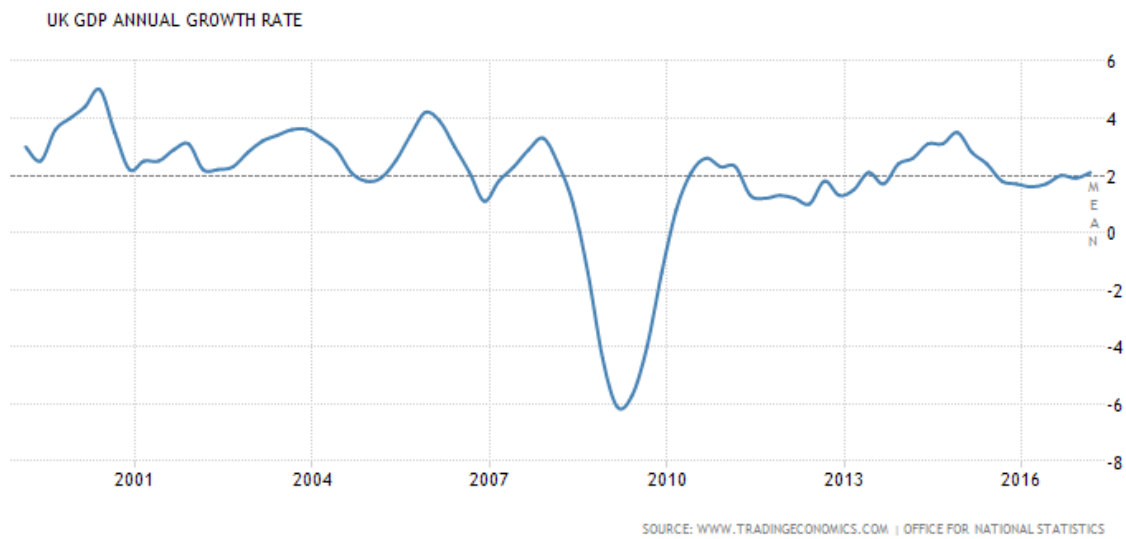


Figure 3: US Annual GDP Growth Rate 1999-2017



Even more striking is the unemployment rate. The Eurozone unemployment rate has averaged more than 9.5% between 1999 and 2017 (Figure 4), while the UK and US unemployment rates have averaged 6% (Figures 5 and 6). From the start of the Great Recession in 2008, Eurozone unemployment rose from a base of just over 7% to a peak of 12% in 2013, and has only fallen slowly since then to reach 9% in 2017. By contrast, US unemployment rose sharply from 5% to 10% between 2008 and 2010, but then immediately began declining rapidly since then to reach 4.5% in 2017 (Figure 6). This reflects the much greater flexibility of the US labour market: US workers are rapidly fired in a recession, but are also promptly rehired when better times come along if they are flexible in terms of wages

and job location. The improved flexibility of the UK labour market is also apparent: Figure 5 shows that UK unemployment rose sharply from 5% to 8% and stayed at that level for three years, before falling steadily to reach 4.75% in 2017. The Eurozone labour market is sclerotic in comparison.

Figure 4: Eurozone Unemployment Rate 1999-2017



Figure 5: UK Unemployment Rate 1999-2017



Figure 6: US Unemployment Rate 1999-2017



Even more striking still is youth unemployment. The Eurozone youth unemployment rate has averaged more than 19% between 1999 and 2017 and reached almost 25% at the worst point of the Great Recession in 2013;⁵⁵ it was still 19% in 2017 (Figure 7). The greater flexibilities of the UK and US labour markets are also apparent from Figs. 8 and 9: in both countries, youth unemployment in 2017 was well below the historical average.

Figure 7: Eurozone Youth Unemployment Rate 1999-2017



⁵⁵ In some Mediterranean countries, the youth unemployment rate exceeded 50%, e.g., Spain with 53% and Greece with 52% (<https://www.weforum.org/agenda/2015/08/which-countries-have-the-highest-rates-of-youth-unemployment/>).

Figure 8: UK Youth Unemployment Rate 1999-2017



Figure 9: US Youth Unemployment Rate 1999-2017



Next, we look at government debt to GDP ratios. Figure 10 shows that the Eurozone countries in aggregate have never been below the Maastricht 60% limit during the entire existence of the euro. The average ratio is 76% and the current ratio is almost 90%. Figure 11 shows that the worst offenders in 2015 were largely the western and southern states of Ireland, France, Spain, Belgium, Cyprus, Portugal, Italy and Greece. Greece has a national debt of 175% of its GDP. As John Whittaker and Bernard Connolly (2003) point out: ‘the euro has enabled fiscally-lax governments to gain from Germany’s reputation for fiscal and monetary prudence. All governments face continual pressure to tax less and spend more. Membership of the EMU “club” dilutes the financial discipline that would be faced by an independent government and makes it more likely that some governments will succumb to

this pressure. ...It is now clear that the Stability [and Growth] Pact is not being observed'.⁵⁶ Figures 12 and 13 show that the UK and US, despite having an independent government, also both perform badly using this metric.

Figure 10: Eurozone Government Debt to GDP Ratio 1999-2017

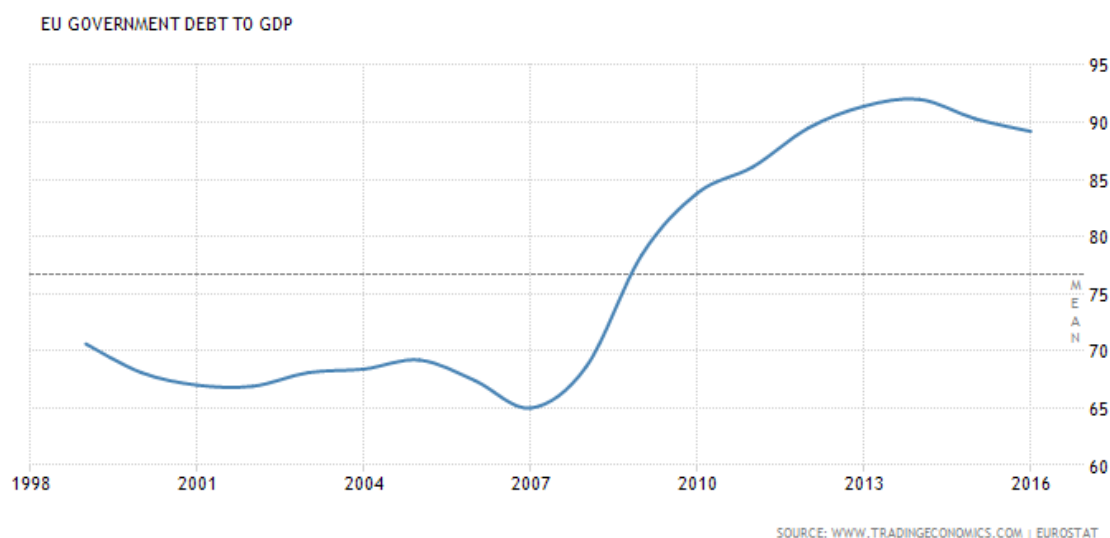
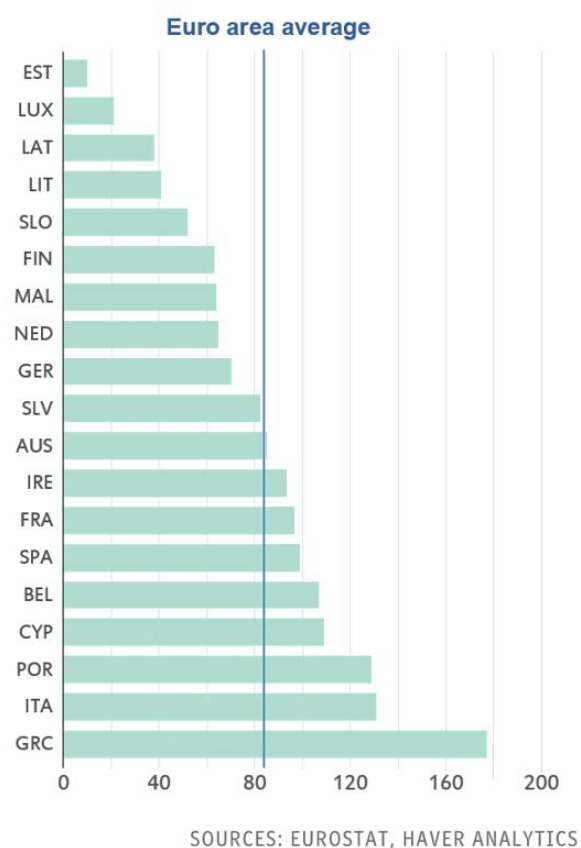


Figure 11: Individual Eurozone Government Debt to GDP Ratios in 2015



⁵⁶ John Whittaker and Bernard Connolly (2003) What Will Happen to the Euro, *Economic Affairs*, 23(1): 66-71.

Figure 12: UK Government Debt to GDP Ratio 1999-2017

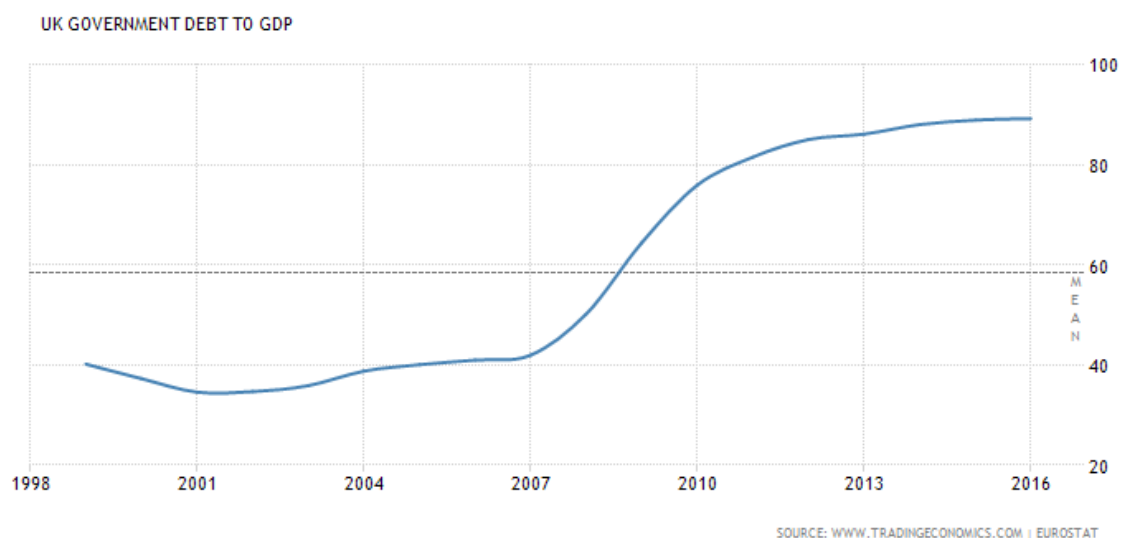
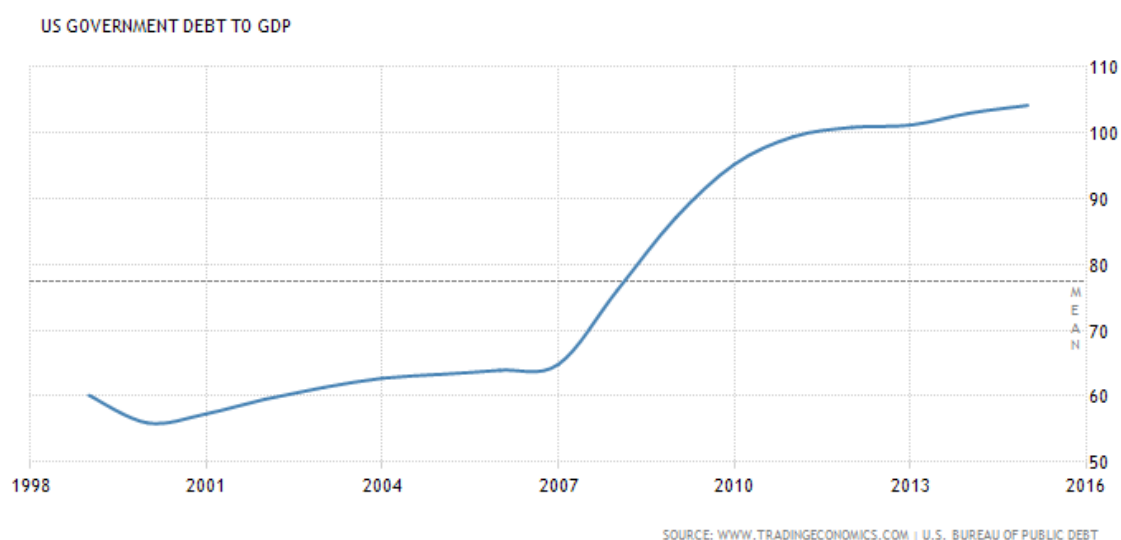


Figure 13: US Government Debt to GDP Ratio 1999-2017

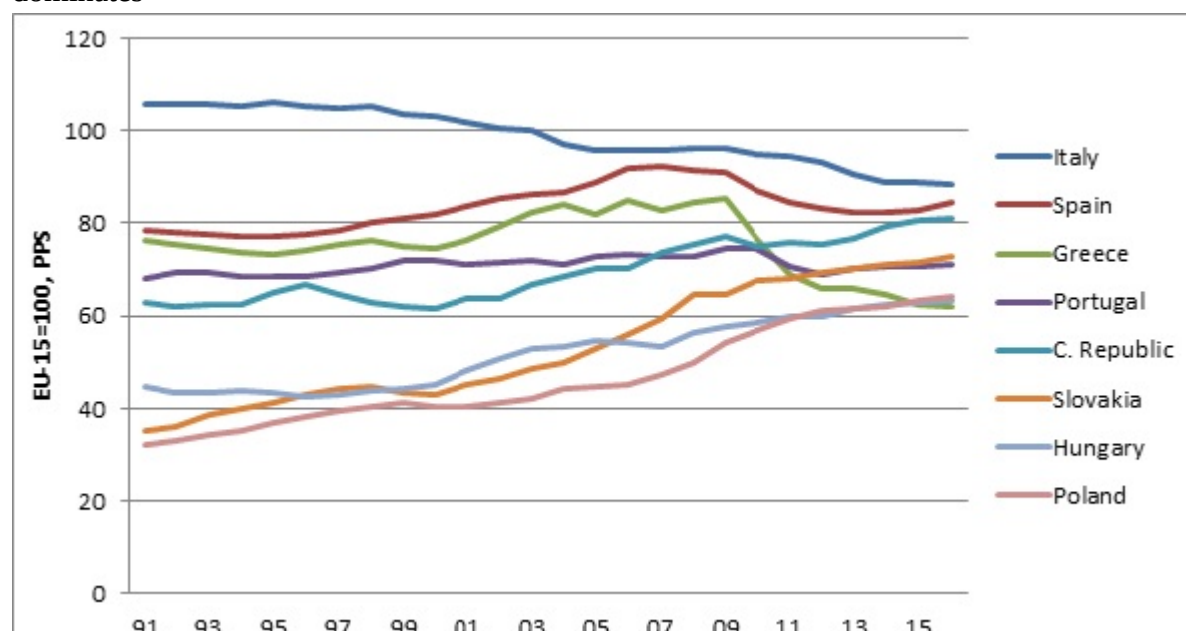


Another piece of evidence comes from an examination of the trend changes in rates of per capita real GDP amongst the Eurozone member states. As previously mentioned, the EU is relying on a combination of market forces (in particular, labour and capital mobility) and structural and investment funds to achieve long-run convergence of per capita GDP. If this policy is successful, there will be a ‘catch-up’ effect that dominates, with the poorer regions catching up over time with the richer regions. This could lead to more highly correlated business cycles in the different regions of the EU, leading to Mundell’s first condition being satisfied endogenously *after* the introduction of currency union. On the other hand, the same policy could equally well lead to the domination of an ‘agglomeration’ effect – the tendency

of capital and skills to concentrate in wealthier areas which then become even wealthier. An example of this is the German car industry, which has used its dominant position in the German market to create a dominant position in the Eurozone. This could lead to an increase in specialisation which would reduce the correlation in business cycles between members and increase the vulnerability to differential macroeconomic shocks within the currency union.⁵⁷

Figure 14 shows the states, mainly in Central and Eastern Europe, where the ‘catch-up’ effect dominates, while Figure 15 shows some of the countries where the ‘agglomeration’ effect dominates – these are Germany, Benelux, the Nordics and Austria. There is still a wide divergence between living standards within the Eurozone and a number of studies have shown the overall dominance of the ‘agglomeration’ effect.⁵⁸ The implication of this is that the core countries will continue to grow by attracting capital and the highest quality labour, while the peripheral countries will lag behind, despite the Stability and Growth Pact.

Figure 14: Per capita GDP relative to the EU average in countries where the catch-up effect dominates

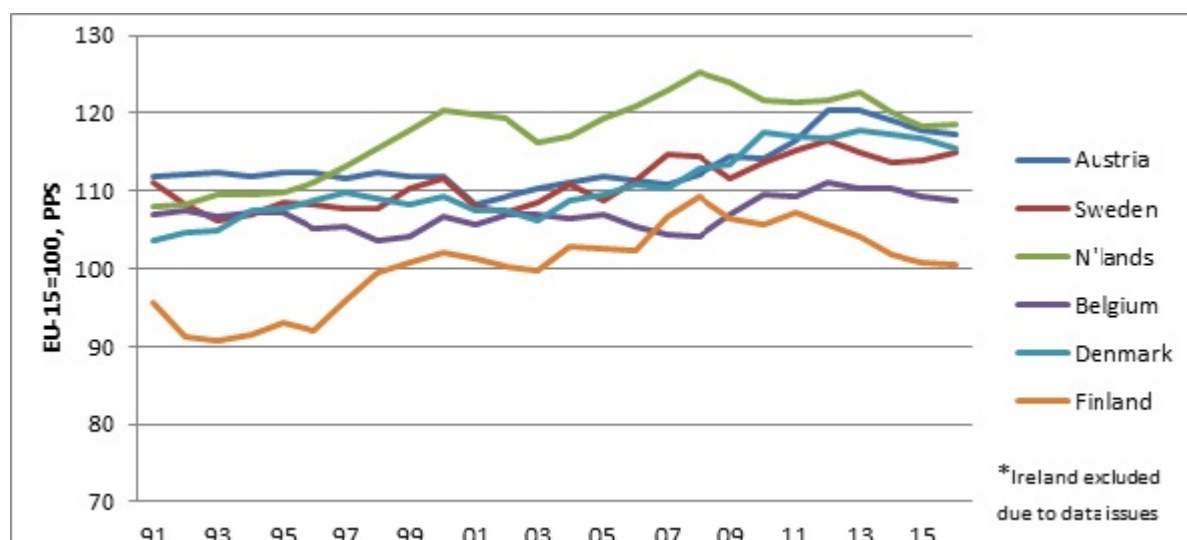


Source: European Commission

⁵⁷ P. Kenen (1969) The Theory of Optimum Currency Areas: An Eclectic View. In R. Mundell and R. Swoboda, A. (eds.) *Monetary Problems of the International Economy*, University of Chicago Press, Chicago, 41-60; Paul Krugman, (1991) *Geography and Trade*, MIT Press, Cambridge, MA.

