Lyddon
CONSULTING SERVICES LTD

07939 132341
enquiries@lyddonconsulting.com
www.lyddonconsulting.com

TARGET2 IMBALANCES ACCOUNTING AND RISK

Follow-up to our paper of mid-2017 entitled "TARGET Imbalances"[1]

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Issue

The subject of TARGET2 imbalances has been much discussed in the media, with two views expounded:

a. The balances are mere accounting entries and of no significance;
b. The balances represent disguised government-to-government loans and are a form of Eurozone bailout mechanism.

The European Central Bank ("ECB") issues monthly reports of the amounts and the positions of the individual National Central Banks ("NCBs"). The amounts involved are very large: for some time the group of NCBs with credit balances have had around €1.2 trillion, and those with debit balances have owed around €1 trillion. This has left a net balance of a liability of the ECB of around €200 billion.

The aim of this paper is to try and draw conclusions about the accounting of the TARGET2 imbalances and the risks that the participants are taking.

We are qualified to do this because the documents and procedures used to enable the ECB's presentation of the TARGET2 imbalances are an example of an International Cash Management ("ICM") structure. Specifically they are an example of Zero-Balancing with Notional Pooling overlaid on top, a common ICM arrangement put in place by international banks for major corporate customers.

[1] http://www.lyddonconsulting.com/wp-content/uploads/2017/10/TARGET-imbalances-research-august-2017.pdf

Author biography
Bob Lyddon is an expert in international banking, working through his own consultancy company Lyddon Consulting Services.

Bob's particular areas of expertise include international cash management, banking regulation, the sovereign debt crisis, and international money transfers and electronic banking.

Bob ran the IBOS international cash management club from 2003 to 2016, and managed the IBOS services for automated Cross-Border Zero-Balancing ("DZero Cash") and the manual equivalent using SWIFT MT101 Request for Transfer. Bob also advised member banks about the services, such as Notional Pooling, to be run in their books to manage the balances drawn in from other member banks using DZero Cash and manual MT101.

Between 1997 and 2000, Bob was a Principal in the Strategic Change Management Consulting practice of PricewaterhouseCoopers, and managed several projects for the original implementation of the EUR, notably in Luxembourg and London.

In a banking career over 17 years Bob was latterly Director of European Cash Management at BankBoston, where he designed of the Connector multibank payments network and the Optimizer zero-balancing and cross-currency notional pooling service.

Bob obtained a First Class B.A. degree in Modern Languages at Fitzwilliam College Cambridge in 1980, and speaks French, German, Norwegian and Dutch. He had periods of study at the universities of Bergen and Freiburg-im-Breisgau, and lived in Antwerp, Zurich and Amsterdam while working for Lloyds Bank International.

Source documents for previous paper

- Guideline for TARGET2 2005
- Amending Guideline for TARGET2 2016
- Harmonised conditions for participation in TARGET2 (Banque de France version only)
- TARGET2 Information Guide v4.0 from 2010 for the Single Shared Platform
- Target functional specification V2_1_070122 for the Single Shared Platform
- Target 2016 annual report
- ECB 2016 annual report
- ECB 2016 annual accounts (contained in the ECB annual report)
- Eurosystem balance sheet 2016 (also contained in the ECB annual report)
- CCBM information for counterparties - summary of legal instruments of January 2017
- CCBM procedures for Eurosystem counterparties January 2017

Supplementary source documents for this paper

- ECB 2017 annual report
- 2012 TARGET Guideline ECB/2012/27
- Agreement of 3 August 2018 on the Multilateral Netting of End-of-Day Obligations in TARGET2
- Deutsche Bundesbank presentation on TARGET2 dated 27th November 2018

Executive Summary

The amounts the ECB reports have already been netted twice. The 600 nostro and vostro accounts held by the ECB and the 24 TARGET2-participating NCBs have their own balances at the end of the processing day, and these balances are then subjected to an operational procedure to net them.

This procedure should reflect the legal documentation that governs the netting, but it does not. The documentation foresees four steps to bring about the result, but in reality there is only one operational step. This mismatch between documentation and operations would be bring into question the validity and enforceability of the arrangement were it contracted between a bank and a multinational corporate.

This raises the issue of whether the documentation achieves the accounting result that the ECB presents, and on one point it definitely does not.

