Exploits of Eurosystem Loopholes and their quantitative reconstruction

Abstract

This paper identifies and analyzes six key strategies used to exploit the Eurosystem’s financial mechanisms, and attempts a quantitative reconstruction: inflating TARGET balances, leveraging collateral swaps followed by defaults, diluting self-imposed regulatory rules, issuing money through Emergency Liquid- ity Assistance (ELA), acquisitions facilitated via the Agreement on Net Financial Assets (ANFA), and the perpetual (re)issuance of sovereign bonds as collateral. The paper argues that these practices stem from systemic vulnerabilities or deliberate opportunism within the Eurosystem. While it does not advocate for illicit activities, the paper highlights significant weaknesses in the current structure and concludes that com- prehensive reforms are urgently needed.

Keywords: cbank failure, love lettters, capital controls, composition agreement, debt restructuring, devaluation, regulation, resolution, supervision

1. **INTRODUCTION**

The debasement and reallocation facilities of fiat currencies like the Euro, due to their non- material nature, offer opportunities and facets, making it distinct from the more straightforward methods used for debasements in commodity and (bi)metallic coin systems, such as the Latin Monetary Union [[1](#bookmark1)–[4](#bookmark2)]. Additionally, it is more subtle than counterfeiting one’s own money by issuing the same securities twice with identical registered numbers and codes.

In the following sections, we will briefly discuss each of the six strategies identified, applicable by any National Central Bank (NLB) within (and one even from outside of) the Eurosystem. We shall not delve into detailed analysis, as there is some overlap with existing literature. These strategies include: Inflating TARGET balances, exchanging fake collaterals and then defaulting, diluting self-imposed rules such as debt ceilings and collateral requirements, money printing through Emergency Liquidity Assistance (ELA), acquisitions through Agreement on Net Financial Assets (ANFA), and finally, the perpetual (re)issuing and chaining of sovereign bonds as Eurosystem collateral.

1. **STRATEGEM 1: INFLATE TARGET BALANCES**

To quote the European Central Bank’s (ECB’s) own publication on TARGET imbalances [[5](#bookmark3), Box 4, p. 42]: *“TARGET balances are the net claims and liabilities of the euro area [[National Central Banks]] NCBs vis-a`-vis the ECB which arise through cross-border payments settled in central bank money of the respective national banking sectors or the NCBs themselves and are executed via the common euro area payment platform known as TARGET.*

*When a bank makes a payment to another bank via TARGET, the current account of the payer’s bank at its NCB is debited and the current account of the recipient bank at its NCB is credited. If both banks hold their current accounts at the same NCB there is no net impact on the aggregate account of banks at the NCB and there are no implications for TARGET balances. However, in the case of cross-border transactions, the NCB of the paying bank sees a reduction in that banks account at the NCB, and the NCB of the recipient bank sees an increase in the recipient bank’s account. Such positions are balanced by a TARGET liability for the first NCB and a TARGET claim for the second NCB. TARGET liabilities and claims also result from cross-border transactions by NCBs themselves, such as the purchase or sale of securities held for investment purposes. At the end of each day, such intra-Eurosystem claims and liabilities are aggregated and netted out throughout the Eurosystem. This leaves each NCB with a single net bilateral position vis-a`-vis the ECB, in the form of a positive or negative TARGET balance. By design, all the TARGET balances (including the ECB’s balance) add up to zero.”*

Essentially, TARGET imbalances function as an automatic credit facility among the Eurosystem’s national central banks (NCBs), distinguished by the following features: (i) no collateral requirements, (ii) zero interest rates, (iii) no need for approval from any authority such as the ECB’s Governing Council or the Executive Board, (iv) unlimited duration, unlike the US Federal Reserve System’s Interdistrict Settlement Accounts, which require an annual settlement through the transfer of primarily US Treasury Securities, and previously Gold Certificates and Special Drawing Rights, and (v) no caps or limits [[6](#bookmark4)–[10](#bookmark6)].

Currently, the consequences of a default by one of the participating national banks on this credit facility are undefined. The ECB’s statements do not address the possibility of default, instead im- plying that imbalances are resolved through mutual, collectivized credit lines among Eurosystem member countries. This means that, for example, if the Banco de Espan˜a were to default (partially) on this debt, the Bundesbank or the entire Eurosystem would need to absorb the losses, with the extent of the absorption (from all to none) unknown at present. It is highly probable that significant political pressures will influence the resolution of such a situation.