⁵⁸ Hiroya Akiba and Yukihiro Iida (2009) Monetary Unions and Endogeneity of the OCA Criteria, *Global Economic Review*, 38, 101-116; Simon Tilford (2017) *Is the EU's Single Market leading to Convergence or Divergence?*, Centre for European Reform, 4 April.

Figure 15: Per capita GDP relative to the EU average in countries where the agglomeration effect dominates



Source: European Commission

Two countries, in particular, stand out as being in deep trouble in the Eurozone – Greece and Italy. Greece's GDP has fallen by 26% since the GFC.⁵⁹ Greece's problems are well known. What is less well known is the plight of Italy, one of the founding members of the EU. The IMF's *World Economic Outlook* predicts that Italy's per capita GDP as a percentage of the EU average will fall from 119% in 1999 to 88% in 2021. This contrasts with Poland whose relative income over the same period will rise from 43% to 77%.⁶⁰ The main reason for Italy's predicament appears to be that aggregate labour productivity abruptly stopped growing after 1995 on account of the failure of a non-meritocratic managerial system to capitalise on the information and communications technology (ITC) revolution.⁶¹ A secondary reason is the drag on economic growth caused by Italy's huge expenditure on state pension provision, amounting to 16% of GDP, the second highest level in the EU after Greece. In 2011, in an attempt to curtail the growth in pension spending, the government increased the state pension age to 67 from 2019, but the Italian parliament is debating whether to exclude certain groups of workers, such as teachers, nurses and building sector workers from this increase.⁶²

A further piece of evidence comes from the volume of intra-EU trade. Various studies have shown that this did increase after 1999 when the euro was introduced, but there are widely differing estimates of the size of the increase. Using different models and measures, these

⁵⁹ http://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment_statistics;

<http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00115&plugin=1>

⁶⁰ Simon Tilford (2017) *Is the EU's Single Market leading to Convergence or Divergence?*, Centre for European Reform, 4 April.

⁶¹ Bruno Pellegrino and Luigi Zingales (2017) *Diagnosing the Italian Disease*, NBER Working Paper no. w23964.

⁶² Carlo Moreolo (2017) Italy considers unwinding 'Fornero' law's state pension age rise, *IPE*, 4 December.

studies showed that intra-EU trade increased from an average of 15% of EU GDP between 1988 and 1998 to 20% between 1999 and 2009,⁶³ or by between 3% and 40%, compared with bilateral trade between countries that had not adopted the euro.⁶⁴ So the degree of economic integration did increase after 1999, but the extent could well be lower than previously hoped.

But how much of this increase is due to the euro itself and how much is due the introduction of the Single Market? As previously mentioned, there is little evidence that the Single Market has so far helped to develop an integrated EU-wide market in services. In 2015, intra-EU and extra-EU service exports to the EU were 6.9% and 5.9% of EU GDP, respectively, a difference of just 1%. Further, exports of services to the EU by countries outside the EU have grown at a faster rate (0.5% p.a.) than those of EU members to each other.⁶⁵ So the increase in intra-EU trade must have been almost entirely in the form of goods. It also seems to be almost entirely the result of the euro, since the Single Market itself is ‘not visible in the macro statistics.... the data are telling us a different story – that the Single Market is a giant economic non-event, for both the EU and the UK’.^{66, 67}

This is confirmed by the absence of aggregate productivity growth in the EU. The idea that the Eurozone and the Single Market ‘would transform EU economic performance has proved to be wide of the mark: there is no indication in the growth of output or productivity... that would support this contention’.⁶⁸ The IMF has also recently pointed out that ‘stagnant productivity growth has impeded the adjustment process in the euro area and contributed to stalling income convergence among countries. [It] urged countries to press ahead with

⁶³ Paul Krugman, Maurice Obstfeld and Marc Melitz (2012) *International Economics: Theory and Policy*, Pearson Education Limited, Harlow.

⁶⁴ Maurice J.G. Bun and Franc J.G.M. Klaassen (2002). *Has the Euro Increased Trade?*, Tinbergen Institute Discussion Paper No. 02-108/2, University of Amsterdam; Alejandro Micco, Ernesto Stein and Guillermo Ordoñez (2003) *The Currency Union Effect on Trade: Early Evidence from EMU*, Inter-American Development Bank Working Paper #490; R. Baldwin, F. Skudelny and D. Taglioni (2005) *Trade Effects of the Euro: Evidence from Sectoral Data*, ECB Working paper Series, nr. 446; Maurice J.G. Bun and Franc J.G.M. Klaassen (2007) The Euro Effect on Trade is not as Large as Commonly Thought, *Oxford Bulletin of Economics and Statistics*, 69, 473–496. The latter study argues that ‘Existing studies on the impact of the euro on goods trade report increments between 5% and 40%. These estimates are based on standard panel gravity models for the level of trade. We show that the residuals from these models exhibit upwards trends over time for the euro countries, and that this leads to an upward bias in the estimated euro effect. To correct for that, we extend the standard model by including a time trend that may have different effects across country-pairs. This results in an estimated euro impact of only 3%’.

⁶⁵ Michael Burrage (2017) *It’s Quite OK to Walk Away: A review of the UK’s Brexit options with the help of seven international databases*, Civitas, April; Michael Burrage (2017) The Single Market promised much, but delivered little, *CAPX*, 27 April; Michael Burrage (2017) The disadvantages of Single Market membership remain as clear as ever, *BrexitCentral*, 16 July.

⁶⁶ Wolfgang Münchau (2015) Would it actually matter if we left the EU?, *Financial Times*, 18 June.

⁶⁷ The UK, in particular, has seen little economic benefit from the Single Market: ‘UK goods exports to the 11 fellow founding members of the Single Market have grown over the years 1993-2015 at a compound annual growth rate (CAGR) of just 1.0%. This compares unfavourably with the mean growth rate of the goods exports of Canada, Japan, Singapore and the US and 10 other non-member countries trading with the same 11 founding members under WTO rules, who had a CAGR of 1.93%, which is almost twice as high. It also compares unfavourably with UK goods exports to the 111 countries with which it trades under WTO rules. These have grown over the same 23 years nearly three times faster, at a CAGR of 2.88%’ (Michael Burrage (2017) The disadvantages of Single Market membership remain as clear as ever, *BrexitCentral*, 16 July).

⁶⁸ Ali M. El-Agraa and Brian Ardy (2011, pp.110-112) *The European Union: Economics and Policies*, Cambridge University Press, Cambridge.

structural reforms to improve productivity. Such reforms can have a larger impact in countries with lower productivity levels, thereby promoting income convergence and reducing competitiveness gaps'.⁶⁹

Professor Nicholas Crafts, the economic historian from Warwick University, has pointed out that the Eurozone aimed to improve trade and growth, but it is not equipped to handle a depressed economy. He argues that policy is needed to escape a liquidity trap, either by unconventional monetary policy or a strong fiscal stimulus. But the Eurozone cannot deliver either, and the ECB is the wrong central bank for a depression, evidenced by its slow move to quantitative easing (QE)^{70,71} He concludes that 'survival entails serious reform: a fully federal solution and deep economic integration, but this is hard to achieve'.⁷²

Even strong supporters of the euro project concede that 'Some important expected benefits have not yet fully materialised. With the euro, we would expect greater price transparency to reduce price discrimination and decrease market segmentation, therefore fostering competition across the euro area. This effect is still missing in several markets for goods and services (for example, we still don't have a full convergence of car prices). The impact of internet-based providers that can sell and ship their merchandise across countries is also still modest. To put this differently, the service industry has not yet reaped the full possible benefits from EMU'.⁷³

Is the Eurozone an OCA?

It soon became clear that most of Mundell's conditions would fail to be satisfied in the Eurozone.

Its different regions do not have similar business cycles, so when the ECB, which is located in Frankfurt, initially set a low European-wide interest rate to suit the economic conditions in the core Eurozone countries, in particular Germany, this led to an unsustainable boom – especially a property boom – in peripheral countries, such as Ireland and Spain. Higher interest rates were needed in these two countries to curtail the boom. This did not happen and instead both countries experienced a construction-led economic collapse that gravely damaged their banking systems when the Great Recession started in 2008. This contributed to

⁶⁹ International Monetary Fund (2017) *Euro Area Policies: Article IV Consultation*, Country Report No. 17/235, July.

⁷⁰ Quantitative easing is an unconventional form of monetary policy where a central bank creates new money electronically to buy financial assets, like government bonds. This will raise the prices of these financial assets and lower their yields. The hope is that the resulting increase in financial wealth and the lower returns on savings will lead to an increase in private sector spending in the economy;
<http://www.bankofengland.co.uk/monetarypolicy/pages/qe/default.aspx>

⁷¹ The problems with implementing QE in the Eurozone are discussed below.

⁷² Britain and Europe: The Political and Economic Repercussions of the Crisis, British Academy Conference, 23 June 2015; <http://ukandeu.ac.uk/explainers/britain-and-europe-the-political-and-economic-repercussions-of-the-crisis/>

⁷³ Francesco Paolo Mongelli (2008) *European Economic and Monetary Integration, and the Optimum Currency Area Theory*, Economic Papers 302, Directorate-General for Economic and Financial Affairs, European Commission.

the European sovereign debt crisis which started in 2009 and has not yet finished. Most significantly, the original EMU agreement had a ‘no bailout clause’.⁷⁴ In other words, there was going to be *no* system at EU level for dealing with the consequences of the distortions to the peripheral economies caused by the operation of a single European-wide monetary policy – just as there was no formal system for redistributing trade surpluses and deficits within the Eurozone. Instead, each member state was expected to rely on market forces alone to deal with any economic or banking crisis that Eurozone membership throws up. In the event, Irish and Spanish GDP contracted by 15.6% and 5.3%, respectively, between 2008 and 2010, and the Irish banking industry collapsed and was almost completely nationalised in 2009. While, the short-term impact of the crisis was less severe in Spain – it did not have to enter a full IMF financial stability programme – the longer term impact was worse and Spain’s unemployment rate remains well above that of Ireland.⁷⁵ The experience of the GFC shows that the Eurozone is a long way from satisfying the OCA criteria endogenously – it does not have the market flexibilities or the stabilising policy mechanisms to deal with economic shocks. The consequences are flat lining GDP growth and persistently high unemployment in the peripheral states and a perpetual banking crisis across the whole Eurozone.

The fact that the Eurozone is not an OCA was recognised as far back as the 1990s by economists Milton Friedman and Martin Feldstein. Friedman wrote: ‘Europe exemplifies a situation unfavourable to a common currency. It is composed of separate nations, speaking different languages, with different customs, and having citizens feeling far greater loyalty and attachment to their own country than to a common market or to the idea of Europe’.⁷⁶ Feldstein argued that the economic costs were so high, that a decision to adopt a single currency would be a political decision.⁷⁷ We will return to this point after we examine how Target2 works.

How does Target2 work?

Consider a German manufacturer (A) who banks with Deutsche Bank and an Italian consumer (B) who banks with Banca Monte dei Paschi di Siena (MPS).⁷⁸ Also involved are the German central bank (Bundesbank), the Italian central bank (Banca d’Italia) and the ECB.

A sells €100 worth of goods to B, but B does not have the money to pay for these goods. So B borrows €100 from MPS. MPS, in turn, increases its refinancing with Banca d’Italia by €100 (i.e., borrows €100 from the Italian central bank). The €100 is transferred via Target2 to the Bundesbank. The Bundesbank receives a credit of €100 from the ECB and Banca d’Italia

⁷⁴ The ‘no bailout clause’ was enshrined in Articles 123 and 125 of the Treaty on the Functioning of the European Union (which replaced the Treaty of Rome).

⁷⁵ Michelle Norris and Michael Byrne (2015) Asset Price Keynesianism, Regional Imbalances and the Irish and Spanish Housing Booms and Busts, *UCD Geary Institute For Public Policy Discussion Paper Series WP2015/14*, July; <http://www.ucd.ie/geary/static/publications/workingpapers/gearywp201514.pdf>

⁷⁶ *The Times*, 19 November 1997.

⁷⁷ Martin Feldstein (1992) Europe’s Monetary Union: The case against EMU, *The Economist*, 13 June. This view is also shared by Charles Goodhart (1998) The Two Concepts of Money: Implications for the Analysis of Optimal Currency Areas, *European Journal of Political Economy*, 14, 407-432.

⁷⁸ The world’s oldest bank founded in 1472.

receives a debit. The Bundesbank transfers €100 to Deutsche Bank which, in turn, reduces its refinancing with the Bundesbank (i.e., receives a claim for €100 against the German central bank). Deutsche Bank credits A's account with €100.

To reiterate, the importation of goods to Italy from Germany – which leads to or increases both a current account surplus in Germany and a current account deficit in Italy – has been financed by MPS creating liquidity in the form of a loan deposited in B's bank account. The liquidity creation results in a Target2 debit for Banca d'Italia and a Target2 credit for the Bundesbank.

In this example, Target2 turns the private debt of an Italian consumer into the national debt⁷⁹ of the Italian government owed to the other national governments in the Eurozone (via their ownership of their NCBs which, in turn, own the ECB):^{80, 81}

$$\begin{aligned} \text{Italy's national debt to Eurozone governments} = & \\ & \text{Italian government bonds held by other Eurozone national central banks and} \\ & \text{the ECB} \\ & + \text{Target2 liability of Banca d'Italia (owed to the ECB)} \end{aligned} \quad (1)$$

The *only* way of extinguishing a Target2 liability is through private financial inflows. This is because an increase in a Target2 liability is equal to the overall balance of payments deficit:⁸²

$$\begin{aligned} \text{Increase in Target2 liability of Banca d'Italia} = & \\ & \text{Net redemptions of Italian government bonds held by other Eurozone national} \\ & \text{central banks and the ECB}^{83} \\ & + \text{Interest on Italian government bonds held by other Eurozone national central} \\ & \text{banks and the ECB} \\ & + \text{Net private financial outflows} \end{aligned} \quad (2)$$

⁷⁹ Defined to include Banca d'Italia's Eurosystem liabilities.

⁸⁰ Adapted from John Whittaker (2016, equation (1)) *Eurosystem Debts do Matter*, Lancaster University Management School, 1 February. Whittaker points out that 'Eurosystem debts are a peculiar form of debt with no contract or understanding about the terms of repayment. This implies that a NCB cannot default on its Eurosystem liability because it has no obligation to repay. A country's intra-Eurosystem liabilities are nonetheless loans from other countries. For a country that has received official loans, its intra-Eurosystem liabilities should therefore be added to its official loans'. This contrasts with 'the US where there is annual settlement of the inter-district balances of the Feds (Federal Reserve Banks), using Federal government debt or agency debt. The US system also differs from the Eurosystem in that the Feds are not associated with states: each Fed deals with banks in several states and Fed profits go to the US government. Intra-Eurosystem settlement would be infeasible because debtor NCBs do not have sufficient suitable assets'.

⁸¹ This equation is valid if there is no banknote adjustment, otherwise the final term in the equation is replaced by Eurosystem liability of Banca d'Italia = Target2 liability of Banca d'Italia *less* the banknote adjustment. If Banca d'Italia has issued a lower value of banknotes than its allocation, this reduces its Eurosystem liability to the ECB (and vice versa). The role of banknotes is discussed in Appendix A, but for ease of understanding, we will assume a zero banknote adjustment in the main body of the paper, implying that the Eurosystem liability of Banca d'Italia is equal to its Target2 liability.

⁸² Adapted from John Whittaker (2016, equation (2)) *Eurosystem Debts do Matter*, Lancaster University Management School, 1 February.

⁸³ The redemption of an Italian government bond held by other Eurozone national central banks and the ECB will lead to an identical increase the Target2 liability of Banca d'Italia with no net change in Italian national indebtedness to other Eurozone governments.

where net private financial outflows equals the private-sector balance of payments deficit, which, in turn, equals the sum of the private current account deficit and net private capital outflows (unrelated to trade) on both the capital and financial accounts (including private transactions in financial assets).⁸⁴

Equations (1) and (2) imply:⁸⁵

$$\begin{aligned} &\text{Increase in Italian national debt to other Eurozone governments} = \\ &\quad \text{Interest on national debt to other Eurozone governments} \\ &\quad - \text{Net private financial inflows} \end{aligned} \tag{3}$$

This shows that private financial inflows (e.g., a current account surplus or net investment inflows or lending by other Eurozone banks to Italian banks) are the *only* way of reducing Italian national indebtedness to other Eurozone governments.

Suppose B never repays its loan of €100 to MPS,⁸⁶ then all that happens is that Target2 records a permanent debit against Banca d'Italia of €100 and records a permanent credit for the Bundesbank of €100. 'Since central bank reserves are perceived as the ultimate safe assets',⁸⁷ everyone is happy. The Italian consumer is happy because he now has the use of goods that are never ultimately paid for. MPS is happy because it has been bailed out by Banca d'Italia for another non-performing loan. Banca d'Italia has a liability against the ECB which will never be extinguished. The Bundesbank holds an asset from the Italian government that is 'risk-free'. And Deutsche Bank has paid the German exporter for his splendid efforts in increasing Germany's trade surplus yet again.

Figure 16 shows the Target2 balances of Germany and Italy since 2001. Three phases are clearly visible. Prior to 2007, there is very little net Target2 activity. The reason for this is that during the early years of the euro's existence, commercial banks in core countries, such as Germany, were happy to lend to commercial banks in peripheral countries, such as Italy, Ireland and Spain, through the international inter-bank market on an unsecured basis and this did not involve Target2.