The ECB is granted no right under the legal documentation to net off its €1 trillion of matching assets and liabilities so as to produce a single liability position on its own balance sheet of €200 billion. The ECB should carry all the assets and liabilities on its balance sheet.

It is more difficult to conclude whether the ECB's calculation of the balances going into its sums is valid, as the original, gross balances on the 600 nostro and vostro accounts at the end of the processing day are not in the public domain. The gross amounts can only be larger than the netted ones that the ECB reports.

In another sense this is all immaterial since what the ECB is doing is window-dressing. Its reports are for only one day per month. They are only for "overnight" on that day, and "overnight" lasts under an hour. TARGET2 processing concludes at 18:00 CET, and there are then the End-of-Day Processes from 18:00 until 18:45. The system is closed for 15 minutes, whereupon the Start-of-Day Processes for the following day begin and last until 19:30.

The timing of the single operational step (a Zero-Balancing) that is carried out on the 600 accounts is not in the public domain, but, in commercial banks, Zero-Balancing is carried out towards the close of the End-of-Day Processes e.g. in TARGTE2's case around 18:30. The TARGET2 Zero-Balancing is reversed to reinstate the balances on the 600 accounts for the next day to be exactly what they were at the end of the previous day. This is known as a "Cinderella Sweep", and can be expected to be done around 19:05 on the "Last In, First Out" principle: the Zero-Balancing is done late in the End-of-Day Processes and is reversed early in the Start-of-Day Processes.

What the ECB reports is valid for at most one hour, and more likely 35 minutes, on just one day per month. We are left to guess what the netted figure would be at the end of other days, or during any business day, and we have no inkling of what the original balances are at any time or on any day.

TARGET2 Account Structure
Twenty four NCBs of EU Member States participate in TARGET2: that is all the nineteen Eurozone NCBs plus the NCBs of Bulgaria, Croatia, Denmark, Poland and Romania.

All 24 NCBs and the ECB have signed a single netting agreement to determine how the balances are dealt with at the end of the business day. It is the "Agreement of 3 August 2018 on the Multilateral Netting of End-of-Day Obligations in TARGET2", and we shall refer to it as the "netting agreement". It confirms, in the way it sets out the end-of-day process in its Article 2.1 and refers to bilateral net obligations between NCBs, that there are bilateral gross obligations between the NCBs, and it states that these are first netted into one single bilateral net obligation between each pair of NCBs. This initial netting is done pursuant to paragraphs 1 and 2 of Article 6 of the 2012 TARGET Guideline ECB/2012/27.

In using this wording the netting agreement confirms that the basic, operational construction is that the 24 participating NCBs have mutual nostros and vostros - which amount to 552 accounts - and that each NCB has a nostro and a vostro account with the ECB as well - another 48 accounts, making 600 current accounts within the scope of TARGET2 in all.

Bilateral gross obligations arise on these accounts during the business day as part of the processing of TARGET2 payments, or, put in plain English, some of the accounts are in credit and some in overdraft. These bilateral gross positions still exist as balances on accounts as TARGET2 finishes its daily operational processing at 18:00 CET, and goes into its end-of day processes. Following the "successful technical completion of the end-of-day reconciliation procedures effected by the SSP-providing NCBs", the netting process starts (Netting agreement Article 2.1).

Stages of the netting process
The first stage of the netting – which is governed by paragraphs 1 and 2 of Article 6 of the 2012 TARGET Guideline ECB/2012/27 and not by the netting agreement – claims to merge the two separate balances on the nostro and vostro accounts held between a pair of NCBs – so for example between Den Nederlandsche Bank and the Banca d'Italia - into a single bilateral net position.

If, by way of example, Den Nederlandsche Bank's vostro account in its books for Banca d'Italia showed a debit balance of €31.6 billion, and their nostro in Banca d'Italia's books showed a debit balance of €11.6 billion, the bilateral net balance would be a liability of the Banca d'Italia to Den Nederlandsche Bank of €20.0 billion.

Then Article 2.1.a and 2.1.b of the netting agreement split this single, bilateral balance between each pair of NCBs into two figures that are "novated" to the ECB.