On request the Austrian O¨ NB, one of the national banks of the Eurosystem, issued the follow-

ing statement (in German, translation by deepl.com) [[11](#bookmark7)]: *“There is no list of TARGET balances between individual countries. The ECB acts as the central settlement centre for the central banks participating in TARGET; at the end of the day, the resulting claims and liabilities between the national central banks are netted out to form a claim on or liability to the ECB.”* This was corroborated by a statement of the ECB [[12](#bookmark8)]: *“Please note that TARGET balances are computed automatically at the end of the day in TARGET Services. Unfortunately, the data you are enquiring for, i.e. the balance position of each National Central Bank (NCB) vis-a`-vis all other NCBs, is not available.”*

We conclude that, at the end of each day, the TARGET balances are ‘collectivized’ or netted among all members of the Eurosystem, and no official record exists to delineate and analyze them, such as a skew-symmetric matrix with vanishing diagonal entries, showing the balances of each individual NCB against every other NCB.

The current reporting procedure for TARGET balances has significant implications for the po-

tential collapse of the Eurosystem and the subsequent debt settlement among its member states. The procedure is inadequate and irreversible, as it does not permit the tracking of individual bal-

ances between National Central Banks (NCBs). To illustrate this, consider Austria’s O¨ NB, which

has a current negative TARGET balance of approximately −65 billion (outstanding) Euro [[13](#bookmark9)]. This balance could have resulted from various (a continuity of) transactions, such as lending 100 billion to Italy and borrowing 165 billion from Germany, or alternatively borrowing 30 billion from Italy, lending 100 billion to Germany, and borrowing 135 billion from France. However, the current system does not allow for the identification of these specific transactions, and no official records are maintained.

Formally, the quantitative flows of inter-NCB Target balances can be represented by a skew- symmetric matrix with zero diagonal elements, where the entry *Ti j* in the *i*th row and *j*th column represents the respective TARGET balance of the *i*th NCB with respect to the *j*th NCB:

This representation excludes balances of the ECB and the Extra Euro Area (outside of the EU), whose inclusion is straightforward. There are currently 20 NCBs in the Eurosystem (excluding the ECB), so *n* = 20. Including the ECB and the Extra Euro Area would result in *n* = 21 and *n* = 22, respectively. The number of independent inter-NCB TARGET balances per day is (*n*2 − *n*)*/*2 =

*n*(*n* − 1)*/*2, which equals 190 for *n* = 20, 210 for *n* = 21, and 231 for *n* = 22.

The current TARGET reporting aggregates these balances into *n* = 20, as it only captures the *n*

aggregate sums

for the *i*th NCB (noting that *Tii* = 0). Evidently, since *n*(*n* − 1)*/*2 *> n* for *n >* 2, this accounting is irreversible for *n >* 2, meaning it cannot be reconstructed for more than two NCBs.

1. **STRATEGEM 2: EXCHANGE FAKE COLLATERALS THEN DEFAULT**

Here is a quote from a crisis management paper by the Financial Stability Institute (FSI) of the Bank for International Settlements (BIS) exposing this scheme [[14](#bookmark10), p. 9]: *“... banks issued bonds and exchanged them between each other so that they could be pledged as collateral with the central banks. This allowed them to break free from central bank funding limits since they could issue such bonds (which became known as ‘love letters’) at will.”*

So the basic idea of this strategem is to create fake collateral, such as ‘I Owe (Y)Us’ (IOUs).

Subsequently default on these worthless certificates. [[15](#bookmark11)–[17](#bookmark12)].

In a little bit more detail, Icelandic banks exchanged debt securities, using each other’s debt as ‘love letter’ collateral for central bank borrowing. The Eurosystem also accepted these, despite questionable correlation risks. Between February and April 2008, Icelandic banks borrowed Eur

2.5 billion from the Central Bank of Luxembourg using love letters. The European Central Bank (ECB) expressed concern, and an informal agreement was made to limit their use, but loans in- creased to Eur 4.5 billion by June. By July, love letters were prohibited, and lending fell to Eur

3.5 billion. In autumn 2008, five counterparties defaulted, three of which were Icelandic bank subsidiaries.