This market (and the wholesale money markets more generally) dried up in August 2007 at the beginning of the GFC.⁸⁸ This was the first significant asymmetric shock to the Eurozone,

⁸⁴ The public-sector balance of payments deficit = net redemptions + interest.

⁸⁵ Adapted from John Whittaker (2016, equation (3)) *Eurosystem Debts do Matter*, Lancaster University Management School, 1 February.

⁸⁶ Or equivalently, keeps rolling over its loan with the bank without any real intention of repaying it – a practice known as 'evergreening'.

⁸⁷ 'Sovereign debt in the euro area: too safe or too risky?', Keynote address by Benoît Cœuré, member of the Executive Board of the ECB, at Harvard University's Minda de Gunzburg Center for European Studies in Cambridge, MA, 3 November 2016; <https://www.ecb.europa.eu/press/key/date/2016/html/sp161103.en.html>. According to another Executive Board member: 'The only risk-free assets in the euro area are the ECB's own liabilities', see 'Public sector security purchases and monetary dominance in a monetary union without a fiscal union', Speech by Peter Praet, member of the Executive Board of the ECB, at the Conference The ECB and Its Watchers XVI, Contribution to the Panel on Low-interest-rate Policy and Non-standard Monetary Policy Measures: Effectiveness and Challenges, Frankfurt am Main, 11 March 2015; https://www.ecb.europa.eu/press/key/date/2015/html/sp150311_1.en.html

⁸⁸ It has since returned but only on a fully collateralised basis and it is less expensive for the banking system to use Target2.

since the euro's introduction and provided striking evidence that the Eurozone failed to satisfy Mundell's first condition for an OCA. The second phase in Figure 16 covers the period of the GFC and its aftermath between 2007 and 2014. The GFC led to massive capital flight by the residents of peripheral Eurozone countries whose banks were perceived to be in difficulties and Target2 facilitated this. Figure 16 shows that Italian residents moved significant amounts of money from their accounts in Italian banks to accounts opened in German banks. As a result, there was a fall in reserves held by the Italian banks. To pay their depositors, Italian banks increased their refinancing with and received liquidity from the Banca d'Italia. The German banks increased their reserves and reduced their refinancing with the Bundesbank. Banca d'Italia receives a Target2 debit, while the Bundesbank gets a corresponding credit.⁸⁹

The Bank for International Settlements (BIS) – the global central bank to the world's national central banks – concedes that in the period between the GFC and mid-2012, 'Target2 balances grew strongly due to intra-euro area capital flight. At the time, sovereign market strains spiked and redenomination risk came to the fore in parts of the euro area. Private capital fled from Ireland, Italy, Greece, Portugal and Spain into markets perceived to be safer, such as Germany, Luxembourg and the Netherlands'.⁹⁰ Figure 17 illustrates this for Spain and Luxembourg in addition to Germany and Italy. In December 2017, the Bundesbank and the Luxembourg central bank had Target2 credits of €871bn and €192bn, respectively, while the ECB, the Bank of Spain and Banca d'Italia had debits of €229bn, €374bn and €433bn, respectively.⁹¹ In addition, no interest is received or paid on these credits and debits.⁹²

The third phase in Figure 16 covers the period of Eurozone quantitative easing (QE) after March 2015. The Great Recession that followed the GFC persisted in the Eurozone and, in March 2015, the ECB began a policy of QE to boost the Eurozone economies. QE is principally implemented by the NCBs buying their own government bonds in proportion to their capital key, i.e., in proportion to the NCB's share in the capital of the ECB.⁹³ The bond sellers in deficit countries immediately transfer the proceeds to surplus countries via Target2, in large part because of concerns about the credit worthiness of their banking system.⁹⁴ Despite the clear evidence of this in Figures 16 and 17, BIS argues that these 'record Target2 balances should be viewed as a benign by-product of the decentralised implementation of the asset purchase programme [as part of the ECB's QE programme]'.⁹⁵

⁸⁹ To reiterate, capital flight is a private financial outflow which increases Italy's balance of payments deficit and hence its Target2 liability.

⁹⁰ Bank for International Settlements (2017) *Quarterly Report*, March; www.bis.org/publ/qtrpdf/r_qt1703a.htm.

⁹¹ <http://sdw.ecb.europa.eu/reports.do?node=1000004859>

⁹² Since 16 March 2016, the refinancing rate has been 0.0%;

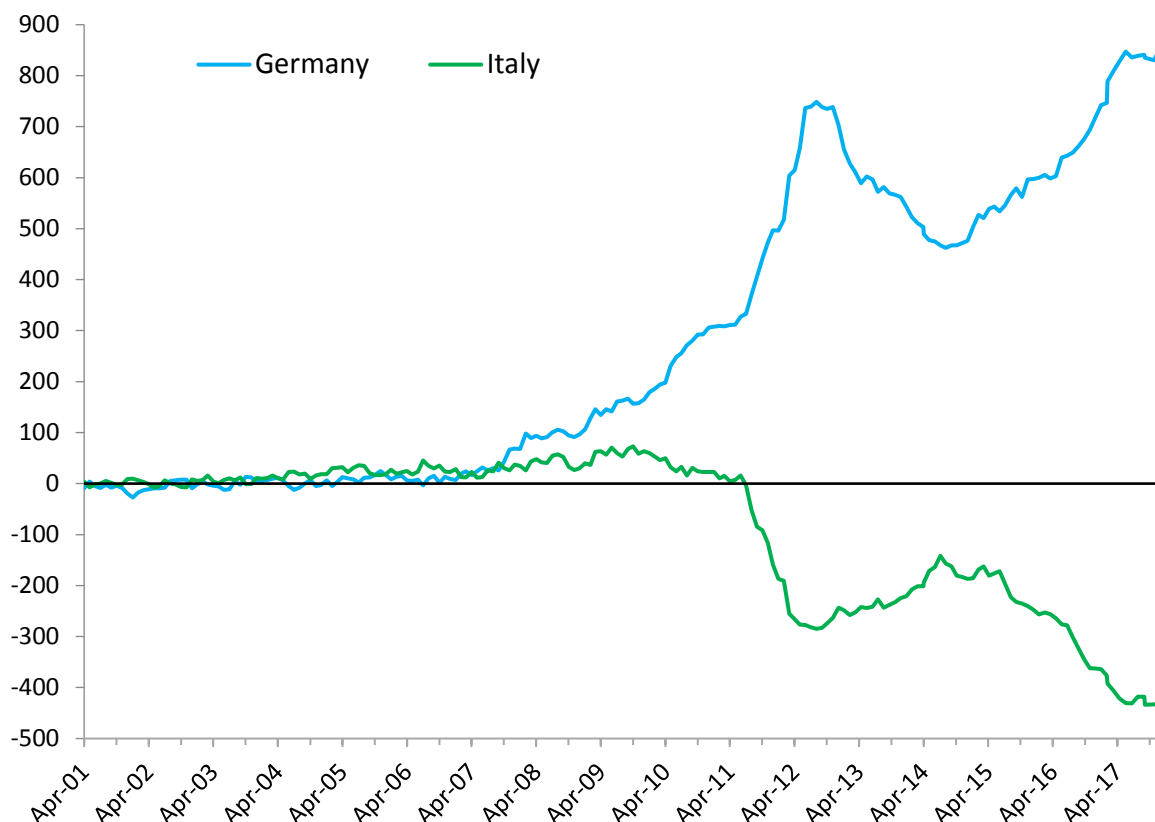
https://www.ecb.europa.eu/stats/policy_and_exchange_rates/key_ecb_interest_rates/html/index.en.html

⁹³ See Table B1 in the Appendix B. Later, we show that the capital key shares are being routinely violated in the ECB's QE programme.

⁹⁴ Ambrose Evans-Pritchard discusses this matter in more detail below.

⁹⁵ Bank for International Settlements (2017) *Quarterly Report*, March ; www.bis.org/publ/qtrpdf/r_qt1703a.htm.

Figure 16: Target2 balances of Germany and Italy (€bn), April 2001 – December 2017⁹⁶



Source: Euro Crisis Monitor, Institute of Empirical Economic Research, Osnabrück University. Data source: European Central Bank

The reality is rather different. The ECB sets collateral standards for refinancing – including for QE purchases – but has progressively weakened these, to enable peripheral NCBs to continue providing liquidity, by, for example, reducing the minimum credit ratings for government debt and other securities, and accepting banks own-issued bonds with a government guarantee. When the quality of available collateral became so poor that further easing could no longer be justified, the ECB allowed NCBs to extend Emergency Liquidity Assistance (ELA)⁹⁷ where the NCB itself approves the collateral, although the credit risk is supposed to be borne by the NCB itself rather than pooled via the ECB, and there is a lot of room for judgement and interpretation.⁹⁸

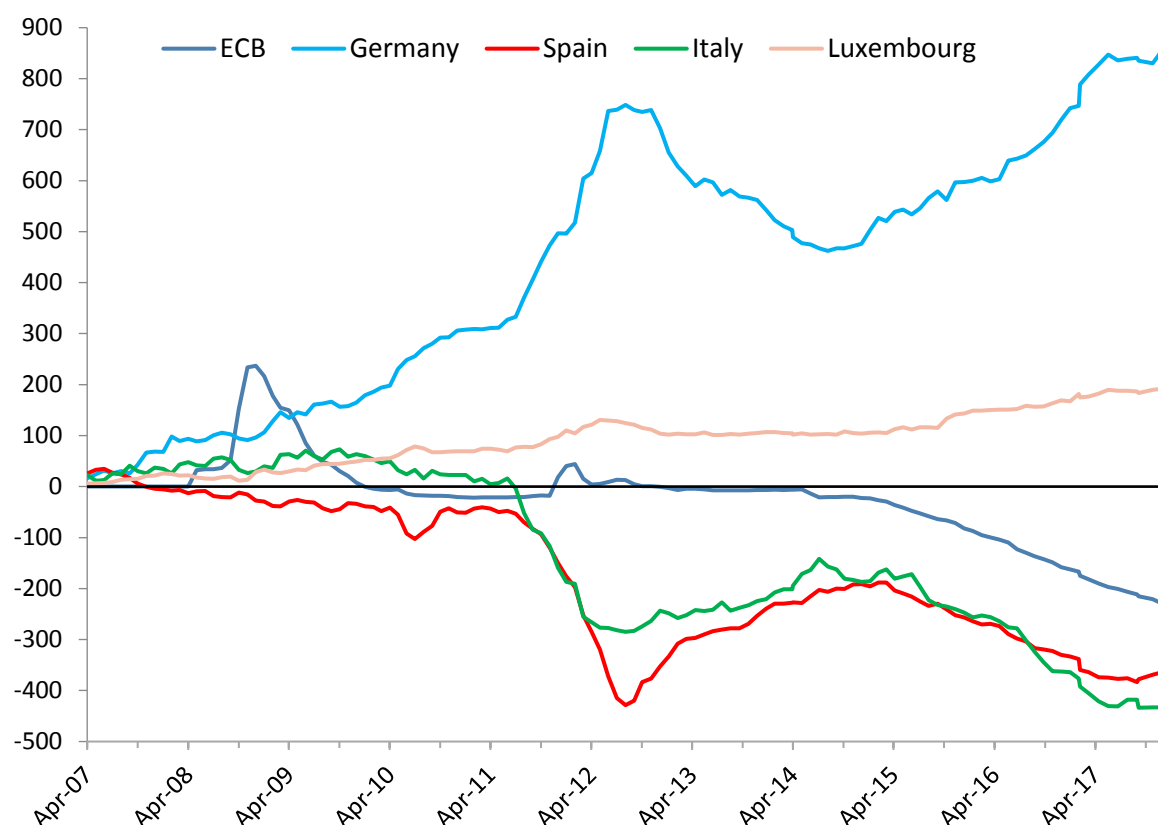
⁹⁶ <http://www.eurocrisismonitor.com/>;

https://www.ecb.europa.eu/stats/policy_and_exchange_rates/target_balances/html/index.en.html

⁹⁷ See the ECB's *ELA Procedures*; https://www.ecb.europa.eu/pub/pdf/other/201402_elaprocedures.en.pdf

⁹⁸ Despite the Eurosystem Credit Assessment Framework (ECAF); <https://www.ecb.europa.eu/paym/coll/risk/ecaf/html/index.en.html>. See Karl Whelan (2015) *What's Going On with Greece and the ECB?*, Medium.com: Bull Market, 1 February; John Whittaker (2016) *Eurosystem Debts do Matter*, Lancaster University Management School, 1 February.

Figure 17: Target2 balances in the Eurozone (€bn), April 2007 – December 2017⁹⁹



Source: Euro Crisis Monitor, Institute of Empirical Economic Research, Osnabrück University. Data source: European Central Bank

To illustrate, consider again the Italian bank that made the €100 loan to the Italian consumer to import goods from Germany. The bank can use that loan – which is an asset of the bank – as collateral for a new loan (less a haircut) to another Italian consumer wishing to import goods from Germany. But the bank has considerable flexibility in choosing the size of the haircut. The smaller the haircut, the larger does Banca d'Italia's resulting Eurosystem debit become. Target2 debits are therefore an unambiguous sign that liquidity is being created in one part of the Eurozone to finance the acquisition of goods imported from another part (as well as facilitating capital flight). Despite official denials, this is *de facto* a transfer from a surplus member of the Eurozone to a deficit member, since the credit status of many of these loan is so weak that they are extremely unlikely to be repaid.

A study by Banca d'Italia concluded that the main reasons for an increase in Target2 liabilities in Greece were increases in the current account deficit and bank deposit runs. In other countries, it was mainly due to private capital outflows in securities and interbank markets.¹⁰⁰

⁹⁹ <http://www.eurocrisismonitor.com/>;

https://www.ecb.europa.eu/stats/policy_and_exchange_rates/target_balances/html/index.en.html

¹⁰⁰ Martina Cecioni and Giuseppe Ferrero (2012) Determinants of TARGET2 imbalances, Banca d'Italia Occasional Paper 136, September.

How Target2 bails out the euro

Given that there is no limit to the size of Target2 balances and there is also no requirement for central bank accounts with Target2 to be settled, it is clear that Target2 has since 2007 become the bailout system that keeps the euro afloat. It is the facility through which Mundell's fourth criterion – the system of regional redistributions whereby regions with trade deficits acquire funding from regions with trade surpluses – operates in the Eurozone. Recall that a country's balance of payments deficit is identical to the increase in its Target2 debits and Target2 debits never need to be repaid. Target2 also facilitates private transactions in financial assets, i.e., capital flight, whenever asymmetric shocks result in a loss of confidence in a particular Eurozone member's banking system.

Initially, the ECB refused to accept that Target2 had become a bailout system, insisting that it was simply a payments system for the Eurozone. But it did not publish the Target2 balances of the individual Eurozone members' NCBs. This information was hidden away in the NCBs' balance sheets.

It was the German academic Hans-Werner Sinn¹⁰¹ who first discovered what was going on in early 2011 by examining the central banks' balance sheets. He found that Target2 was far more than a simple payments system. It had become intimately involved with the emergence of systematic balance of payments surpluses and deficits amongst the Eurozone member states, with shifting the refinancing of commercial bank credit from the central banks of states with weak economies to the central banks of states with strong economies, and with facilitating cross-border private sector capital movements away from states with financially weak banks, such as those in Greece, Ireland, Portugal, Spain and Italy, to the stronger core banks.

The evidence for this was that the increase in Target2 liabilities of a member state equalled the sum of the current account deficit and net capital outflows (as equation (2) above shows). Sinn concluded that Target2 was a *de facto* a bailout system for the euro.¹⁰² This claim was strongly denied by the ECB. Jürgen Stark, a member of its Executive Board, even went as far as saying that some commentators could lose their reputation as serious academics by claiming that Target2 functions as a bailout system.¹⁰³ The ECB refused to publish the Target2 balances of the individual Eurozone NCBs until September 2015.

¹⁰¹ President emeritus at the Ifo Institute and Professor at the University of Munich.

¹⁰² Hans-Werner Sinn (2012) *Die Target-Falle: Gefahren für unser Geld und unsere Kinder*, Hanser, Munich; Hans-Werner Sinn (2014) *The Euro Trap: On Bursting Bubbles, Budgets, and Beliefs*, Oxford University Press, Oxford; Hans-Werner Sinn (2016) 'Europe's Secret Bailout', *Project Syndicate*, 28 November, www.hanswernersinn.de/en/PS_28112016

¹⁰³ <https://en.wikipedia.org/wiki/TARGET2>

So Target2 saves the euro?

Well only up to a point. The recycling of trade surpluses back to deficit economies – Mundell’s fourth criterion – could, in principle, fully compensate for the failure of the other three criteria to be satisfied, and so could contribute to the euro achieving OCA status. Target2 is certainly helping with this, although this was not one of its original aims and is still not an officially recognised aim.

But there are huge economic problems in the way that Target2 and the other rescue packages for the euro have been operating.

First, Target2 has, since 2007, been helping to convert the private debts of individuals, companies and commercial banks into sovereign debts and then monetise them. To illustrate, consider the previous example of the German manufacturer (A) and the Italian consumer (B). Suppose now that A sells €100 worth of goods to B on credit, so has capital of €100 in the form a private-sector Italian debt obligation. Target2 allows the German owner of this illiquid debt obligation to repatriate his capital, and, in in doing so, convert private German claims on an Italian resident into claims of the Bundesbank on Banca d’Italia via the ECB. In other words, Germany’s risky capital account deficit with Italy – the counterpart to its current account surplus – can be transformed into a risk-free asset via Target2.

Governments can also use Target2 for the same purpose. A classic example is the Greek government which was unable to raise long-term funding on the bond markets, but could continue to finance its deficits through borrowing from its commercial banks by selling them short-term treasury bills (e.g., €22.8bn in the year to June 2011, although the ECB imposed a treasury bill cap of €15bn in February 2015¹⁰⁴). These banks borrowed the funds to do this from the Bank of Greece – EU rules prevent the BoG lending directly to the government¹⁰⁵ – and the BoG, in turn, borrowed the funds from the ECB. Such backdoor funding of the Greek government via Target2 can continue indefinitely, so long as Greece stays in the Eurozone.^{106, 107}

In other words, Target2 is a way of creating liquidity to keep the Eurosystem afloat. If too little liquidity is created, then individuals, companies, banks and the government in a peripheral state might be unable to meet its day-to-day bills, the market could mark down the price of the government bonds held in the Target2 system as collateral, and taxpayers in surplus countries could lose out – in direct proportion to their capital key. If too much liquidity is created, this could have inflationary consequences which hits savers. Either way,

¹⁰⁴ Peter Spiegel (2015) Tsipras letter to Merkel: the annotated text, *Financial Times*, 22 March.