The result of this stage of the netting process – to continue with the above example – would be the creation of a liability of the ECB to Den Nederlandsche Bank of €20.0 billion, and of a claim for the ECB on Banca d'Italia of €20.0 billion. After the completion of that stage, each NCB has 23 separate claims on or liabilities to the ECB deriving from the "novation" of its bilateral net positions with other NCBs, and it has its two direct positions with the ECB as well: the balances on its nostro and vostro with the ECB. This is the force of Article 2.1 of the netting agreement: each NCB has 25 separate positions with the ECB.

The ECB, under Article 2.2, then totals its 25 separate positions with each NCB, and derives the figures that it releases in its monthly reports and which it puts in its own year-end balance sheet:

- One net liability to or claim on each NCB;
- One total position of ECB towards all NCBs combined (which has always been a liability up to now);
- This total only goes onto the ECB's balance sheet and it is its single largest liability.

The ECB's accounting treatment is an example of On-Balance Sheet Netting as envisaged under Basel II[2]; the relevant BCBS publication confirms that the "novation" technique used within TARGET2 is a valid technique.

Amounts shown by the ECB

The ECB now issues a monthly report, usually one month in arrears, of its claim on or liability to each NCB, and of its own net claim[3].

The net claim as of year-end is what the ECB puts on its own balance sheet, along with a note of the total of all claims on and liabilities to the NCBs[4].

As at 31/12/17 these amounts were, as per Note 11.2:

	2017 €	**2016 €**
Due to euro area NCBs in respect of TARGET2	1,263,961,444,256	1,058,484,156,256
Due from euro area NCBs in respect of TARGET2	(1,047,197,405,166)	(908,249,140,203)
Matched TARGET2 imbalance	(1,047,197,405,166)	(908,249,140,203)
Net deposit as a result of TARGET imbalance	216,764,039,090	150,235,016,053

Up until June 2018 the ECB only issued quarterly averages of the TARGET2 balances, making it difficult to reconcile their statistics with their published balance sheet.

[2] https://www.bis.org/publ/bcbs37.pdf
[3] http://sdw.ecb.europa.eu/reports.do?node=1000004859
[4] https://www.ecb.europa.eu/press/pr/date/2018/html/ecb.pr180222.en.html

However, since June 2018 the ECB has published the statistics monthly, and the month upon which we have based this paper is October 2018, when the ECB-to-NCB balances were:

Borrower NCBs	€ billions	Depositor NCBs	€ billions
Belgium	5.3	Germany	927.6
Estonia	0.2	Ireland	11.8
Greece	29.3	Cyprus	8.4
Spain	397.5	Luxembourg	223.7
France	25.8	Malta	3.6
Italy	489.5	Netherlands	91.7
Latvia	7.3	Finland	49.6
Lithuania	4.8	Slovenia	0.2
Austria	47.0	Slovakia	10.5
Portugal	78.7	Non-Eurozone	4.2
	1,085.4		1,331.3

Matching Balance	1,085.4
Mismatch	245.9
Imbalance shown as "ECB"	245.7

Obviously it is disturbing that the ECB's final figure differs from the mismatch between claims and obligations by €200 million, but the bigger issue is that, by showing only €245.7 billion on its own balance sheet, the ECB treats its several relationships with the 24 NCBs as if they were with a Single Counterparty.

The netting agreement only purports to novate the balances that the NCBs hold with one another into a single bilateral balance per NCB with the ECB; it does not go on and make such arrangements between the NCBs and the ECB as would allow the ECB to present the figures as it does.

Single Counterparty

It needs to be recognised that the NCBs, and the ECB itself, are separate legal entities, with no common parentage or cross-shareholding, they each have their own statutes, and they are each established under a given applicable law, with various corporate laws from their country of incorporation applying to them.

The ECB's accounting is a treatment which, in the corporate banking world of International Cash Management, is customarily only achieved between a Pooling Bank (e.g. Deutsche, Citibank, Bank Mendes Gans) and the subsidiaries of a multinational company if several conditions are all met.