Finally, in March 2009, after a European Parliament member questioned the ECB about these loans, the strategem was publicly exposed.

This strategem bears some resemblance to a scheme in which two large European banks outside of the Eurosystem were allegedly involved. During the 2008 financial crisis, these banks allegedly created capital through a credit-share swap: They needed around £7 billion in new capital during the crisis. To raise this capital, they used a method that involved lending money to a sovereign wealth fund, who in turn agreed to buy newly issued shares in the banks. Essentially, the banks allegedly lent the sovereign wealth fund the money to invest back into them, inflating their equity [[18](#bookmark13), t=770]. This transaction, while effective in raising capital—as it is unlawful for a bank to lend itself money [[19](#bookmark14)]—got unsuccessfully flagged by one regulatory body.

1. **STRATEGEM 3: DILUTE SELF-IMPOSED RULES SUCH AS DEBT CEILINGS AND COL- LATERAL REQUIREMENTS**

The European Central Bank (ECB) has faced increasing scrutiny for diluting its self-imposed rules, particularly regarding debt ceilings and collateral requirements. These rules were initially designed to ensure fiscal responsibility among member states and maintain financial stability in the eurozone. However, as economic pressures have mounted—especially during crises like the Eurozone debt crisis and the COVID-19 pandemic—the ECB has relaxed these rules to provide more flexibility to member states.

One key area of dilution is the debt-to-GDP ratio. Originally, eurozone countries were expected to maintain a debt-to-GDP ratio below 60%, as stipulated by the Maastricht Treaty. However, many countries have consistently exceeded this limit. Instead of enforcing strict penalties, the ECB has allowed more leniency, fearing that rigid adherence to these rules could exacerbate economic downturns and stifle growth.

Additionally, the ECB has relaxed collateral requirements, allowing banks to use riskier assets as collateral for loans. While this move aims to ensure liquidity in the financial system, it also raises questions about the quality of assets being accepted. This leniency has been accompanied by the ECB’s practice of indirect monetization of budget deficits, by buying government debt on secondary markets. Some fear that by allowing questionable collateral, the ECB is taking on excessive risk, which could lead to financial instability if these assets fail to perform.

Here is a quote from an article published by The Brookings Institution [[20](#bookmark15)]: *“The ECB now accepts as collateral an expanded set of non-marketable assets—including government guaranteed loans, lower quality loans, and small business loans—that are outside of the general framework. It also granted waivers to Greek sovereign debt, which, because of its non-investment grade status, was not previously considered eligible collateral. ‘Fallen angel’ bonds, those that have recently lost their investment-grade rating, are now accepted as collateral as well. In addition, the ECB reduced haircuts, the amount of collateral required in excess of the loan amount, for its lending programs. In effect, the ECB decided that it is willing to temporarily increase its risk tolerance so banks can access the ECB’s liquidity operations.”*

At the moment, the central banks hold about one third of the long-term sovereign bonds issued. This makes them vulnerable against all sorts of attacks by speculators, and against the desires of the political bodies in their respective countries. If the trend of collectivizing risks and debt continues,

this could, in principle, make it necessary to refinance these central banks and the Eurosystem in general [[21](#bookmark16)].

1. **STRATEGEM 4: MONEYPRINTING THROUGH EMERGENCY LIQUIDITY ASSISTANCE (ELA)**

Emergency Liquidity Assistance (ELA) loans are crisis loans built into the Euro system from the start but published only in 2017 [[22](#bookmark17)]. A national central bank can declare a financial emergency, for instance by a bank or debt run. The national central banks can print unlimited money to lend to commercial banks within its jurisdiction, based on its own collateral rules, ‘rescue’, these banks, allegedly at the NCB’s own risk. This could also be used to delay a bankruptcy, and may have other negative side effects [[7](#bookmark5), Chapter 5].

ELA is by no means a small resource: For instance, at the height of Greece’s 2015 crisis, ELA borrowing by Greek banks reached 71% of the country’s nominal GDP [[23](#bookmark18)].