¹⁰⁵ By contrast, the UK government can borrow directly from the Bank of England using ‘Ways and Means Advances’.

¹⁰⁶ John Whittaker (2011) *Eurosystem debts, Greece, and the Role of Banknotes*, Lancaster University Management School, 14 November.

¹⁰⁷ The banks that do this across the Eurozone also tend to engage in derivatives and other activities, thereby adding to the risk in international financial markets.

there could be real losses of wealth experienced by savers and/or taxpayers in surplus countries.

Second and related to the first point, the debts in Target2 are effectively being mutualised or socialised across the Eurozone member states – this, by definition, is what a bailout mechanism does – despite this being explicitly ruled out – especially by Germany – when the euro was set up. Yet ever since the Eurozone was established, there has been pressure to introduce ‘Eurobonds’, bonds that are issued and guaranteed jointly by all 19 Eurozone members – in effect, sovereign bonds of the European Union. Again this has been resisted by Germany, despite Target2 being essentially an equivalent bailout mechanism. However, the European Stability Mechanism – also originally opposed by Germany – is really just another alternative for Eurobonds, since it provides loans to countries in difficulty which are collectively guaranteed. As Tyler Durden (2012) puts it: ‘The difference between the three is merely of degree. There is more parliamentary control for Eurobonds or the ESM. In the ESM, creditor countries have more control over bailouts than with Eurobonds. Interest rates differences are also more pronounced with the ESM than with Eurobonds. The ECB wants to shift the bailout burden from Target2 to the ESM. Governments prefer to hide the losses on taxpayers as long as possible and prefer the ECB to aliment¹⁰⁸ deficits. However, all three devices serve as bailout systems and form a “transfer union”’.¹⁰⁹

A more recent example of debt mutualisation is European Banking Union (EBU). This was also originally opposed by Germany, despite the fact that monetary union was never likely to be sustainable without banking union.¹¹⁰ There was, however, a significant difference from previous bank rescue attempts and the ESM – private sector agents, including depositors, would share the burden alongside taxpayers. EBU began in 2012, comes under the governance of the European Banking Authority, and has three components. The first is the Single Supervisory Mechanism (SSM) which is based on the EU's common financial regulatory framework. The second is the Single Resolution Mechanism (SRM), run by a Single Resolution Board (SRB), which establishes rules for restructuring failing banks, taking over responsibility for this from the NCBs. To finance the restructuring, the SRB can draw on a Single Resolution Fund (SRF) which is funded by the Eurozone banks and has a target minimum size of 1% of the covered deposits of all banks in the EBU. The third component, deposit insurance, has yet to be agreed.¹¹¹

Related to this is the Bank Recovery and Resolution Directive (BRRD) which was introduced in 2014 to provide authorities with ‘comprehensive and effective arrangements to deal with failing banks at national level and cooperation arrangements to tackle cross-border banking

¹⁰⁸ Archaic term for feed or maintain.

¹⁰⁹ Tyler Durden (2012) Is TARGET2 A Less Than Thinly Veiled Bailout For Europe's Periphery?, Zerohedge, 19 June 2012; <http://www.zerohedge.com/news/guest-post-target2-less-thinly-veiled-bailout-europes-periphery>

¹¹⁰ John Whittaker has pointed out to us that even with banking union, monetary union is not obviously sustainable.

¹¹¹ William Rhodes (2016) Eurozone must complete banking union to avert crisis, *Financial Times*, 28 July; Hugo Dixon (2016) EU enters brave new world of bank bail-ins, Reuters, 4 January; <http://blogs.reuters.com/hugo-dixon/2016/01/04/eu-enters-brave-new-world-of-bank-bail-ins/>

failures'. The directive 'requires banks to prepare recovery plans to overcome financial distress. It also grants national authorities powers to ensure an orderly resolution of failing banks with minimal costs for taxpayers. The directive includes rules to set up a national resolution fund that must be established by each EU country. All financial institutions have to contribute to these funds. Contributions are calculated on the basis of the institution's size and risk profile. The EU's bank resolution rules ensure that the banks' shareholders and creditors pay their share of the costs through a "bail-in" mechanism. If that is still not sufficient, the national resolution funds set up under the BRRD can provide the resources needed to ensure that a bank can continue operating while it is being restructured'.¹¹² Bank creditors including bondholders and depositors (with deposits above €100,000), as part of the bail-in rules, have to absorb 8% of the liabilities before any state aid can be used to bail out banks. This is less onerous than some previous bail-ins. For example, in July 2013, depositors in Cyprus lost 47.5% of the value of their bank deposits above €100,000.

The SRM came into operation on 1 January 2016. Stress tests conducted by the EBA and the ECB in 2016 indicated that MPS was insolvent in the 'adverse case',¹¹³ and that Italy alone needed €40bn to rescue its banks.¹¹⁴

In one of the first opportunities to apply the new resolution regime – the rescue of Veneto Banca and Banca Popolare di Vicenza by Intesa Sanpaolo¹¹⁵ – no BRRD bail-in was used, which would have included senior bonds and unguaranteed deposits, and the banks were wound down in insolvency proceedings at national level. The decision not to use a bail-in was taken on the grounds that a BRRD resolution was not warranted in the public interest. The BRRD was disapplied by the SRB declaring that 'neither of the banks provide critical functions and their failure is not expected to have a significant adverse impact on financial stability' and, as a result, local Italian law was applied, which did not have the 8% bail-in requirement.¹¹⁶ The European Commission simultaneously approved state aid for the orderly market exit of the two banks allowing Italy to mitigate the effects for the local economy. Under local Italian law, only shareholders and junior bondholders participated in the losses as required by the state aid rules, although retail junior bondholders who were mis-sold bonds may be eligible for compensation. The European Commission takes the view that such compensation is an entirely separate consideration to the burden-sharing required by the state aid rules. In light of the apparent wiggle-room granted by the new resolution regime, critics have accused the SRB and the European Commission of circumventing the no-bail-out

¹¹² https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/managing-risks-banks-and-financial-institutions/bank-recovery-and-resolution_en

¹¹³ The total cost of the state bailout of Banca Monte dei Paschi di Siena to date is estimated to be €9bn (Giovanni Legorano (2017) How Italy's Monte dei Paschi ended up on the verge of nationalisation, *Financial News*, 10 July). In August 2017, the European Commission agreed that the Italian government should take a 70% stake in Banca Monte dei Paschi di Siena in exchange for €5.4bn.

¹¹⁴ Across the Eurozone as a whole, non-performing loans account for 5% of total loans (at around €1trn), while in some peripheral states, the ratio is as high as 10% (Andrew Fraser (2017) Risks are rising for investors in bank debt, *Financial News*, 20 October).

¹¹⁵ Italy's second largest bank which received a government loan of €5.2bn to maintain its capital ratios, while the bad assets were put into a 'bad bank' backed by a €12bn state guarantee.

¹¹⁶ Danae Kyriakopoulou (2017) Death in Venice for Banking Union, OMFIF, 28 June.

principle and therefore have pushed for the harmonisation of national insolvency laws and a further tightening of the state aid rules to avoid something similar happening in future.

Figure 18: Interest rate on two-year German debt¹¹⁷



Third, even if these are temporary teething troubles that will eventually sort themselves out – and supporters of the euro point out that it took well over a century for the dollar to be fully adopted in the US – what the Eurosystem cannot deal with on a long term basis is the capital flight from the peripheral states to Germany, in particular, conducted through Target2. This is causing enormous distortions in Europe’s capital markets as Germany becomes flooded with money that it cannot use productively¹¹⁸ and there is a corresponding dearth of funds for investment in the peripheral states. The distortion to German interest rates – which have become increasingly negative since 2014 – is readily apparent from Figure 18. A study by Germany’s Postbank estimates that German savers lost interest income worth €125bn between 2011 and 2015 as a result of the ECB’s ultra-low rates and QE.¹¹⁹ There are further distortions when investors outside the Eurozone take part in the ECB’s QE exercise, as pointed out by Professor Frank Westermann of Osnabrück University: ‘[It results in] a significant increase in non-euro area foreign direct investment into Europe. ...Investors in these countries sell their bonds to the ECB and in return buy equity and real estate, raising

¹¹⁷ Source: Ambrose Evans-Pritchard (2017) Unpayable debts and an existential EU financial crisis – are Eurozone central banks still solvent?, *Daily Telegraph*, 23 February.

¹¹⁸ Target2 flows into Germany cause German banks to acquire large amounts of reserve deposits at the Bundesbank which earn a negative 0.4%. The banks would like to lend these out at positive interest but, collectively, they are stuck with these reserve balances (https://www.ecb.europa.eu/stats/policy_and_exchange_rates/key_ecb_interest_rates/html/index.en.html).

¹¹⁹ Reported in Gunnar Beck (2016) Germany discovers some home truths about Brexit, *Wall Street Journal*, 14 September.

equity and house prices in many euro area countries. Most recently, offshore financial centres have become the largest net asset holder vis-à-vis the euro area in the ECB's statistics. Their current balance is €500bn. Before the 2007-08 financial crisis, this balance was close to zero'.¹²⁰

Fourth, considerable risk is inserted into the system as a result of the Basel II rules which effectively treat all sovereign debt as risk free for regulatory capital purposes: 'The CRR¹²¹ does not grant a general zero risk weight for sovereign debt. However, owing to the analogous adoption of exemptions stated within the Basel II framework, EU regulation *de facto* grants zero risk weights for the majority of debt issued by EU sovereigns. According to Article 114(4) of the CRR, "exposures to Member States' central governments and central banks denominated and funded in the domestic currency of that central government and central bank shall be assigned a risk weight of 0% in the standardised approach. Because of the currency union, the exemption is automatically applicable to all banks within the euro area that finance euro-denominated government debt, leading to preferential treatment of the respective bonds in spite of actual differences in credit risk'.¹²² Were that not the case, private sector institutions, such as central counterparties, as well as the central banks holding government debt, would have to take account of its riskiness by way of significant haircutting and, additionally, in the case of the private sector, by holding more regulatory capital against it.¹²³ This would make the holding of much of that debt prohibitively expensive, which would, in turn, bring an end to the merry-go-round process of it being issued and 'sold' to member state champion financial institutions.

One of the main reasons why the ECB wants euro-clearing to be located in the Eurozone is because it wants to prevent CCPs haircutting member state bonds, as the London Clearing House did in 2011, causing problems in the Eurosystem. The LCH required banks to provide extra collateral to deal with possible losses on EU countries' debt, raising borrowing costs in the Eurozone. Christian Noyer, ex governor of the Banque de France said: 'It fuelled the

¹²⁰ Frank Westermann (2016) ECB Target2 balances keep rising, *OMFIF*, 29 November; <https://www.omfif.org/analysis/commentary/2016/november/ecb-target-2-balances-keep-rising/>

¹²¹ CRD IV - Capital Requirements Regulation (CRR) - 575/2013

¹²² European Systemic Risk Board Report on the Regulatory Treatment of Sovereign Exposures, March 2015 (Section 1.3.1 Risk weights for sovereign assets).

¹²³ In practice, credit rating agencies frequently change the credit rating on EU government bonds. For example, on 13 February 2012, Moody's Investors Service adjusted the sovereign debt ratings of nine EU countries in order to reflect their susceptibility to the growing financial and macroeconomic risks emanating from the euro area crisis and how these risks exacerbate the affected countries' own specific challenges:

- Austria: outlook on Aaa rating changed to negative
- France: outlook on Aaa rating changed to negative
- Italy: downgraded to A3 from A2, negative outlook
- Malta: downgraded to A3 from A2, negative outlook
- Portugal: downgraded to Ba3 from Ba2, negative outlook
- Slovakia: downgraded to A2 from A1, negative outlook
- Slovenia: downgraded to A2 from A1, negative outlook
- Spain: downgraded to A3 from A1, negative outlook
- United Kingdom: outlook on Aaa rating changed to negative

(https://www.moodys.com/research/Moodys-adjusts-ratings-of-9-European-sovereigns-to-capture-downside--PR_237716)

Eurozone crisis at exactly the wrong moment. The mandate of UK regulators was not to protect the euro area, it was to protect the City. The increase was not a normal increase, it was an explosion of margin calls'.¹²⁴ However, if euro-clearing is located in the Eurozone, then the ECB faces a conflict of interest in actively controlling haircutting and margining in its own credits, especially given the incomplete nature of the euro and its underpinning structures.

Fifth and most significantly, Target2 is papering over the cracks of a much more fundamental problem which is that it is bailing out 'uncompetitive econom[ies] with too high prices [since they cannot use devaluation to make themselves competitive]. Thanks to this bailout mechanism, [these countries do] not have to deregulate labour markets, and reduce government spending to adjust prices relatively, but can continue [their] spending spree and maintain [their] uncompetitive internal structure'.¹²⁵ In other words, Mundell's fourth criterion is being used to compensate for the failure of the second and third criteria to operate effectively – as driving forces of economic efficiency – in the Eurozone.

Supporters of the euro will continue to argue that Target2 is doing a useful and temporary job until the conditions for a fully endogenous OCA emerge and the peripheral states have become as efficient as a core state such as Germany. However, even those at the heart of the euro project have come round to accepting that the emperor has no clothes. In late 2011, Jürgen Stark recanted and resigned from the Executive Board, along with former Bundesbank head Axel Weber, recognising that the ECB had taken on 'a new role, to fall into panic. It gave in to outside pressure ... Together with other central banks, the ECB is flooding the market, posing the question not only about how the ECB will get its money back, but also how the excess liquidity created can be absorbed globally'.¹²⁶

Similarly, Otmar Issing, the ECB's first chief economist and one of the founding fathers of monetary union, admits that the ECB is becoming dangerously over-extended and the whole euro project is unworkable in its current form:

One day, the house of cards will collapse. The euro has been betrayed by politics, the experiment went wrong from the beginning and has since degenerated into a fiscal free-for-all that once again masks the festering pathologies. Realistically, it will be a case of muddling through, struggling from one crisis to the next. It is difficult to forecast how long this will continue for, but it cannot go on endlessly...The Stability and Growth Pact has more or less failed. The moral hazard is overwhelming. Market discipline is done away with by ECB interventions. There is no fiscal control mechanism from markets or politics. This has all the elements to bring disaster for monetary union. The no-bailout clause is violated every day and the European

¹²⁴ Quoted in Alex Hawkes (2017) 'London must lose euro trading': On eve of crucial Brexit talks, continental bankers close ranks threatening 83,000 jobs in City, *Financial Mail on Sunday*, 17 June.

¹²⁵ Tyler Durden (2012) Is Target2 A Less Than Thinly Veiled Bailout For Europe's Periphery?, Zerohedge, 19 June; <http://www.zerohedge.com/news/guest-post-target2-less-thinly-veiled-bailout-europes-periphery/>

¹²⁶ Quoted in 'ECB in "panic", say former chief economist Jürgen Stark', *Daily Telegraph*, 22 September 2012.

Court's approval for bailout measures is simple-minded and ideological....The ECB has crossed the Rubicon and is now in an untenable position, trying to reconcile conflicting roles as banking regulator, Troika enforcer in rescue missions and agent of monetary policy. Its own financial integrity is increasingly in jeopardy.

The venture began to go off the rails immediately, though the structural damage was disguised by the financial boom. There was no speed-up of convergence after 1999 – rather, the opposite. From day one, quite a number of countries started working in the wrong direction. A string of states let rip with wage rises, brushing aside warnings that this would prove fatal in an irrevocable currency union. During the first eight years, unit labour costs in Portugal rose by 30% versus Germany. In the past, the escudo would have devalued by 30%, and things more or less would be back to where they were. Quite a few countries – including Ireland, Italy and Greece – behaved as though they could still devalue their currencies. The elemental problem is that once a high-debt state has lost 30% in competitiveness within a fixed exchange system, it is almost impossible to claw back the ground in the sort of deflationary world we face today. It has become a trap. The whole Eurozone structure has acquired a contractionary bias. The deflation is now self-fulfilling. The first Greek rescue in 2010 was little more than a bailout for German and French banks. It would have been far better to eject Greece from the euro as a salutary lesson for all. The Greeks should have been offered generous support, but only after it had restored exchange rate viability by returning to the drachma. [The fear was a chain-reaction reaching Spain and Italy, detonating an uncontrollable financial collapse. This nearly happened on two occasions, and remained a risk until Berlin switched tack and agreed to let the ECB shore up the Spanish and Italian debt markets in 2012.]

Cloaking it all is obfuscation, political mendacity and endemic denial. Leaders of the heavily indebted states have misled their voters with soothing bromides, falsely suggesting that some form of fiscal union or debt mutualisation is just around the corner. Yet there is no chance of political union or the creation of an EU treasury in the foreseeable future, which would in any case require a sweeping change to the German constitution – an impossible proposition in the current political climate. The European project must therefore function as a union of sovereign states, or fail.¹²⁷

Problems with implementing quantitative easing in the Eurozone

The ECB's QE programme began very late in the day in March 2015, well after the GFC (2007-08) and the peak of the Eurozone sovereign debt crisis (2011). It is also likely to end

¹²⁷ Quoted in Ambrose Evans-Pritchard (2016) Euro 'house of cards' to collapse, warns ECB prophet, *Daily Telegraph*, 16 October.

much sooner than was originally anticipated – in part because of the way Target 2 was set up using capital keys.¹²⁸

Yanis Varoufakis, the former Greek finance minister, was one of the first commentators to recognise that Mario Draghi, president of the ECB, will have to halt QE asset purchases soon ‘because of a shortage of German bunds. Remember how European quantitative easing works: to buy any amount of Italian bonds, Draghi has to buy twice as many bunds. That is the only way the ECB could pull off QE “euro-style”. In other words, the only way of convincing German Chancellor Angela Merkel and Bundesbank chairman Jens Weidmann to allow the ECB to do QE was that it purchased government debt in proportion to GDP or to ECB shareholding by member states.¹²⁹ Same thing. Now, the problem is that bunds are running out because [the then] German finance minister Dr Wolfgang Schäuble is not issuing them – he is running a surplus. German financial institutions have an obligation to retain the bunds they have. So you have excess demand for bunds. This is creating problems for the smaller banks in Germany and the pension funds. And that is pushing Draghi into tapering already, and why the ECB's programme of QE is going to be withdrawn very soon’.¹³⁰

A more recent analysis by OMFIF, while accepting Varoufakis’s assessment about the ECB’s QE programme, also points out that the rules mentioned by Varoufakis have not actually been followed:

Figures for July [see Figure 19] show that, for the fourth month in a row, German bonds bought under the European Central Bank’s public sector purchase [i.e., QE] programme (PSPP) fell short of the amount allowed by the ‘capital key’ allocation. Other countries have also seen significant deviations from the capital key, under which bonds are bought in proportion to the share of the ECB capital provided by each country. This figure is determined by the size of GDP and population, and is adjusted slightly to reflect the ineligibility of Greek bonds given their low credit rating.¹³¹

Since April, the ECB has bought an additional €4.2bn of Italian bonds and €809m of Spanish bonds, against an under-purchase of €1.09bn for Germany and (since May) €172m for the Netherlands. The divergence suggests growing difficulties with the ECB’s quantitative easing programme and has reignited speculation about a tapering of bond purchases.