These conditions are cumulative:

- The participating subsidiaries all belong to the same ultimate parent company; **and**
- There is a system of accounts for the multinational's subsidiaries established with just one banking location of the Pooling Bank (e.g. London, Amsterdam, Frankfurt); **and**
- Accounts held in the country of incorporation of the subsidiaries (or indeed anywhere else) are zero-balanced cross-border into accounts of the same subsidiaries at the pooling location and in the same currency:
    - ➢ These transactions are sometimes referred to as "left pocket, right pocket";
    - ➢ They will include the sweeping in of credit balances on the in-country accounts to the Pooling Bank accounts;
    - ➢ They will also include the opposite: topping transactions to make payments out of the Pooling Bank and eliminate overdrafts on in-country accounts;
    - ➢ Each such arrangement will have a Zero-Balancing Agreement to govern it, an example being an IBOS DZero Cash Agreement, and will be signed between the Pooling Bank, the in-country Account Servicing Institution for each subsidiary, and the subsidiary itself as slave account owner and master account owner;
    - ➢ If the master account owner is not the subsidiary, then the master account owner will sign the Zero-Balancing Agreement as well; **and**
- Both credit and debit balances thus escape the coverage of the General Banking Conditions of the Account Servicing Institution to each subsidiary, whether that be a branch or subsidiary of the Pooling Bank, its local strategic partner, or an unrelated third-party bank; **and**
- The subsidiaries all sign into a single pooling agreement with the Pooling Bank, relating to the treatment solely of the accounts within the scope of the pool at the Pooling Bank; **and**
- In it they submit to the applicable law of and the exclusive jurisdiction of the country of the pooling location; **and**
- The subsidiaries collectively agree in it that the balances on accounts in the pool – whoever nominally owns them – represent a single funds position towards the Pooling Bank.

This last condition is the crux, and the legal techniques for the subsidiaries to collectively agree that the balances on accounts in the pool represent this single funds position and to establish the subsidiaries as a Single Counterparty towards the Pooling Bank fall into two broad categories.

Firstly they are ones allowing the Pooling Bank to seize credit balances in the pool and apply them against overdrafts:

- Pledge: the subsidiaries, within the text of the pooling agreement, pledge their credit balances in the pool to the bank as security for the overdrafts in the pool of other subsidiaries[5]

- Close-Out: the subsidiaries grant a right in the pooling agreement to the Pooling Bank to zero-balance the system of accounts in its books at its discretion[6]

Secondly they are techniques whereby the subsidiaries make themselves liable for one another's debts:

- Cross-guarantee: the subsidiaries issue separate Letters of Guarantee without a maximum amount to the Pooling Bank, guaranteeing the overdrafts of other subsidiaries[7]

- Declaration of Joint and Several Liability: the pooling agreement contains a Declaration of Joint and Several Liability under which all subsidiaries make themselves liable for the overdrafts of all other subsidiaries at the Pooling Bank

No such technique is embedded in the TARGET2 netting agreement: the NCBs have separate relationships with the ECB.

Therefore the ECB's accounting treatment is invalid: the ECB should carry each of their Debtor positions towards an NCB as an asset, and each of their Creditor positions towards an NCB as a liability.

Indeed there is a further important point that we will return to later: all the techniques used in the corporate world are in force and effect 24x7, for every moment that the accounts they apply to exist.

No distinction is made between the position overnight and during the business day. In TARGET2, however, the netting and novation explicitly kick in after the end of the TARGET2 processing day, such that they are not in force and effect during TARGET2 processing hours.

Correct ECB accounting

As at 31/12/17, the ECB should not have carried just a Creditor position in respect of TARGET2 of €216,764,039,090, but a Creditor position of €1,263,961,444,256 and a Debtor position of €1,047,197,405,166.

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[5] Used by Bank Mendes Gans as per their specimen pooling agreement

[6] Used by BankBoston in the Optimizer Cash Pooling Schedule

[7] Used by US and UK banks, and the technique recognised by the US and UK banking regulators for On-Balance Sheet Netting of current account balances

This would have added €1,047,197,405,166 to their Balance Sheet Footing and made their key figures change as follows:

€ millions	Before adjustment	Adjustment	After adjustment
Assets	€414,162	€1,047,197	€1,461,359
Liabilities	€375,533	€1,047,197	€1,422,730
Capital & Reserves	€9,014	€0	€9,014
Provisions & Revaluation Accounts	€29,615	€0	€29,615
Total loss cushion	€38,629	€0	€38,629
Capital & Reserves/Assets	2.2%	--	0.06%
Total loss cushion/Assets	9.3%	--	2.6%

The European System of Central Banks or "ESCB" plays no role in the TARGET2 construction. The ESCB is simply a term used to refer collectively to the ECB and the Eurozone NCBs (but not the Non-Eurozone ones).