The ECB Governing Council can block such loans with a two-thirds majority vote. However, if at least one-third supports the loans, they cannot be stopped. In 2013, over a third of the ECB Governing Council members were from GIPSIC (Greece, Ireland, Portugal, Spain, Italy, and Cyprus) countries in need of cheap credit, making it impossible for others to form a blocking coalition. Until Latvia’s entry in 2014, these countries could theoretically secure unlimited central bank credit without opposition.

1. **STRATEGEM 5: AQUISITIONS THROUGH AGREEMENT ON NET FINANCIAL ASSETS (ANFA)**

Daniel Hoffmann’s doctoral thesis [[24](#bookmark19), [25](#bookmark20)] at the TU Berlin uncovered that national central banks had secretly created money to buy assets, generating profits for their governments. This practice, amounting to 650 billion Euro in ANFA credits in 2011, caused tensions within the ECB council. A confidential agreement was made to limit the activity, but Hoffmann’s work exposed it, leading to the eventual public release of the details [[26](#bookmark21), [27](#bookmark22)].

1. **STRATEGEM 6: PERPETUAL (RE)ISSUING AND CHAINING OF SOVEREIGN BONDS AS EUROSYSTEM COLLATERAL**

It is common practice among all sovereign states to chain an unlimited number of sovereign bonds [[28](#bookmark23), 3], and thereby to roll over more and more debt without ever being able to pay it back. In this process, the original principal is devalued by compounded inflation—an effect welcomed by the (sovereign) deptors—while at the same time the required amount of money created grows exponentially (by that compounding inflation).

Instead of going into too much detail here I just recall the answer of a prominent OECD re-

searcher to my question *“will any government ever pay back this sovereign debt, or are they at least committed to do so?”* at a scientific meeting organized by the Austrian National Bank (O¨ NB): his answer was a staightforward *“no”*, after he checked that I am not a journalist. In that way the sovereign debt can be perpetually rolled over, and, without disruption, the required amount of money created grows exponentially.

1. **REFLECTIONS OF THE ORIGIN AND AVOIDANCE OF THE STRATEGEMS**

Many of these strategems involve securing ‘free’ loans from the Eurosystem, followed by de facto default: With infinite time horizons and for practical purposes, repaying the collateral and compounded interest becomes illusory. Moreover, if the interest rate is effectively zero, the constraints on purchasing equity are primarily determined by the (im)possibility of concealing such transactions from public scrutiny. In the (unrealistic) limit, it would be possible to acquire ‘every- thing for nothing’.

This can only be done with non-material fiat currencies, not with those where the medium of exchange is scarce (for instance, gold, silver, or algorithmically ’hard’ currencies). I do not wish to argue against fiat money per se, as I maintain that only fiat currency can provide the necessary elasticity to cope with progressive technologies and an expanding economy. However, the non- material nature of fiat currencies makes them vulnerable to exploitation that results in unintended redistribution and aggregation of wealth.

Even if money creation is executed in large quantities, it does not necessarily lead to ‘excessive’ (more than of the order of 100% per annum) inflation, regardless of the volume or quantity of money aggregate and demand-pull inflation—too much money chasing too few goods—might

suggest [[29](#bookmark24)], even if the possibility of ‘hoarding’—stashes of money stowed away somewhere and suddenly released—is taken into consideration.

Because as long as this additional money does not show up at foreign exchanges, competing against other currencies, it will not lead to inflation [[21](#bookmark16)]. This can, for instance, be corroborated by the Japanese example characterized by trade surplus and internal debt [[30](#bookmark25), [31](#bookmark26)].

It is conceivable that, as long as the currency is in some way ‘demanded’ or ‘wanted’ in relation to other currencies—for example, due to a trade surplus, or the demand for commodities, especially those related to energy—there will be no excessive inflation. As a result, if you hold a reserve currency (that is always ‘wanted’), you can print ‘as much money as you want’, without causing excessive inflation.

The true nature of these alleged scenarios or strategems remains ambiguous to external observers: are they the product of inadequate design and unforeseen repercussions, or are they deliberately coordinated by factions within or outside the Eurosystem to, for instance, reassign wealth among member states? Regardless of whether the impetus stems from systemic deficiencies or calculated maneuvers, the Eurosystem demands a comprehensive overhaul.

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