¹²⁸ In addition, in August 2017, Germany’s constitutional court ruled that the ECB’s €2trn QE programme might violate EU law and referred the case to the European Court of Justice. However, many commentators, including Wolfgang Schäuble, the former German finance minister, have defended the ECB’s action and expect the ECJ to decide in the ECB’s favour. https://www.omfif.org/analysis/commentary/2017/august/germanys-macron-dilemma/?utm_source=OMFIFweeklyupdate

¹²⁹ See Table B1 in Appendix B.

¹³⁰ Quoted in *Investment Week*, 17 May 2017.

¹³¹ This would appear to be the first recognition by the ECB that not all Eurozone government bonds are in fact ‘risk free’.

The chart displays the monthly net new job creation in four European countries from March 2015 to March 2017. The Y-axis represents the number of jobs, ranging from -500 to 2500. The X-axis shows the timeline, with labels for Mar 2015, 2016, and 2017. The legend identifies the countries by color: Germany (blue), Netherlands (black), Italy (grey), and Spain (green). The chart shows a period of low job creation in early 2015, followed by a significant increase in early 2016. A major peak in job creation occurred in early 2017, with Germany leading the increase, followed by Spain and Italy. The Netherlands also contributed to the growth but with smaller net additions. The chart ends with a sharp decline in job creation in early 2017, with Germany and the Netherlands showing negative net new job creation.

These figures mark a significant break from the pattern that existed for the two years from the start of the PSPP in March 2015 until March 2017. During that period the ECB over-purchased German and Dutch bonds by a total of €8.3bn and €2.3bn respectively. Italian and Spanish bonds were also over-purchased to compensate for the scarcity of bonds in smaller euro area countries, including Cyprus, Estonia and Portugal. However, the scale of Italian and Spanish bond over-purchasing has increased rapidly this year. Since January the ECB has overshot Italy's adjusted capital key by an average of €920m per month and Spanish bonds by €311m per month. This compares with €264m and €181m respectively each month from the start of the PSPP to the end of 2016. In July, the over-purchase of Italian bonds reached more than €1.2bn, the highest monthly figure to date.

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*...As the ECB remains committed to doing 'whatever it takes' to return the euro area to stability and growth, new tools could be needed as the potential limits of QE edge ever closer.*¹³²

In October 2017, the ECB announced that it would cut back its €2trn QE programme from €60bn¹³³ to €30bn a month of bond purchases from January 2018, but the scheme will be extended until September 2018 or longer if needed.¹³⁴ Mario Draghi said nothing about the shortages of German bunds: 'The recalibration in our asset purchases reflects growing confidence in the gradual convergence of inflation rates towards our inflation aim on account of the increasingly robust and broad based economic expansion. We did not discuss composition and how the asset purchase programme will evolve; however, we will continue to buy sizeable quantities of corporate bonds'.¹³⁵ German lawyer, Gunnar Beck, has described this new strategy as little better than 'hoovering up junk'.¹³⁶

The cut back in QE is needed for another reason, namely the serious overheating of the German economy, which grew at an annualised rate of 3.2% in the fourth quarter of 2017 and is experiencing capacity constraints in the form of equipment and labour shortages, as well as a real estate bubble in its largest cities. Professor Clemens Fuest of the IFO Institute said: 'It is clear that monetary policy is too expansionary for Germany... We think the ECB should be cutting asset purchases to zero by April [2018, six months sooner than planned]'.¹³⁷ So once again we have evidence that the single interest rate set by the ECB in the Eurozone is not suitable for any of its economies. While the peripheral economies are still coming out of recession – and hence need a low rate of interest – core economies, such as Germany, are booming – and hence need a much higher rate to dampen the boom. The Eurozone economies grew at an annualised rate of 2.7% in the fourth quarter of 2017 and unemployment fell to 7.3%, but this was largely due to QE. The gradual withdrawal of QE, combined with a stronger euro and uncertainty about the trade tension between the US and China has reduced Eurozone economic growth to just 1.6% in the first quarter of 2018.¹³⁸

¹³² Ben Robinson (2017) QE challenged by bond limits, OMFIF, 11 August; https://www.omfif.org/analysis/commentary/2017/august/qe-challenged-by-bond-limits/?utm_source=OMFIFweeklyupdate

¹³³ Reduced from €80bn to €60bn a month in April 2017.

¹³⁴ <https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html>

¹³⁵ Tom Eckett (2017) 'A potential sea change event': ECB to halve €60bn bond buying programme, *Investment Week*, 26 October.

¹³⁶ Quoted in Ambrose Evans-Pritchard (2017) German court threatens QE as plans die for euro fiscal union, *Daily Telegraph*, 17 October.

¹³⁷ Ambrose Evans-Pritchard (2017) Germany risks havoc of boom and bust, *Daily Telegraph*, 25 November.

¹³⁸ Claire Jones (2018) Eurozone growth hits slowest pace in 18 months, *Financial Times*, 2 May.

Can a country leave the Eurozone?

The ECB argues that ‘the size of the Target2 balances does not pose additional risk to the Eurosystem or the NCBs given the irreversibility of the euro’.¹³⁹

However, as John Whittaker (2016) points out:¹⁴⁰

...the euro is not irreversible. Indeed, ... exit risk is an unavoidable feature of monetary union. Thus, if a country's Eurosystem debt presents a risk when it leaves the euro, and if there is a non-zero probability that it will leave, then its Eurosystem debt is risky. A contingent risk is a risk.

... The departure of any country from monetary union would involve large political and financial costs and uncertainty, particularly for that country but also for other Eurozone members, given the absence of agreed exit procedures. This makes monetary union more durable than a fixed rate regime between separate currencies.

Yet, there must be a limit to the tolerance of creditor countries. There must be some threshold level of exposure to Greece or any other debtor country, or expected future exposure, beyond which Germany and the other creditors would refuse further credit either via the Eurosystem or official loans, accept their losses, and expel.

Despite the ECB's assertion that monetary union is irreversible, exit risk will always be present, just as it is in any ordinary fixed exchange rate regime. The difference with monetary union is that it raised the stakes by cementing all financial claims into a 'foreign' currency.

The Greek government knows this. Indeed, the fear of being deprived of Emergency Liquidity Assistance and forced out of the euro¹⁴¹ was the main reason why it accepted the conditions attached to the latest bailout. Likewise, it was the threat to cut ELA that persuaded the Irish government to accept an official loan programme in November 2010 and the Cypriot government to accept a programme in March 2013.

In June 2017, Greece received another loan of €8.5bn from the Eurozone's 19 member states, bringing the total value of EU/IMF loans outstanding to €225bn.¹⁴² But it was told, it would have to wait until 2018 before any debt relief would be considered. Greece is already running a primary surplus – the government's budget balance before debt repayments and interest – of between 2-3% of GDP as a result of huge cuts in government spending. According to Yanis Varoufakis, Germany used its political and financial muscle to impose austerity on Greece,

¹³⁹ European Central Bank (2013), Target Balances and Monetary Operations, *Monthly Bulletin*, Issue 5, May, pp. 103-114.

¹⁴⁰ John Whittaker (2016) *Eurosystem Debts do Matter*, Lancaster University Management School, 1 February. See also John Whittaker and Bernard Connolly (2003) What Will Happen to the Euro, *Economic Affairs*, 23(1): 66-71.

¹⁴¹ A country is forced out of a currency union when it is denied credit and liquidity by other members – equivalent in the case of the euro of being thrown out of Target2. By contrast, a country is forced out of a fixed exchange rate regime when it runs out of the foreign exchange reserves needed to support the exchange rate at the fixed level.

¹⁴² *Hellenic Republic Public Debt Bulletin*, June 2017.

despite widespread acknowledgement in the rest of the Eurozone that the policy was self-defeating and unsustainable.¹⁴³

John Whittaker (2016) continues:¹⁴⁴

*Even if the Greek government runs large budget surpluses which it uses to repay its official loans, this will merely cause an equal rise in its Eurosystem (Target2) debt, unless the budget surpluses induce private financial inflows.*¹⁴⁵

While ‘austerity’ may be given the credit for turning round the Irish economy, the loan programmes for Greece have been notably unsuccessful and there has been mixed success elsewhere. The argument has been made [e.g., by Varoufakis] that austerity in Greece may have improved economic efficiency and budget balances, but that the dominant effect has been to depress economic activity and create political instability, making the repayment of loans less likely.

By the beginning of 2017, even Mario Draghi, the Italian head of the ECB – who 4 years earlier had said the ECB would do ‘whatever it takes to preserve the euro’ – conceded, in a letter to two Italian parliamentarians, that a country could leave the Eurozone, but would first need to settle its Target2 liabilities ‘in full’.¹⁴⁶ For example, if Italy left the Eurozone, Italian citizens would have to repay the equivalent of €433bn. As equations (2) and (3) show, this could only be achieved by inducing sufficient private financial inflows, e.g., through the sale of national assets, such as state industries and Banca d’Italia’s gold holdings.

The problem in the case of Greece, as Tim Worstall points out, is that:

Greece cannot afford the primary surplus the Eurogroup¹⁴⁷ has called for...

Debts which cannot be repaid will not be repaid. That’s why we have bankruptcy in the first place. Or, when it comes to sovereign nations, we have debt rescheduling and IMF programmes instead of bankruptcy.

When the Greek crisis first blew up, what should have happened was the standard IMF programme: a haircut on the debt, devalue the currency and a bit of a loan to tide things over until growth returned. This is similar to the approach taken by Iceland – which has already recovered while Greece languishes – and is what the IMF has been doing for decades in other places.

¹⁴³ Yanis Varoufakis (2017) *Adults in the Room: My Battle with Europe’s Deep Establishment*, Bodley Head, London.

¹⁴⁴ John Whittaker (2016) *Eurosystem Debts do Matter*, Lancaster University Management School, 1 February.

¹⁴⁵ See equations (2) and (3) above.

¹⁴⁶ Any country leaving euro zone must settle bill first: ECB’s Draghi, Reuters, 20 January 2017; <http://uk.reuters.com/article/us-ecb-eurozone-idUKKBN1542KL>

¹⁴⁷ The group of Eurozone finance ministers.

The one thing standing between Greece and this approach was the euro. In order to protect the integrity of the single currency, debts to the private sector banks were refinanced by public money from varying combinations of the EU itself, the ECB, the Eurogroup, the IMF and so on.

This is the crucial point. There are no private sector capitalists left. If there were, we could simply say “you lost your money, better luck next time”. Instead there are only official creditors, run by politicians, who have their voters wondering what has happened or will happen to their money.

For it is still true that Greece cannot repay those debts, and therefore Greece will not repay them. All that can change is who will lose money and when. Unsurprisingly, politicians are keen to delay the inevitable until they have retired and are collecting their pensions. That the Greeks have to see theirs cut in the interim is just bad luck.

*...The Greek debt crisis is a contest between politics and reality.*¹⁴⁸

The ECB made it very clear during the Greek crisis that it would not act as lender of last resort if a member state got into trouble. This gave the euro the status of a foreign currency when repaying debt held by non-residents. It also meant that Eurozone governments, having lost their monetary sovereignty, could default, a prospect which generated large spreads in interest rates amongst Eurozone countries.¹⁴⁹ Should Greece leave the euro and the Bank of Greece failed to pay back its Eurosystem debt in full, the NCBs of the other Eurozone countries would share the loss in proportion to their capital key.

Is there a political solution to the Eurozone problem?

Supporters of the euro believe that the Eurozone will in due course become an OCA if there is also ‘closer economic policy coordination with an agreed framework for national budgetary policies’.¹⁵⁰ In effect, this means fiscal and political union of the member states of the Eurozone. A number of European and UK economists have also recognised this:

- ‘There can be little doubt that the absence of a political union is a serious design flaw in the European monetary union that will have to be remedied to guarantee the long-run survival of the Eurozone’.¹⁵¹
- ‘European integration is a political process. The importance of the political origins, motivations and consequences of European integration cannot be overemphasised’.¹⁵²

¹⁴⁸ Tim Worstall (2017) Greece can never pay its debts. So why not admit it?, *CAPX*, 2 May; <https://capx.co/yet-another-eurofudge-will-prolong-greeces-suffering/?omhide=true>

¹⁴⁹ These spreads had disappeared between 1999 and 2007. See Massimo Amato, Luca Fantacci, Dimitri B. Papadimitriou, and Gennaro Zezza (2016) Going Forward from B to A? Proposals for the Eurozone Crisis, *Economies*, 4, 18; doi:10.3390/economies4030018

¹⁵⁰ ‘Optimal Currency Area Revisited’, Pierre Werner Lecture by Yves Mersch, Governor of the Central Bank of Luxembourg, at the European Institute, Florence, 26 October 2011.

¹⁵¹ Paul De Grauwe (2006) Flaws in the Design of the Eurosystem?, *International Finance*, 9, 137-144.

¹⁵² Francesco Paolo Mongelli (2008) *European Economic and Monetary Integration, and the Optimum Currency Area Theory*, Economic Papers 302, Directorate-General for Economic and Financial Affairs, European Commission.

- ‘The EMU seems locked into a vicious circle, which had been foreseen long ago: “monetary unity imposed under unfavourable conditions will prove a barrier to the achievement of political unity”, Milton Friedman foresaw. But now political unity is precisely the necessary condition to save monetary unity’.¹⁵³
- ‘EMU is impractical to the point of impossibility if...it is introduced before – rather in conjunction with – political union. In this context, political union must include a thorough-going centralisation of fiscal and debt management powers. There is no escape from the interdependence of political and monetary union. German politicians and Bundesbank officials have correctly emphasised that the two ideas are inseparable. Indeed, for many of Europe's leaders, the great merit of EMU is that it is a building-block – perhaps the most important building-block – in the construction of political union. In view of the proliferation of official statements associating political and monetary union, Mr. Kenneth Clarke's view that “I do not believe EMU is any threat to the continued existence of the nation state” is puzzling. At any rate, the EU will fail to create a single currency unless it simultaneously establishes a political union’.¹⁵⁴

However, the EU is a very long way from political unification and there is a clear and present crisis with the Eurozone which Target2 (like other rescue attempts) is merely papering over.

Yet, there is a completely different view of the Eurozone crisis – and it is held by the EU's political establishment. Far from being concerned, a crisis is exactly what they wanted. This is because a crisis – indeed a series of crises – is the only way to get political union in Europe – which is their ultimate aim. The foundation stone of this strategy was laid down by Jean Monnet, one of the founding fathers of the European Union. Understandably enough, after the horrors of two world wars, he – along with other post-war leaders, such as Konrad Adenauer and Robert Schuman – prized peace above all other virtues and no price was too high to pay for it. To prevent further wars on European soil, the resources for making war – coal and steel – needed to be shared amongst the European people, not concentrated in the hands of a single European power. And so he came up with a proposal to introduce a European Coal and Steel Community – a ‘proposal [that] will lay the first concrete foundations of the European Federation which is indispensable for the maintenance of peace’. Set up in 1951, this was the first of the organisations that ultimately developed into the European Union.

But Monnet – who never stood for or was elected to political office – also recognised that the creation of a European Union was not going to be a straightforward process: ‘I have always believed that Europe would be built through crises, and that it would be the sum of their

¹⁵³ Paolo Pasimeni (2014) An Optimum Currency Crisis, *European Journal of Comparative Economics*, 11, 173-204.

¹⁵⁴ Tim Congdon (1997) Why the Euro Will Fail. In Paul Temperton (ed., 1997) *The Euro*, John Wiley & Sons, Chichester, 77-95.

solutions. But the solutions had to be proposed and applied'.¹⁵⁵ He believed that economic crises should be welcomed as opportunities to bring the states of Europe closer together, give up sovereignty and gradually move to a federal Europe. He wrote to a friend in 1952: 'Europe's nations should be guided towards the super-state without their people understanding what is happening. This can be accomplished by successive steps, each disguised as having an economic purpose, but which will eventually and irreversibly lead to federation'.

The introduction of the single currency in 1999 was just another step towards federation. But there was a fundamental economic problem with the way it was implemented as pointed out by John Lanchester: 'The nineteen countries in the Eurozone (out of twenty-eight in the EU) would adopt a single currency but would not have a parallel system to raise tax. There would be monetary union without fiscal union. A European Central Bank would run the currency and set interest rates, but there would be no pan-European finance ministry to run the economy. If you pitched this idea to a class in Economics 101, there would be an embarrassed pause, and eventually a hand would go up and someone would ask, "Is that even possible?" The answer: "Nobody knows." The EU went ahead with its experiment anyway. To raise the stakes even further,... monetary union was, by design, irreversible'.¹⁵⁶

While this looks like a serious flaw in the design of the euro – which soon became apparent in the boom and bust experience of the Eurozone's peripheral economies in the first decade following the euro's introduction – Europe's political elite see it as another step in the process first to fiscal union and then to political union. It is no accident that the 1957 Treaty of Rome – the first formal treaty setting up what is now the European Union – opens with the aim of pursuing 'ever closer union' or that modern successors to Monnet, such as Guy Verhofstadt MEP – chair of the European Parliament's Brexit Steering Group and a former prime minister of Belgium – openly call for a United States of Europe. He believes that political unity is now Europe's 'last chance' and wants her to 'abandon the artificial divisions of nation-states and instead embrace a unified democracy on a continental scale, a United States of Europe, ...so that Europe remains secure, influential, and prosperous into the future'.¹⁵⁷ This view is strongly supported by Martin Schulz, then leader of the German Social Democratic Party, who wants a United States of Europe by 2025.¹⁵⁸

But there's the rub – what form should this political unity take? There are only two possible models that Europe could adopt, those of France or Germany, as a recent book by German,

¹⁵⁵ Quoted in John Lanchester (2016) *The Failure of the Euro*, CAPX, 24 October; <http://capx.co/external/the-failure-of-the-euro/>

¹⁵⁶ John Lanchester (2016) *The Failure of the Euro*, CAPX, 24 October; <http://capx.co/external/the-failure-of-the-euro/>

¹⁵⁷ Guy Verhofstadt (2017) *Europe's Last Chance: Why the European States Must Form a More Perfect Union*, Basic Books. See also Guy Verhofstadt (2006) *The United States of Europe*, Federal Trust. At a speech at the London School of Economics on 28 September 2017, Mr Verhofstadt went further and called for the EU to turn itself into an empire: 'The world of tomorrow is a world of empires, and only a united Europe will play a role of significance'; <http://www.lse.ac.uk/Events/2017/09/20170928t1830vLSE/the-future-of-europe>

¹⁵⁸ Philip Oltermann (2017) Martin Schulz wants 'United States of Europe' within eight years, *Guardian*, 7 December.