The ESCB is not a legal person, cannot hold accounts and cannot incur liabilities or claims. As such the wording on page A31 of the ECB 2017 Annual Report is incorrect when it expresses the legal position of the TARGET2 balances as follows: "These positions in the books of the ECB represent the net claim or liability of each NCB against the rest of the European System of Central Banks (ESCB)".

The version on page A4 is the correct one from the point of view of who the parties are: "Intra-Eurosystembalances of euro area NCBs vis-à-vis the ECB arising from TARGET2 are presented together on the Balance Sheet of the ECB as a single net asset or liability position".

This version describes the parties correctly, but does not correctly reflect the ECB's legal position towards the parties. The netting agreement does not confer on the ECB the right to present its balances towards the separate NCBs as if they were towards a Single Counterparty.

The ECB's accounting, as stated, presents the TARGET2 balances as if they were, and this is incorrect.

Credit risk on claims on the ECB compared to claims on NCBs
A school of thought has emerged whereby the original bilateral balances between NCBs are unimportant because they are all novated to the ECB. This contention rests on the assumption that the ECB's creditworthiness is superior to that of the NCBs.

We shall explore below the efficacy of the legal means by which the netting and novation are enacted, but from the point of view of credit risk, it matters very much who is responsible for the balances that creditor NCBs hold with the ECB.

The ECB's accounting – by eliminating the matching balance from its assets and liabilities – infers that the ECB is not responsible for the claims of creditor NCBs in their entirety. This cannot be the case if original bilateral claims have been novated to the ECB. The essence of novation of a claim is that the new debtor becomes solely and fully responsible for the claim that the claimant had on the original debtor.

Article 2.2 of the netting agreement releases the NCBs from their claims on one another, and replaces them with claims on – and obligations to – the ECB.

The claims on the original parties were a mix of:

a) Unsecured claims on an NCB when a creditor NCB had a credit balance on its nostro at a debtor NCB;
b) Secured claims when a debtor NCB went overdrawn on its vostro at a creditor NCB.

The nature of the security lodged in case (b) against an overdraft is not in the public domain, but because of the historical 'A' and 'B' lists of collateral that existed when TARGET was established, we can be confident that an NCB mainly lodges public sector securities of its own country i.e. the Austrian NCB lodges securities issued by the Republic of Austria or by other Austrian government entities, as they have a ready supply of them.

Since the NCB's debts are normally the responsibility of its government anyway – and in the case of the Austrian NCB that would be the Republic of Austria – we can say with reasonable certainty that it does not matter whether an NCB pledges security for its TARGET2 debts or not, because any security it does pledge carries 100% correlation with lending to the same NCB without security.

While the NCBs do not have a public credit rating, their government does. The credit risk being taken by any NCB in TARGET2 by either allowing another NCB to go overdrawn on its vostro account – with or without collateral – or by running a credit balance in that other NCB, is the credit risk on the government of the respective Member State. This is a claim in "central bank money", albeit that it is in euro, standing behind which there is not one single sovereign entity.

There are three types of "central bank money". In central banking theory all three types are assumed to carry the same credit risk – the risk of the government of the country in question:

- Note and coin;
- A credit balance on an account held at an NCB;
- A security issued by the government which stands behind the NCB.

NCBs have government-to-government credit risk when they have bilateral balances in TARGET2.

The question is whether that is a preferable position to be in compared to having a single net claim on the ECB, when the ECB is:

- Unrated by any of the public credit rating agencies;
- Not explicitly backed by a single national government;
- Thinly capitalised;
- With a loss cushion that is composed for 77% of "Provisions & Revaluation Accounts" which may have already been earmarked for other purposes and which may turn out not to be available to cushion credit losses in TARGET2.

The phrase "out of the frying pan into the fire" would be appropriate here. The credit risk of the ECB is different from the credit risk of an NCB (which is tantamount to the credit risk of the NCB's government), but it is not necessarily preferable. Indeed, since so many of the ECB's assets are the novated claims on NCBs, it could be argued that the credit risk of the ECB is no more than a blended version of the direct credit risks on the NCBs. The ECB's methodology for dealing with a credit loss it incurred is the clearest token of the ECB's blending role.

How a loss in TARGET2 would be dealt with

TARGET2 counts as a "payment operation" of the ECB that falls within the scope of its profit-and-loss allocation methodology.

This means that a credit loss incurred in the operation of TARGET2 is either incurred directly by the ECB, or is allocated to the ECB in full by whichever NCB incurred it.

In either case the ECB then allocates the loss out to the Eurozone shareholders through their capital accounts. This is the reason why Non-Eurozone NCBs cannot be Debtors in TARGET2 and be the cause of a loss, as they are not part of the loss-absorbing arrangement.

If, for example, a loss of €20 billion was incurred by the Luxembourg NCB in its dealings with the Portuguese NCB, the loss would be deducted from ECB capital accounts of the Eurozone NCBs, according to their Capital Keys. Because Non-Eurozone countries do hold capital in the ECB, the Eurozone NCBs' capital keys do not total 100% of the ECB's capital, but have to be re-based in order to determine their share of the loss in question.

ECB Capital Keys are determined by combining each Member State's share of the EU on two measures:

1. 50% x Member State Gross National Income/EU Gross National Income;
2. 50% x Member State Population/EU Population.

Here are the current Capital Keys of the Eurozone NCBs in the ECB, totalling 71% of the whole, with each one's Capital Key shown first as a percentage of 100%, and then re-based to exclude the non-Eurozone NCBs and to show which portion of any TARGET2 loss would be allocated to their share account:

NCB	Country	Capital key %	Rebased key %
Nationale Bank van België	Belgium	2.4778	3.5200
Deutsche Bundesbank	Germany	17.9973	25.5674
EestiPank	Estonia	0.1928	0.2739
Central Bank of Ireland	Ireland	1.1607	1.6489
Bank of Greece	Greece	2.0332	2.8884
Banco de España	Spain	8.8409	12.5596
Banque de France	France	14.1792	20.1433
Banca d'Italia	Italy	12.3108	17.4890
Central Bank of Cyprus	Cyprus	0.1513	0.2149
Latvijas Banka	Latvia	0.2821	0.4008
Lietuvosbankas	Lithuania	0.4132	0.5870
Banquecentrale du Luxembourg	Luxembourg	0.2030	0.2884
Central Bank of Malta	Malta	0.0648	0.0921
De Nederlandsche Bank	Netherlands	4.0035	5.6875
Oesterreichische Nationalbank	Austria	1.9631	2.7888
Banco de Portugal	Portugal	1.7434	2.4767
Banka Slovenije	Slovenia	0.3455	0.4908
Národnábanka Slovenska	Slovakia	0.7725	1.0974
Suomen Pankki	Finland	1.2564	1.7849
Total		70.3915	100.0000

For completeness' sake, here are the Capital Keys of the non-euro area NCBs:

NCB	Country	Capital key %
Българсканароднабанка	Bulgaria	0.8590
Českánárodníbanka	Czech Republic	1.6075
Hravatska norodna banka	Croatia	0.6023
Danmarks Nationalbank	Denmark	1.4873
Magyar Nemzeti Bank	Hungary	1.3798
Narodowy Bank Polski	Poland	5.1230
Banca Naţională a României	Romania	2.6024
Sveriges Riksbank	Sweden	2.2729
Bank of England	UK	13.6743
Total		29.6085

The first problem is that a €20 billion loss would exceed the ECB's Capital & Reserves and require a full replenishment of shareholdings and in cash.

The second problem is that the Portuguese NCB, having been the source of the loss, would be unlikely to be able to come up with its contribution of 2.4767% of the replenishment.

Indeed the background to the problem would be likely to rest with the Republic of Portugal, the NCB's owner, and not with the NCB itself.

This is uncharted territory, but past experience would indicate that the matter would be resolved by one or more of the following means:

a. The shareholdings are re-based again and without including the Portuguese NCBs, so that every other NCB pays more; or
b. One or more of the NCBs lends the Portuguese NCB the money with which to make its contribution; or
c. A separate bail-out is arranged through the entirety of the Eurozone Member States and this includes a loan to the Portuguese NCB with which to pay its contribution to the ECB.

In other words, a loss of that magnitude would not be worked through the agreed methodology.