British and French economists Markus K. Brunnermeier, Harold James, and Jean-Pierre Landau (2016) makes clear.¹⁵⁹ The authors:

...explore the dichotomy between French and German political-economic philosophies. The first values flexibility and solidarity and state intervention; the second stresses rules and consequences and free markets.

*They note that France and Germany have in effect swapped sides in this debate. In the nineteenth and early twentieth centuries, the French had a strong tradition of economic liberalism, and the newly unified Germany believed in state-centered, state-directed economic policies. These biases were reversed by the disasters of Nazism and the Second World War. France's wartime failure discredited its elites and their laissez-faire inclinations, and led to a heavy new emphasis on state planning, whereas Germany became obsessed with the idea of a rules-based liberalism. The product, known as Ordoliberalism, involves a mixture of free-market economics with an attitude toward rules that approaches mystic reverence.*¹⁶⁰

...It is a matter of deep conviction [in Germany] that the euro must never be a "transfer union". The Eurozone must never be about the rich paying for the poor, the North for the South. There are good historical reasons for this passionate adherence to fiscal rectitude, rooted in the causal link between deficits, runaway inflation, and the rise of the Nazis.... This theme in German thought runs very deep. A German government can't follow the necessary policies without facing electoral disaster.... Where others see a crisis caused by weak demand, Germany sees a crisis caused by excessive use of cheap credit, which can be cured only by severe cuts in spending. ...Chancellor Angela Merkel...talks fondly about the "Swabian housewife", a figure

¹⁵⁹ Markus K. Brunnermeier, Harold James, and Jean-Pierre Landau (2016) *The Euro and the Battle of Ideas*, Princeton University Press, Princeton NJ.

¹⁶⁰ Ordoliberalism is the German variant of social liberalism that emphasises the role of the state in ensuring that the free market produces results close to its theoretical potential and so helps to prevent powerful private interests – particularly from abroad – from undermining competition. It relies heavily on rules and independent institutions, such as an independent central bank, to achieve these outcomes. It also results in Germany being strongly protectionist about its domestic economy. As Juliet Samuel points out: 'Germany has consistently shown that it has a wide definition of strategic economic assets and it will support action to protect them. The high structural barriers to hostile takeovers and the continued dominance of family ownership are also signs of a society ill at ease with the whims of footloose global capital.... Moreover, despite its rhetoric about free movement and European solidarity, Germany assiduously protects its population from intense labour market competition. All sorts of jobs, from plumbing to construction, are protected by the need to take long, rigorous, German-language vocational courses'. The protectionism can extend to collusion in key industries: *Spielgel* has recently reported that Daimler, BMW, Volkswagen, Porsche and Audi have operated a secret technology cartel for the past 20 years in which they collude on what technology they offer their customers; in October 2017, BMW's Munich headquarters was raided for evidence; <https://en.wikipedia.org/wiki/Ordoliberalism>, <https://mainlymacro.blogspot.fr/2014/01/ordoliberalism-neoliberalism-and.html>, Juliet Samuel (2017) Berlin reveals true colours..., *Daily Telegraph*, 14 July, Justin Huggler (2017) German carmakers' 'cartel', *Daily Telegraph*, 22 July, and Alan Tovey (2017) Anti-trust watchdog searches BMW's HQ, *Daily Telegraph*, 21 October.

*of legendary common sense and frugality who, when times are hard, balances the books by cutting her spending.*¹⁶¹

Which country's version of political union will be end up being victorious? At their first meeting on the day after his election in May 2017, Emmanuel Macron and Angela Merkel 'struck a consensual tone' when they agreed to draw up a roadmap of 'ambitious reforms' to EU treaties that will 'deepen the existing European Union and especially the Eurozone'. France has previously resisted treaty changes and Wolfgang Schäuble, the former German Finance Minister, has said that Macron's idea of creating a budget and finance minister for the Eurozone was unrealistic because it would require changes to EU treaties. Macron now says French attitudes have changed: 'In the past, the subject of treaty change was a French taboo. It will no longer be the case'. In March 2018, Christine Lagarde, head of the IMF and former French Finance Minister, backed Macron's call for greater fiscal and banking union among Eurozone member states in order to support a more economically integrated currency union.¹⁶²

Nevertheless, beneath the surface lie underlying tensions in the Franco-German relationship because Macron is also asking Germany behind the scenes 'to pay for struggling states that resist reforms', although he wanted to reassure the Germans that the Eurozone will not 'develop into a "transfer union" in which Germany is asked to bankroll other states'.¹⁶³ He also said he did not support the idea of Eurobonds, which would allow Eurozone members to issue debt jointly, with weaker members benefiting from lower risk premiums thanks to Germany's creditworthiness: 'I have never defended (the idea of) Eurobonds or the mutualisation of existing debt in the Eurozone'.¹⁶⁴

Germany has been able to build up huge trade surpluses both within the Eurozone and internationally by benefiting from a lower euro exchange rate than the Deutsche Mark would have been had there been no currency union.¹⁶⁵ And Wolfgang Schäuble has made it very clear that 'Germany has no plans to reduce its export surplus'. Indeed, the opposite is happening: the ECB's quantitative easing programme has led to a weaker euro and a corresponding increase in Germany's trade surplus to almost €300bn, which now exceeds China as the world's largest.¹⁶⁶

¹⁶¹ Review by John Lanchester (2016) *The Failure of the Euro*, CAPX, 24 October; <http://capx.co/external/the-failure-of-the-euro>.

¹⁶² Anna Isaac (2018) IMF boss backs French calls for closer integration in the Eurozone, *Daily Telegraph*, 27 March.

¹⁶³ A mechanism for fiscal transfers was introduced in 2011 as part of the Macroeconomic Imbalance Procedure, but have not yet been applied.

¹⁶⁴ Reported in Paul Carrel and Michel (2017) Merkel and Macron agree to draw up roadmap to deeper EU integration, Reuters, 15 May 2017; <http://in.reuters.com/article/germany-france-leaders-roadmap-idINKCN18B28T>

¹⁶⁵ Similar behaviour by China to keep its currency artificially low against the dollar – in order to build up a huge trade surplus vis-à-vis the US – is known as currency manipulation in the US.

¹⁶⁶ Germany's Schäuble blames ECB for German export surplus, Reuters, 9 September 2016; <http://www.reuters.com/article/germany-exports-idUSL8N1BL1GE>

The problem is that all this comes at very high cost to the rest of the people of Europe – both economically and politically.

At the economic level, the combination of a single currency, persistent regional trade imbalances, but no system of fiscal transfers – in the absence of the other OCA criteria holding – is not sustainable.¹⁶⁷ Yet there is no sign of flexibility from Germany. The ECB's Draghi continually asks Schäuble to reduce his trade surplus, but his reply is always 'I haven't heard that the ECB is changing its monetary policy'.¹⁶⁸ It is only the unofficial redistributions via Target2 that is keeping the euro afloat. This is Draghi's bitter-sweet revenge on Schäuble, since most of the redistributions go to Italy.

At the political level, the European political establishment might well believe that the political gains to themselves of greater integration exceed the economic costs – as Feldstein conjectured¹⁶⁹ – but there is a huge political cost to engineered crises¹⁷⁰ and games of 'destructive creationism', and that is the loss of democracy. There is no evidence that the people of Europe want to be in a United States of Europe and certainly one that is in reality as anti-democratic as the EU. While, there is supposed to be 'double democracy' in the EU – represented by the European Council and the European Parliament – the reality is that the EU is run by the bureaucrats of the European Commission who run rings around ministers from national governments.¹⁷¹

These bureaucrats are indeed openly contemptuous of the democratic wishes of the European people, as the current president of the European Commission Jean-Claude Juncker takes every opportunity to make clear:

- 'I'm ready to be insulted as being insufficiently democratic'
- 'If it's a Yes, we will say "on we go", and if it's a No we will say "we continue"' (on the 2005 French referendum on the EU constitution)
- 'We decide on something, leave it lying around and wait and see what happens. If no one kicks up a fuss, because most people don't understand what has been decided, we continue step by step until there is no turning back'.

¹⁶⁷ This is now widely recognised, even in Germany, as recent press articles show. See, e.g., Jeremy Warner (2017) Fault lines at the heart of Europe can't be closed: London may be happy to bankroll the North – but Germany won't pick up the bills for Greece, *Daily Telegraph*, 26 May; Roger Bootle (2017) Trump is correct – German surplus is bad news for everybody, *Daily Telegraph*, 4 June; and David Nonhoff (2017) Germany's trade surplus is a threat to the EU, *CAPX*, 12 June. Nonhoff is a research assistant at the German Bundestag.

¹⁶⁸ Germany's Schäuble blames ECB for German export surplus, Reuters, 9 September 2016; <http://www.reuters.com/article/germany-exports-idUSL8N1BL1GE>

¹⁶⁹ Martin Feldstein (1992) Europe's Monetary Union: The case against EMU, *The Economist*, 13 June.

¹⁷⁰ If a crisis is predictable, then it is hard to avoid the conclusion that the crisis was engineered, unless those that sowed the seeds of the crisis were completely incompetent – as was the case in the GFC.

¹⁷¹ This was well illustrated in an interview with former UK government minister Kenneth Baker conducted by Peter Hennessy on BBC Radio 4's *Reflections* programme on 23 August 2016. Lord Baker reported that it is common for European Commission civil servants to come up with proposals which were rejected by ministers from national governments only to come back with a virtually identical set of proposals a few months later when these ministers have moved on to other responsibilities; <http://www.bbc.co.uk/programmes/b07pgvjg>

- ‘Of course there will be transfers of sovereignty. But would I be intelligent to draw the attention of public opinion to this fact?’ (on British calls for a referendum over the Lisbon Treaty).
- ‘There can be no democratic choice against the European Treaties’ (in ‘Greece: The dangerous game’, *Le Figaro*, 1 February 2015).¹⁷²

Supporters of the euro who believe that the Eurozone can genuinely become an OCA cannot now escape from the recognition that this can only happen if there is full fiscal and political union. The first stage in this process began in August 2017, when Angela Merkel agreed to support Emmanuel Macron’s proposals for a Eurozone budget of €300-400bn a year and a Brussels-based finance minister for the Eurozone, despite Schäuble’s previous downplaying of the idea.¹⁷³ Macron has also made clear that he expects further significant moves towards completing the political infrastructure of economic and monetary union.¹⁷⁴ In his ‘state of the union’ address to the European parliament in September 2017, Mr Juncker used Brexit as an opportunity to call for further steps towards political union with a single president – combining the presidencies of the European Commission and the European Council.¹⁷⁵ He also called for all member states to adopt the euro, to have qualified majority voting, rather than unanimity, on foreign policy matters, and to have a single European army by 2025.¹⁷⁶

Yet it is hard to see how a political union engineered along the lined proposed by Monnet, Juncker and Verhofstadt will be very democratic and therefore how it will be sustainable in the long run.

Why is the problem with Target2 so little known?

This is a question I am struggling to answer. It is clearly well known within the treasuries and central banks of Europe and amongst banking academics¹⁷⁷ and the odd lawyer.¹⁷⁸ But outside this small coterie, how many people have even heard of Target2?

¹⁷² Jean-Claude Juncker’s most outrageous political quotations, *Daily Telegraph*, 15 July 2014; Marian L Tupy (2017) Why sovereignty matters, *CAPX*, 3 August.

¹⁷³ Guy Chazan (2017) Merkel backs Macron’s vision for eurozone reform: German chancellor endorses proposal for single currency area finance minister, *Financial Times*, 29 August.

¹⁷⁴ David Marsh (2017) Problems beyond Merkel Victory, *OMFIF*, 5 September; https://www.omfif.org/analysis/commentary/2017/september/problems-beyond-merkel-victory/?utm_source=omfifweeklyupdate; Angela Merkel’s reliance in the Free Democrat Party after the German general election on 24 September 2017 is likely to slow down the move to fiscal union. Its leader, Christian Lindner said his party would not tolerate any drift towards a fiscal transfer union, and demanded that holders of Eurozone sovereign debt should suffer sobering losses before there can any further rescues for governments in trouble (reported in Ambrose Evans-Pritchard (2017) German court threatens QE as plans die for euro fiscal union, *Daily Telegraph*, 17 October).

¹⁷⁵ ‘Europe would be easier to understand if one captain was steering the ship’.

¹⁷⁶ http://europa.eu/rapid/press-release_SPEECH-17-3165_en.htm

¹⁷⁷ Such as: Hans-Werner Sinn; Karl Whelan of University College Dublin who presented ‘Target2 and the Euro Crisis’ at the Bank of England on 26 June 2012 (<http://www.karlwhelan.com/Presentations/Whelan-BoE.pdf>) and who wrote ‘All You Wanted to Know About TARGET2 But Were Afraid to Ask’ (<https://www.forbes.com/sites/karlwhelan/2012/11/19/all-you-wanted-to-know-about-target2-but-were-afraid-to-ask/#31a00c5a4605>, 19 November 2012) and ‘TARGET2 and Central Bank Balance Sheets’ (UCD Discussion Paper, 21 November 2012); and Frank Westermann and Sven Steinkamp who run the Euro Crisis Monitor at the Institute of Empirical Economic Research of Osnabrück University.

Some journalists have obviously written about problems in the Eurozone, but very few have done this in the context of Target2. A notable exception is the pseudonymous ‘Tyler Durden’ who has been writing about Target2 since 2012 on the Zerohedge website.¹⁷⁹ Just a sprinkling of UK national newspaper journalists have written the odd article about Target2, examples being Izabella Kaminska at the *Financial Times*¹⁸⁰ and Liam Halligan and Ambrose Evans-Pritchard both at the *Daily Telegraph*.

Halligan as far back as 2012 wrote:¹⁸¹

¹⁷⁸ For example, German lawyer Gunnar Beck is fully aware that: ‘under the so-called Target 2 payments system operated by the ECB, Germany’s balance-of-payments surplus with the eurozone is financed not by the transfer of foreign-currency reserves, gold or other near-liquid assets, but by an open-ended overdraft facility granted by the Bundesbank. Under this peculiar system, the exporter is paid not by the importing country but by Germany’s central bank, which itself never receives payment. Rather, a credit note is issued by the importing country’s central bank, which it has no obligation ever to pay’ (Gunnar Beck (2016) Germany Discovers some home truths about Brexit, *Wall Street Journal*, 14 September).

¹⁷⁹ For example:

- Tyler Durden (2012) Is TARGET2 A Less Than Thinly Veiled Bailout For Europe's Periphery?, Zerohedge, 19 June; <http://www.zerohedge.com/news/guest-post-target2-less-thinly-veiled-bailout-europes-periphery>
- Tyler Durden (2016) The TARGET2 Chart Shows A Breakdown Of The Central Bank Narrative, Zerohedge, 30 June; <http://www.zerohedge.com/news/2016-06-30/target2-chart-shows-breakdown-central-bank-narrative>
- Tyler Durden (2016) Italy Funding Panic? Target2 Liabilities Unexpectedly Soar To Record High, Zerohedge, 7 September; <http://www.zerohedge.com/news/2016-09-07/italy-funding-panic-target2-liabilities-unexpectedly-soar-record-high>
- Tyler Durden (2016) TARGET2 Shows Europe's Banking Crisis Is Escalating Again (Fast), Zerohedge, 4 October; <http://www.zerohedge.com/news/2016-10-03/target2-shows-europes-banking-crisis-escalating-again-fast>
- Tyler Durden (2016) Why Europe Must End In Tears, Zerohedge, 10 December; <http://www.zerohedge.com/news/2016-12-10/why-europe-must-end-tears>
- Tyler Durden (2017) In Stunning Admission, Draghi Says A Country Can Leave Eurozone But Must "Settle Bill First", Zerohedge, 21 January; <http://www.zerohedge.com/news/2017-01-21/stunning-admission-draghi-says-country-can-leave-eurozone-must-settle-its-bill-first?page=1>
- Tyler Durden (2017) The European Debt Bomb Fuse Is Lit! Target2 Imbalances Hit Crisis Levels, Zerohedge, 26 February; <http://www.zerohedge.com/news/2017-02-26/european-debt-bomb-fuse-lit-target2-imbalances-hit-crisis-levels>
- Tyler Durden (2017) BIS Admits TARGET2 Is A Stealth Bailout Of Europe's Periphery, Zerohedge, 6 March; <http://www.zerohedge.com/news/2017-03-06/bis-admits-target2-stealth-bailout-europes-periphery>
- Tyler Durden (2017) Eurozone Capital Flight Intensifies- Target2 Imbalances Widen Again, Zerohedge, 6 March; <http://www.zerohedge.com/news/2017-03-06/eurozone-capital-flight-intensifies-target2-imbalances-widen-again>
- Tyler Durden (2017) Target2 & Secret Bailouts: Will Germany Be Forced Into Fiscal Union With Rest Of Eurozone?, Zerohedge, 24 April; <http://www.zerohedge.com/news/2017-04-23/target2-secret-bailouts-will-germany-be-forced-fiscal-union-rest-eurozone>
- Tyler Durden (2017) The ECB's Target2 Lies - Exposing The Real Capital Flight From Italy & Spain, Zerohedge, 25 September; <http://www.zerohedge.com/news/2017-09-24/ecbs-target2-lies-exposing-real-capital-flight-italy-spain>

¹⁸⁰ Izabella Kaminska (2017) So turns out Target2 imbalances in 2012 WERE a big deal, *Financial Times*, 6 March 2017.

¹⁸¹ Liam Halligan (2012) IMF allows Eurozone to stay in its fantasy world, *Daily Telegraph*, 21 April. Liam Halligan and Gerard Lyons also cover Target2 in their book *Clean Brexit: Why Leaving the EU Still Makes Sense – Building a Post-Brexit Economy for All* (Biteback Publishing, 2017).

How much longer will Germany's hard-working, inflation-averse population tolerate paying for other countries' excesses? There is considerable anger across the Eurozone's largest economy, even though most voters don't know the half of it. Obscure data shows that under so-called Target2 operations, the ECB's intra-eurozone payments system, the Bundesbank is owed a mighty €620bn by other member states. This stealth bail-out dwarfs German's covert contributions to previous Eurozone rescues, which themselves provoked bitter public criticism.

More recently, Evans-Pritchard wrote:¹⁸²

Vast liabilities are being switched quietly from private banks and investment funds onto the shoulders of taxpayers across southern Europe. It is a variant of the tragic episode in Greece, but this time on a far larger scale, and with systemic global implications.

There has been no democratic decision by any parliament to take on these fiscal debts, rapidly approaching €1 trillion. They are the unintended side-effect of quantitative easing by the European Central Bank, which has degenerated into a conduit for capital flight from the Club Med bloc to Germany, Luxembourg, and The Netherlands.

This 'socialisation of risk' is happening by stealth, a mechanical effect of the ECB's Target2 payments system. If a political upset in France or Italy triggers an existential euro crisis over coming months, citizens from both the Eurozone's debtor and creditor countries will discover to their horror what has been done to them.

..."Alarm bells are starting to ring again. Our flow data is picking up serious capital flight into German safe-haven assets. It feels like the build-up to the Eurozone crisis in 2011," said Simon Derrick from BNY Mellon.

The Target2 system is designed to adjust accounts automatically between the branches of the ECB's family of central banks, self-correcting with each ebbs and flow. In reality it has become a cloak for chronic one-way capital outflows.

Private investors sell their holdings of Italian or Portuguese sovereign debt to the ECB at a profit, and rotate the proceeds into mutual funds in Germany or Luxembourg. "What it basically shows is that monetary union is slowly disintegrating despite the best efforts of Mario Draghi," said a former ECB governor.

The Banca d'Italia alone now owes a record €364bn to the ECB¹⁸³ – 22pc of GDP – and the figure keeps rising. Mediobanca estimates that €220bn has left Italy since the

¹⁸² Ambrose Evans-Pritchard (2017) Unpayable debts and an existential EU financial crisis – are Eurozone central banks still solvent?, *Daily Telegraph*, 23 February 2017.

¹⁸³ As of December 2016.

ECB first launched QE. The outflows match the pace of ECB bond purchases almost euro for euro [as Figure 16 makes clear].

Professor Marcello Minenna from Milan's Bocconi University said the implicit shift in private risk to the public sector – largely unreported in the Italian media – exposes the Italian central bank to insolvency if the euro breaks up or if Italy is forced out of monetary union. "Frankly, these sums are becoming unpayable," he said.

The ECB argued for years that these Target2 imbalances were an accounting fiction that did not matter in a monetary union. Not any longer. Mario Draghi wrote a letter to Italian Euro-MPs in January warning them that the debts would have to be "settled in full" if Italy left the euro and restored the lira.

This is a potent statement. Mr Draghi has written in black and white confirming that Target2 liabilities are deadly serious – as critics said all along – and revealed in a sense that Italy's public debt is significantly higher than officially declared. The Banca d'Italia has offsetting assets but these would be heavily devalued.

Spain's Target2 liabilities are €328bn, almost 30pc of GDP. Portugal and Greece are both at €72bn. All are either insolvent or dangerously close if these debts are crystallised.

Willem Buiter from Citigroup says central banks within the unfinished structure of the Eurozone are not really central banks at all. They are more like currency boards. They can go bust, and several are likely to do so. In short, they are "not a credible counterparty" for the rest of the Eurosystem.

It is astonishing that the rating agencies still refuse to treat the contingent liabilities of Target2 as real debts even after the Draghi letter, and given the self-evident political risk. Perhaps they cannot do so since they are regulated by the EU authorities and are from time to time subjected to judicial harassment in countries that do not like their verdicts. Whatever the cause of such forbearance, it may come back to haunt them.

On the other side of the ledger, the German Bundesbank has built up Target2 credits of €796bn. Luxembourg has credits of €187bn, reflecting its role as a financial hub. This is roughly 350pc of the tiny Duchy's GDP, and fourteen times the annual budget.

So what happens if the euro fractures? We can assume that there would be a tidal wave of capital flows long before that moment arrived, pushing the Target2 imbalances towards €1.5 trillion. Mr Buiter says the ECB would have to cut off funding lines to "irreparably insolvent" central banks in order to protect itself.

The chain-reaction would begin with a southern default to the ECB, which in turn would struggle to meet its Target2 obligations to the northern bloc, if it was still a

functioning institution at that point. The ECB has no sovereign entity standing behind it. It is an orphan.

The central banks of Germany, Holland, and Luxembourg would lose some of their Target2 credits, yet they would have offsetting liabilities under enforceable legal contracts to banks operating in their financial centres. These liabilities occur because that is how the creditor central banks sterilise Target2 inflows.

In other words, the central bank of Luxembourg would suddenly owe 350pc of GDP to private counter-parties, entailing debt issued under various legal terms and mostly denominated in euros. They could try printing Luxembourgish francs and see how that works.

Moody's, Standard & Poor's, and Fitch all rate Luxembourg a rock-solid AAA sovereign credit, of course, but that only demonstrates the pitfalls of intellectual and ideological capture.

It did not matter that the EMU edifice is built on sand as long as the project retained its aura of inevitability. It matters now.

...Whether Italy can survive the loss of the ECB shield is an open question. Mediobanca says the Italian treasury must raise or roll over €200bn a year, and Frankfurt is essentially the only buyer.

Greece could be cowed into submission when it faced crisis. The country is small and psychologically vulnerable on the Balkan fringes, cheek by jowl with Turkey. The sums of money were too small to matter much in any case.

It is France and Italy that threaten to subject the euro experiment to its ordeal by fire. If the system breaks, the Target2 liabilities will become all too real and it will not stop there. Trillions of debt contracts will be called into question.

This is a greater threat to the City of London and the banking nexus of the Square Mile than the secondary matter of euro clearing, or any of the largely manageable headaches stemming from Brexit.

Implications for the UK

Although the UK does not contribute to the European Stability Mechanism, it is clearly not immune from what is happening in Target2 and the Eurozone.

This is principally because of the UK government's contribution to the programmes set up to resolve the Eurozone banking and sovereign debt crises:¹⁸⁴

¹⁸⁴ What does the eurozone debt crisis mean for the UK?, BBC News, 9 December 2011.

- It helped to bail out the Irish banking system as part of a €85bn rescue package involving the ECB and IMF which began in 2010.¹⁸⁵ The UK's contribution was £7bn. Included in this was a series of bilateral interest-bearing loans to the Irish government totalling £3.2bn that were made between 2010 and 2013 and which mature between 2019 and 2021.¹⁸⁶ There was an additional £10bn to support Dublin-headquartered Ulster Bank, a subsidiary of Royal Bank of Scotland (RBS) which, despite its name, operates mainly in the Irish Republic, as part of the £45.80bn rescue of RBS in 2008. Similarly, Lloyds Bank transferred £6.41bn of its £20.54bn rescue package to its Irish operation, Bank of Scotland (Ireland), before dissolving the business. In both cases, the funds were used to write off billions of pounds of loans made to Irish commercial property developers and households during the 'Celtic Tiger' boom years.¹⁸⁷
- It contributed €3.6bn to help bail out the Portuguese banking system as part of the €78bn ECB-IMF rescue package in 2011.¹⁸⁸
- It increased its contributions to the IMF, thereby allowing the IMF to provide rescue loans to Eurozone states in financial difficulty. Total contributions increased by €200bn, of which €150bn came from the various NCBs in the eurozone, with the rest coming from other NCBs, including the Bank of England. The Bank of England's share is around 4.5% of the total. The IMF was involved in seven bank bailouts between 2010 and 2015 (Ireland, 2010; Greece, 2010, 2012 and 2015; Portugal, 2011; Spain, 2012; and Cyprus, 2012) and the total contribution of the UK was around €4.5bn.^{189, 190}
- Where a bailout creates a shortfall in funding for regular projects, it is filled by extra contributions from all EU members. The UK would contribute to this extra funding in line with its share of regular contributions to the EU Budget. The UK government's EU negotiations in February 2016 – prior to the Referendum – stipulated that the UK would be reimbursed for any additional costs to the EU's general budget created when emergency funding was provided to Eurozone states, other than administrative costs. Despite this, it is possible for the EU to use the EU Budget directly to grant ad hoc

¹⁸⁵ https://en.wikipedia.org/wiki/European_Financial_Stability_Facility

¹⁸⁶ <http://www.thejournal.ie/ireland-interest-repayment-to-britain-1120288-Oct2013>; Telegraph View (2013) Ireland bail-out: Britain pays the price of the euro's failure, 22 November.

¹⁸⁷ Philip Aldrick (2013), British taxpayers funded Ireland's £14bn bail-out, Daily Telegraph, 19 January; Sam Coates (2013) Irish bailout costs British taxpayers an extra £10bn, *The Times*, 10 June.

¹⁸⁸ http://www.bbc.co.uk/blogs/thereporters/robertpeston/2011/04/what_is_the_uks_contribution_t.html; https://en.wikipedia.org/wiki/European_Financial_Stability_Facility

¹⁸⁹ <http://www.bbc.com/news/uk-politics-eu-referendum-36456277>

¹⁹⁰ In 2011, the EU agreed that the UK and other non-Eurozone EU states should not be part of any future Eurozone bailouts. In 2012, the Eurozone established the European Stability Mechanism for the purpose of bailing out only Eurozone countries with the liability for this falling only on Eurozone members. In July 2015, when the third Greek bailout was agreed, Greece was also given a short term bridging loan of €7bn from the European Financial Stability Mechanism which can provide loans to any EU country in financial difficulty. This was agreed by qualified majority voting which the UK could not veto. The fund is financed by borrowing against the EU Budget as collateral. The UK is liable for around €855m of the loan, through its share in the EU Budget. However, the UK government agreed a deal with the EU under which the ECB would cover any liabilities that would have fallen to the UK or other non-Eurozone states. This meant that the UK and other non-Eurozone states were exempted from any risk of losing money in this emergency loan to Greece; <http://www.bbc.com/news/uk-politics-33556085>

financial assistance to a Eurozone state as a result of Article 122 of the Treaty on the Functioning of the European Union which states that: ‘Where a Member State is in difficulties or is seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control, the Council... may grant, under certain conditions, Union financial assistance to the Member State concerned’.¹⁹¹

Although the Bank of England – as a non-Eurozone NCB – will not be liable to fund any losses of the ECB related to the Eurozone,¹⁹² the UK banking system is exposed to the Eurozone banking system. UK banks have made significant loans to both Irish and French banks, and the French banks, in turn, have made substantial loans to Italian and Spanish banks. So if any Italian and Spanish banks fail, this could have a negative impact on UK banks, not least by restricting their ability to raise finance in euros and other major currencies. There would also be problems if a Eurozone-headquartered bank, which did significant business in London, got into difficulties.

UK savers and investors with Eurozone bank accounts or asset holdings could face a haircut. Those with bank deposits above €100,000 could be liable for an 8% haircut if the bank becomes insolvent.

UK households could also be affected in terms of savings and mortgage rates. If a Eurozone banking crisis affected UK banks, this could raise the interest rate at which UK banks could borrow money on the wholesale money markets which would then lead to higher rates on new mortgages. On the other hands, the UK might be considered a safe haven for Eurozone depositors and investors, and this would help to reduce deposit and mortgage rates in the UK; it would also raise property prices, especially in London.

Finally, the value of the euro affects exporters to, importers from and tourists visiting Eurozone countries. Studies have shown that an increase in the likelihood of the Eurozone breaking up results in the euro depreciating and its volatility increasing.¹⁹³

Conclusion

The evidence is overwhelming that the Eurozone is not an Optimal Currency Area. The first two decades of its existence have shown that a common monetary policy has not stabilised its disparate economies. Further, there is insufficient wage flexibility and labour mobility to eliminate unemployment quickly and insufficient price flexibility and capital mobility to remove intra-Eurozone trade imbalances quickly. Most significantly, the Eurozone has no counter-cyclical stabilisation mechanism, e.g., an official system of regional redistributions whereby regions with balance of payments surpluses redistribute them via fiscal transfers to

¹⁹¹ <https://fullfact.org/europe/will-uk-pay-future-eurozone-bailouts/>

¹⁹² <https://www.ecb.europa.eu/ecb/orga/capital/html/index.en.html>

¹⁹³ See, e.g., Eichler, S. (2012), The Impact of Banking and Sovereign Debt Crisis Risk in the Eurozone on the Euro/US Dollar Exchange Rate, *Applied Financial Economics*, 22, 1215-1232.

regions with balance of payments deficits – as happens in other currency unions such as the UK and US.

This brings us to Target2 – a simple inter-central bank payments and book-keeping system – which has become an unofficial channel for bailing out the euro. As Tyler Durden points out, the imbalances in Target2 are ‘a direct result of an unsustainable balance of payment system. [They] represent both capital flight and debts that can never be paid back’.¹⁹⁴ What is remarkable about this is that most people in Europe have never heard of Target2. Even more remarkable is that the whole future of the Eurozone and, indeed, the EU project itself depends on what is happening in Target2.

Yet Target2 has helped to create a whole range of moral hazards within the Eurozone, the key one being the lowering of credit standards when financially weak banks lend to financially weak customers for the purpose of conducting cross-border transactions (such as importing goods), as happened in the case of Banca Monte dei Paschi di Siena. This is because these loans can be converted using Target2 into ‘risk-free’ central bank loans which never have to be repaid.¹⁹⁵

In reality, Germany cannot prevent either the recycling of surpluses or the lowering of credit standards if it wants to maintain the euro. But the key to how long the euro actually survives is Italy – given the significance of its position in both the EU and the Eurozone. As Figure 14 shows, Italy’s economy is in sharp decline relative to other EU states – its per capital GDP is lower today than it was at beginning of the millennium. It has the largest Target2 liabilities. If Italy decided to leave the Eurozone, then not only would it be unable to repay these debts – as Mario Draghi clearly knows – it would most likely also trigger both the end of the euro and the end of the EU project itself. Since Germany’s current political establishment could never accept this, it has no real alternative but to keep using Target2 to bail out Italy.¹⁹⁶ Ireland and Portugal were (relatively) lucky – their financial crises came along early and they were small enough to be bailed out in full¹⁹⁷ by Germany and the other core countries. Greece was unlucky – its crisis came later, by which time Germany had lost patience¹⁹⁸ and Greece turned out to be expendable, as Yanis Varoufakis makes clear.

But Italy is a different story – too big to fail, too big to be saved. Italian banks have around €173bn in non-performing loans.¹⁹⁹ More than 75% of these are loans to companies and,

¹⁹⁴ Tyler Durden (2017) Italy Target2 Imbalance Hits Record €432.5 Billion As Dwindling Trust In Banks Plunges, Zerohedge, 7 November; <http://www.zerohedge.com/news/2017-11-06/italy-target2-imbalance-hits-record-%E2%82%AC4325-billion-dwindling-trust-banks-plunges>

¹⁹⁵ As Tyler Durden (op cit) points out: ‘If you think Italy can pay German and other creditors a record €432.5bn, you are in Fantasyland’.

¹⁹⁶ Paul Lever, a former British ambassador to Germany, confirms Germany’s strong desire to protect the EU at all costs (Paul Lever (2017) *Berlin Rules: Europe and the German Way*, IB Tauris, London).

¹⁹⁷ Of course, they still took big hits in terms of GDP, wages and unemployment.

¹⁹⁸ As well as not liking the fact that tax evasion is high in Greece, especially amongst the highest paid.

¹⁹⁹ As of December 2016,

<https://www.bancaditalia.it/media/views/2017/npl/index.html?com.dotmarketing.htmlpage.language=1>; 114 Italian banks have non-performing loans that exceed tangible capital (Tyler Durden (2017) 114 Italian Banks

because the banks do not have sufficient capital to absorb the losses, these loans cannot be written off.²⁰⁰ Cumbersome corporate restructuring and insolvency procedures, long judicial processes and tax rules all act to discourage rapid write-offs in Italy.²⁰¹ If the music does eventually stop, it will be Italy that brings down the pack of cards.²⁰²

Nobel laureate Joseph Stiglitz said that in 1992, the European Union made a ‘fatal decision’ in choosing ‘to adopt a single currency, without providing for the institutions that would make it work... No one had ever tried a monetary union on such a scale, among so many countries that were so disparate’.²⁰³ Fast forward to 2017 and Tyler Durden claims that ‘Italy is on ECB life support. Should Draghi halt QE asset purchases, demand for Italian bonds will plunge’; and as if to prove the point, capital flight from Italy (and Spain) to Germany increased in the early months of 2017.²⁰⁴ Durden also believes that ‘The EU and the euro project have been an economic disaster for all participants, including Germany, which will eventually be forced to write off the hard-earned savings she has lent to other Eurozone members. *We know, with absolute certainty, that the euro will self-destruct and the Eurozone will disintegrate*’.²⁰⁵ Stiglitz is optimistic enough to believe that a more ‘flexible euro’, such as a Northern and Southern euro, can save the euro project.²⁰⁶

Europe’s political establishment dismiss all this as simply not understanding the real game or the degree of patience that is required. The Eurozone crisis is just another crisis on the long and irreversible road to fiscal and political union, with Target2 as a convenient device to dampen the crisis – just so long as German savers and taxpayers don’t get to hear about it.²⁰⁷ But this time, they could have taken a leap too far.

To conclude, the answers to the four specific questions asked at the beginning are:

- No, the Eurozone is not an Optimal Currency Area. This is because it does not satisfy the conditions for monetary union. These conditions can only be satisfied if the Eurozone adopts fiscal and political union by becoming a federal state.

(Roughly 23%) Have NPLs Exceeding Tangible Assets, Zerohedge, 28 November; <http://www.zerohedge.com/news/2017-11-28/114-italian-banks-roughly-23-have-npls-exceeding-tangible-assets>).

²⁰⁰ So the loans are continuously evergreened.

²⁰¹ Philip Molyneux (2016) Will Italy’s failing banks trigger financial collapse across Europe?, *Guardian*, 28 November.