Instead it would be met, one way or the other, by the same group of Member States whose NCBs are the original lenders to the NCB in question, and the only variables are the percentages of the loss allocated to each NCB and the financial means through which the loss is crystallised (i.e. as a direct loan, as a syndicated bail-out loan, but not by being written off as a loss).

Is an NCB better off lending directly and bilaterally to another NCB, or by having its claims novated to the ECB?
This is not a simple question to answer.

It should be of some comfort to Germany, Finland, the Netherlands and Luxembourg that their very large net claims on the ECB (which may be backed by even larger gross bilateral claims on NCBs) should be diminished through the loss-sharing methodology.

The result would be a share of any loss in line with the normal range of their support for other EU mechanisms, such as the EU Budget, the European Investment Bank, the European Financial Stability Facility and the European Stabilisation Mechanism.

As the total of NCB claims on the ECB was €1,331.3 billion on 31/10/18, the amelioration of the position of the four main creditor NCBs thanks to the loss-sharing mechanism of the ECB can be quantified as follows:

Country	% of rebased ECB capital A	TARGET2 claims on 31/10/17 B	% of TARGET2 claims on 31/10/17 C = B/€1,331.3 billion	Difference in % D = C - A	Difference in money D x €1,331.3 billion
Germany	25.5674%	€927.6 billion	69.6763%	44.1089%	€587.2 billion
Finland	1.7849%	€49.6 billion	3.7257%	1.9408%	€25.8 billion
Netherlands	5.6875%	€91.7 billion	6.8880%	1.2005%	€15.9 billion
Luxembourg	0.2884%	€223.7 billion	16.8031%	16.5147%	€219.9 billion

Of course it is one thing to have the right to see one's claims diminished by these amounts through the ECB's mechanism, and another to get the remaining Member States to step up to the plate to take these claims on. Germany and Luxembourg should be particularly concerned in this regard.

It remains a moot point whether the creditor NCBs might be better served by retaining their direct claims on the debtor NCBs, rather than having them intermediated by the ECB.

It can hardly be pretended that the ECB adds a layer of Credit Enhancement to the claims of creditor NCBs, when a claim on a debtor NCB is directly backed by a national government whereas a claim on the ECB is not.

The ECB is not well-capitalised and does not have such a spread of other assets as to be able to repay creditor NCBs in case debtor NCBs fail. The ECB is totally dependent upon the debtor NCBs in TARGET2 repaying in order for the ECB in turn to meet the claims of the creditor NCBs.

What is the size of the gross claims?
The size of the gross bilateral claims on the mutually-held current accounts, before the application of the Article 6 of the 2012 TARGET Guideline ECB/2012/27 and the netting agreement, can only be guessed at.

By the nature of netting – and especially a netting that is in multiple stages – the amounts will be larger than the ECB discloses, and they will be unlimited: NCBs must supply each other with credit only limited by the amount of collateral that can be pledged.

Since the government of the NCB is a ready source of collateral in the form of issuance of its government bonds, there is no effective limit on how much collateral can be brought forth and how much credit in TARGET2 taken, other than the overall limits on government deficits that are part of the Stability and Growth Pact[8].

Examination of the validity of the netting of NCBs' nostro and vostro balances with one another as per paragraphs 1 and 2 of Article 6 of the 2012 TARGET Guideline ECB/2012/27

Any pair of NCBs maintain mutual current accounts. A cross-border TARGET payment originates in the high-value payment system of the originating NCB, who credits the account of the destination NCB in its books and sends a payment order to that destination NCB.

The destination NCB debits the account of the originating NCB in its books and pays out to the beneficiary's bank in its respective high-value payment system.

This is how the TARGET imbalances arise, and if there were just one payment, the destination NCB would find its account at the originating NCB to be in credit, and the account of the originating NCB in its own books to be in debit.

This situation is an "Intra-Eurosystem obligation" in the meaning of Article 6, and Article 6 states that any such obligation "shall automatically be aggregated and form part of a single obligation in relation to each Eurosystem CB".

Article 6 runs to four short paragraphs totalling 183 words. This seems quite thin for achieving its objective: re-construing the balances on two separate bank accounts held in different NCBs as one single balance.