²⁰² As Tyler Durden (op cit) also points out: ‘It is no coincidence that Target2 imbalances are on the rise as faith in banks collapses. Target2 is a measure of capital flight despite the ECB’s assurances’.

²⁰³ Joseph E. Stiglitz (2016) *The Euro: How a Common Currency Threatens the Future of Europe*, W. W. Norton, New York.

²⁰⁴ Tyler Durden (2017) Eurozone Capital Flight Intensifies - Target2 Imbalances Widen Again, Zerohedge, 6 March 2017; <http://www.zerohedge.com/news/2017-03-06/eurozone-capital-flight-intensifies-target2-imbalances-widen-again>

²⁰⁵ Tyler Durden (2016) Why Europe Must End In Tears, Zerohedge, 10 December 2016; <http://www.zerohedge.com/news/2016-12-10/why-europe-must-end-tears>

²⁰⁶ Joseph E. Stiglitz (2016) *The Euro: How a Common Currency Threatens the Future of Europe*, W. W. Norton, New York.

²⁰⁷ See Roger Bootle (2017) Germany faces an uneasy future as the Eurozone’s magic money tree, *Daily Telegraph*, 12 June.

- The euro can therefore survive only so long as Germany, in particular, continues – albeit reluctantly – to finance the balance of payments deficits of other Eurozone members, in particular, Italy and Spain. This requires it both to recycle its trade surpluses back to countries with trade deficits and to be the main recipient of capital flight from Eurozone states with weak and weakening banking systems.
- Target2, the apparently innocuous Eurozone payments system, is critical to facilitating the payment flows between surplus and deficit countries. The Target2 credits of countries such as Germany almost exactly match the balance of payments deficits of countries such as Italy and Spain. Since these deficits can never be repaid, the euro can only survive if Germany, in particular, agrees to mutualise Eurozone debts so that the Eurozone becomes a transfer union.
- Political union together with a common fiscal as well as monetary policy is the only realistic way of saving the euro in the long term and avoid further failed rescue packages.²⁰⁸ This is, of course, what Europe’s political establishment wants and has been preparing for since the days of Jean Monnet, but it is not obvious that this is what the people of Europe want.²⁰⁹ However, given the size of the Target2 imbalances, it is also conceivable that the Eurozone will not survive and will eventually break up; this becomes more likely if political support for the euro project, particularly in Germany, begins to wane.²¹⁰

Target2 is indeed the silent bailout system that keeps the euro afloat – for now.

²⁰⁸ One possible historical model for this is the political union of England and Scotland in 1707. This followed the failure of the catastrophic Darien scheme which bankrupted Scotland’s establishment. The English government offered to bail out the Kingdom of Scotland in exchange for political union: see, https://en.wikipedia.org/wiki/Darien_scheme

²⁰⁹ Between December 2016 and February 2017, Chatham House surveyed two groups of people across ten EU countries: a representative sample of 10,000 members of the public and a sample of over 1,800 of Europe’s ‘elite’, individuals in positions of influence from politics, the media, business and civil society at local, regional, national and European levels. The results reveal a continent split along three lines. First, there is a divide between elites and the public. While there is an alignment between the two groups in their attitudes to EU solidarity, EU democracy and a sense of European identity, the data show an important divide in general attitudes, beliefs and life experiences. The elite are more likely to experience the benefits of EU integration and are more liberal and optimistic. Meanwhile, there is ‘simmering discontent’ within the public, large sections of whom view the EU in negative terms, want to see it return some powers to member states, and feel anxious over the effects of immigration. Only 34% of the public feel they have benefited from the EU, compared with 71% of the elite. A majority of the public (54%) think their country was a better place to live 20 years ago (Thomas Raines, Matthew Goodwin and David Cutts (2017) *The Future of Europe: Comparing Public and Elite Attitudes*, Chatham House Research Paper, June).

²¹⁰ Jacki Davis of the European Policy Centre reports that: ‘It is no exaggeration to say that people in this town [Brussels] – who believe passionately in what they have built over the last 60 years – really do believe that the whole project is under threat now’ (interviewed by Katya Adler in ‘After Brexit: The Battle for Europe’, BBC2, 9 February 2017). In the same programme, Ms Adler interviewed Guy Verhofstadt and put it to him that he was the only person left in Brussels who still believed in a United States of Europe. His reaction was surprisingly sheepish.

Appendix A – The role of banknotes in Target2²¹¹

Cross-border payments can also be made by drawing banknotes from banks in one Eurozone country and depositing them in another, and this is another source of intra-Eurosystem debts. Banks in each euro country obtain their banknotes from their NCB and, to account for cross-border movements, each NCB is allocated a proportion of the total stock of Eurozone-wide issue outstanding at any time. If the value of banknotes issued by an NCB exceeds its allocation, this excess is recorded as a Eurosystem liability; a NCB that has issued less than its allocation has a Eurosystem claim. In addition, these claims and liabilities can be changed by the actions of bank customers. To illustrate, if €100 of banknotes is drawn in Greece and deposited in Germany, the total issue is unchanged and allocations are therefore unchanged, but Greece's Eurosystem liability rises by €100, while Germany's claim rises by €100.

An essential property of monetary union is that euro banknotes exchange one-for-one irrespective of their country of issue. Since notes are issued by all national central banks in the euro area, this means that each NCB must accept notes issued by all others, at par. This gives rise to a second essential property: a euro bank deposit in one country has the same value as in any other country. To uphold this property, all NCBs must accept claims on all others that arise from cross-border financial flows.

Banknotes issued by NCBs are indistinguishable. While the serial code on each euro banknote contains a country letter – e.g., X refers to Germany and T to Ireland – this just identifies the NCB that commissioned the printing of the notes, which may or may not be the NCB that issued them. This is because notes are distributed around the NCBs between printing and issue; also a NCB may reissue notes that it has redeemed and which had previously been issued by other NCBs. Notes drawn from a bank in a particular country may thus have any letter.

Each NCB is allocated a share of the total euro banknote issue outstanding at any time, weighted according to the country's population and GDP. The weight of each NCB's 'banknote allocation key' is the same as its 'capital key' (which sets the NCB's contribution to the capital of the ECB) multiplied by 92%, the remaining 8% being allocated to the ECB as seigniorage. For example, the Bundesbank has a capital key of 23.52% of the Eurozone (January 2015) and a banknote allocation key of 24.90%.²¹²

On a NCB balance sheet, the liability 'banknotes in circulation' shows this allocated value; it is not the value of banknotes issued by that NCB. However, the net outstanding value of banknotes issued by a NCB has to be recorded as a liability in its balance sheet. A NCB that has issued more notes than its allocation therefore has a further entry on its balance sheet: 'liabilities related to the allocation of euro banknotes within the Eurosystem (net)'. When

²¹¹ This section draws heavily on: John Whittaker (2011) *Eurosystem Debts, Greece, and the Role of Banknotes*, Lancaster University Management School, 14 November; and John Whittaker (2016) *Eurosystem Debts do Matter*, Lancaster University Management School, 1 February.

²¹² Table B1 in Appendix B.

added to the NCB's allocation (the liability labelled 'banknotes in circulation'), this adjustment makes up the total banknote issue of that NCB, and it owes the amount of the adjustment to other NCBs. Conversely, where a NCB has issued fewer banknotes than its allocation, the difference is entered as an asset: 'claims related to the allocation of euro banknotes'.

This banknote adjustment for each NCB is a claim on, or a liability to, other NCBs in the same respect as Target2 claims. Intra-Eurosystem debts arising both from Target2 transactions and banknote movements bear interest at the main refinancing rate set by the ECB. In July 2011 it was 1.5%; since March 2016, it has been 0.0%.²¹³

Table A1: Banknotes issued by central banks				
June 2011	€ billions			
	Issued	% of GDP	Allocated	Adjustment
Austria	-6.8	-2.3	21.6	28.4
Belgium	9.6	2.6	27.0	17.4
Cyprus	1.1	6.1	1.5	0.4
Estonia	0.4	2.4	2.1	1.7
Finland	10.8	5.7	13.9	3.1
France	83.9	4.2	158.3	74.4
Germany	374.0	14.5	210.9	-163.1
Greece	36.6	16.2	21.9	-14.8
Ireland	27.1	17.4	12.2	-14.9
Italy	140.9	8.9	139.2	-1.7
Luxembourg	69.4	158.4	1.9	-67.4
Malta	0.8	12.7	0.7	-0.1
Netherlands	19.9	3.3	44.8	24.9
Portugal	-0.3	-0.2	19.5	19.8
Slovakia	6.6	9.4	7.9	1.4
Slovenia	1.4	3.7	3.7	2.3
Spain	73.1	6.8	93.4	20.4
ECB	0.0		67.8	67.8
Total Eurozone	848.5	9.0	848.5	-----
US \$bn	985.8	6.7		
UK £bn	53.9	3.7		
Note: Negative adjustments indicate issues in excess of allocation. For instance, the central bank of Ireland has issued €14.9bn more banknotes than its allocation; it therefore owes this amount to other central banks.				
Source: NCB financial statements, IMF International Financial Statistics, John Whittaker (2011, Table 1) <i>Eurosystem Debts, Greece, and the Role of Banknotes</i> , Lancaster University Management School, 14 November				

The values of banknotes issued by Eurozone NCBs at June 2011 are shown in Table A1. There are two notable features of these data. First, the actual issues of notes by some NCBs differ substantially from their allocations, giving rise to large adjustments, i.e.. intra-Eurosystem claims. Second, the total banknote issue in the Eurozone as a proportion of GDP is markedly larger than in the US or the UK, despite the use of US dollar notes outside the US. A likely cause of this large demand for euro notes is the presence of high value notes. Of

²¹³ <http://www.euribor-rates.eu/ecb-refinancing-rate.asp>

the total euro banknote issue, 57% is in €100, €200 and €500 notes (December 2010), whereas it is the smaller denominations that are commonly used as a medium of exchange.

Table A2 shows aggregated intra-Eurosystem net claims. The inclusion of credits and debts arising from banknote flows can make a significant difference to the overall size of the net claims, compared with the Target2 positions alone. If a NCB increases its note issuance above its allocation, this reduces its Eurosystem net claim, for a given level of Target2 net claims, since the increase in the notes presents an increase in the liabilities of the NCB.

To illustrate, as at June 2011, the German Bundesbank had issued €163.1bn more banknotes than its share which, against its €336.5bn Target2 claim, brought its total Eurosystem claim down to €173.5bn. Similarly, the NCB of Luxembourg had issued far more notes (€69.4bn) than its share (€1.9bn) but the difference (€67.4bn) is offset almost exactly by its Target2 claim (€69.9bn); around 98% of the Luxembourg note issue is in high value notes.

Table A2: Intra-Eurosystem net claims			
June 2011	€ billions		
	Target2	Banknote adjustment	Total
Austria	-35.1 ^e	28.4	-6.7
Belgium	-21.3	17.4	-3.9
Cyprus	-6.4	0.4	-6.0
Estonia	-0.2	1.7	1.5
Finland	6.0	3.1	9.1
France	-18.3	74.4	56.1
Germany	336.5	-163.1	173.5
Greece	-96.8	-14.8	-111.6
Ireland	-129.5	-14.9	-144.4
Italy	6.0	-1.7	4.3
Luxembourg	69.9	-67.4	2.5
Malta	-1.9	-0.1	-2.0
Netherlands	20.5	24.9	45.5
Portugal	-57.3	19.8	-37.5
Slovakia	-13.4	1.4	-12.1
Slovenia	-2.0	2.3	0.4
Spain	-45.4	20.4	-25.0
ECB	-11.6 ^r	67.8	56.2
Note: Negative numbers indicate amounts owed to other central banks; a NCB with a negative banknote adjustment has issued a greater value of banknotes than its allocation; ^e = estimate; ^r = residual			
Source: NCB financial statements, IMF International Financial Statistics, John Whittaker (2011, Table 2) <i>Eurosystem Debts, Greece, and the Role of Banknotes</i> , Lancaster University Management School, 14 November			

Amongst the peripheral Eurozone countries, note issues in Ireland and Greece are also higher than their allocations. This adds to their Target2 debts and may reflect hoarding or cash transfers out of these countries via the banknote route. As an opposite example, the banknote issue in Portugal is approximately zero. The central bank attributes this to tourism, with

visitors drawing notes in other Eurozone countries and spending them in Portugal (Annual Report, 2010, page 280).

Although these debts are accounted for as lending by the ECB, the ECB itself is owned by the NCBs of Eurozone states. Hence, irrespective of which NCBs are actually holding the corresponding claims, exposure to these debts falls on the remaining 12 (non-peripheral) countries, in proportion to their shares in the capital of the ECB. It may be noted that, while Germany insists that its guarantee to the European Financial Stability Facility or its successor the European Stability Mechanism for supporting the peripheral countries cannot exceed €211bn, its exposure to the same countries via the Eurosystem (€196.6bn in September 2011 and unlimited) is in addition to this figure.

Appendix B - Capital subscription to the European Central Bank, 1 January 2015²¹⁴

Table B1 shows the Eurozone NCBs' contributions to the ECB's capital, while Table B2 does the same for the non-Eurozone NCBs.

Table B1: Eurozone NCBs' contributions to the ECB's capital			
<i>National central bank</i>	<i>Capital key %</i>	<i>Share of Eurozone NCB capital</i>	<i>Paid-up capital (€)</i>
Nationale Bank van België/Banque Nationale de Belgique (Belgium)	2.4778	3.520027	268,222,025.17
Deutsche Bundesbank (Germany)	17.9973	25.56743	1,948,208,997.34
Eesti Pank (Estonia)	0.1928	0.273897	20,870,613.63
Central Bank of Ireland (Ireland)	1.1607	1.648921	125,645,857.06
Bank of Greece (Greece)	2.0332	2.888417	220,094,043.74
Banco de España (Spain)	8.8409	12.55961	957,028,050.02
Banque de France (France)	14.1792	20.14334	1,534,899,402.41
Banca d'Italia (Italy)	12.3108	17.48904	1,332,644,970.33
Central Bank of Cyprus (Cyprus)	0.1513	0.214941	16,378,235.70
Latvijas Banka (Latvia)	0.2821	0.400759	30,537,344.94
Lietuvos bankas (Lithuania)	0.4132	0.587003	44,728,929.21
Banque centrale du Luxembourg (Luxembourg)	0.203	0.288387	21,974,764.35
Central Bank of Malta (Malta)	0.0648	0.092057	7,014,604.58
De Nederlandsche Bank (The Netherlands)	4.0035	5.687476	433,379,158.03
Oesterreichische Nationalbank (Austria)	1.9631	2.788831	212,505,713.78
Banco de Portugal (Portugal)	1.7434	2.476719	188,723,173.25
Banka Slovenije (Slovenia)	0.3455	0.490826	37,400,399.43
Národná banka Slovenska (Slovakia)	0.7725	1.097434	83,623,179.61
Suomen Pankki – Finlands Bank (Finland)	1.2564	1.784875	136,005,388.82
Total ¹	70.3915	100.00	7,619,884,851.40
Note: 1. Owing to rounding, the total may not correspond to the sum of all figures shown.			

²¹⁴ <https://www.ecb.europa.eu/ecb/orga/capital/html/index.en.html>

Table B2: Non-Eurozone NCBs' contributions to the ECB's capital		
<i>National central bank</i>	<i>Capital key %</i>	<i>Paid-up capital (€)</i>
Българска народна банка (Bulgarian National Bank) (Bulgaria)	0.8590	3,487,005.40
Česká národní banka (Czech Republic)	1.6075	6,525,449.57
Danmarks Nationalbank (Denmark)	1.4873	6,037,512.38
Hrvatska narodna banka (Croatia)	0.6023	2,444,963.16
Magyar Nemzeti Bank (Hungary)	1.3798	5,601,129.28
Narodowy Bank Polski (Poland)	5.1230	20,796,191.71
Banca Națională a României (Romania)	2.6024	10,564,124.40
Sveriges Riksbank (Sweden)	2.2729	9,226,559.46
Bank of England (United Kingdom) ¹	13.6743	55,509,147.81
Total ²	29.6085	120,192,083.17
Notes: 1. Although the UK's capital key is quoted as 13.6743%, its actual capital key as a non-Eurozone state (used to calculate the BoE's contribution to ECB capital) is 3.75% of this (since 29 December 2010); https://www.ecb.europa.eu/ecb/orga/capital/html/index.en.html .		
2. Owing to rounding, the total may not correspond to the sum of all figures shown.		

Appendix C – List of acronyms

BIS – Bank for International Settlements
 BoG – Bank of Greece
 BRRD – Bank Recovery and Resolution Directive
 CAGR – compound annual growth rate
 CCP – central counterparty (i.e., clearing house)
 CF – Cohesion Fund
 CRD IV – Capital Requirements Directive IV
 CRR – Capital Requirements Regulation
 EAFRD – European Agricultural Fund for Rural Development
 EBA – European Banking Authority
 EBU – European Banking Union
 ECB – European Central Bank
 EFSF – European Financial Stability Facility
 EFSM – European Financial Stabilisation Mechanism
 EIOPA – European Insurance and Occupational Pensions Authority
 ELA – Emergency Liquidity Assistance
 EMFF – European Maritime and Fisheries Fund
 EMU – Economic and Monetary Union
 ERDF – European Regional Development Fund
 ERM – Exchange Rate Mechanism
 ESA – European Supervisory Authority
 ECAF – Eurosystem Credit Assessment Framework
 ESF – European Social Fund
 ESFS – European System of Financial Supervision
 ESM – European Stability Mechanism
 ESMA – European Securities and Markets Authority

ESRB – European Systemic Risk Board
EU – European Union
GDP – gross domestic product
GFC – Global Financial Crisis
GNI – gross national income
IMF – International Monetary Fund
LCH – London Clearing House
MiFID II – Markets in Financial Instruments Directive II
MPS – Banca Monte dei Paschi di Siena
NCB – national central bank
OCA – Optimal Currency Area
OECD – Organisation for Economic Cooperation and Development
OMT – Outright Monetary Transactions
PSPP – Public Sector Purchase Programme
QE – quantitative easing
SGP – Stability and Growth Pact
SMP – Securities Markets Programme
SRB – Single Resolution Board
SRF – Single Resolution Fund
SRM – Single Resolution Mechanism
SSM – Single Supervisory Mechanism
Target2 – Trans-European Automated Real-time Gross Settlement Express Transfer System
TLAC – Total Loss Absorbing Capacity
Ucits – Undertakings for Collective Instrument in Transferable Securities
WTO – World Trade Organisation