This is the extent of the documentation for the first step of the netting, whereby each pair of current accounts held by two NCBs with one another are netted into a single obligation of one NCB to the other. The wording infers that this happens continuously during the business day, not least because there is explicit reference, in the second half of Article 6.2, to "an agreement between the Eurosystem CBs" – which we take to mean the netting agreement – and that this applies to the balances "at the end of the business day", but by implication not during it.

This continuous netting between the accounts that NCBs have with one another has no operational result: the balances on the accounts fluctuate with the processing of payments over them during the business day, and there is no zero-balancing of the pairs of accounts at the end of the business day.

[8] https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/stability-and-growth-pact_en

Using again our example where Den Nederlandsche Bank's vostro account in its books for Banca d'Italia showed a debit balance of €31.6 billion, and their nostro in Banca d'Italia's books showed a debit balance of €11.6 billion, there is no payment between these two accounts of €11.6 billion such that the nostro in Banca d'Italia's books is brought to zero, and the vostro in Den Nederlandsche Bank's books is brought to €20.0 billion debit:

- By a discreet payment using a SWIFT MT200 or MT202;
- By an automated zero-balancing function such as is possible within the TARGET2 Single Shared Platform ("SSP"), the technical platform run by the Bundesbank, Banca d'Italia and Banque de France, on which TARGET2 runs and on which all the accounts are housed.

Zero-balancing can be performed on the SSP, but is not used to this end.

As a result and both intraday and at the end of the processing day, these accounts have balances on them, which are construed thanks to Article 6 as a single bilateral net obligation, and which are referred to in para 1(a) of the netting agreement as "each original net obligation". By using these words it is acknowledged that original gross obligations exist between the NCBs, as credit and debit balances on their mutually-held accounts.

The wording of Article 6 confirms that these are real claims and obligations, and on real accounts.

In the corporate world Article 6 would not be sufficient to achieve the effect of continuously netting balances on accounts that are held with different banks. The acid test would be whether the liquidator of one of the banks would be able, under the governing law and Terms&Conditions ("Ts&Cs") applying to the accounts, to unpick (sometimes referred to as "cherry-pick) the arrangement.

In our example it would clearly be in the interests of the liquidator of Den Nederlandsche Bank (for the benefit of other creditors) to lay claim to the entire asset – the loan of €31.6 billion to Banca d'Italia – and make the Banca d'Italia service it in line with its terms, whilst recording the loan made by Banca d'Italia to Den Nederlandsche Bank of €11.6 billion as an ordinary creditor claim.

The liquidator would then try to realise the asset in its entirety, pay the proceeds into the creditor pool, and then propose to pay the Banca d'Italia a liquidation premium (or "pence in the pound") in accordance with the proceeds of all the assets, first meeting the priority claims, and then using what is left over to divide between the ordinary, unsecured creditors.

Banca d'Italia's position would be that Article 6 conferred on it a priority status, and that it had the right to set-off its loan to Den Nederlandsche Bank in its books against Den Nederlandsche Bank's loan to Banca d'Italia.

This would set Dutch bankruptcy law against Article 6, an issue that would have been addressed in the corporate banking world through legal advice before the arrangement had been put in place.

In the construction of TARGET2 one NCB acts as Account Servicing Institution ("ASI") for the other, and vice versa. Whilst all the accounts reside technically on the SSP, TARGET2 is decentralised from a logical and therefore also from a legal point of view. The nostro account of the Bundesbank with the Bank of Greece resides in the Bank of Greece's books, it is domiciled in Greece, and is subject to the Bank of Greece's Terms and Conditions ("Ts&Cs").

In the corporate banking world it is customary to move all balances into a Pooling Bank, in one location and subject to a single set of Ts&Cs, with one governing law. The Pooling agreement involves the Pooling Bank having the right of set-off between credit and debit balances, and frustrating any attempt by a liquidator of one of the participating companies to cherry-pick credit balances in the pool while there are debit balances outstanding.

Establishing the agreement, the powers of each participating company to sign it, the absence of local legal powers to cherry-pick it and so on, is a major undertaking, and the efficacy of the outcome needs to be confirmed with positive legal opinions "from every relevant jurisdiction" and which are regularly refreshed. An objective of Pooling in the corporate world is normally to establish that the location of the Pooling is the only relevant jurisdiction, because all the accounts in the Pool are held there. This is not the case in TARGET2 because the accounts are distributed around 24 countries.

For both this reason, and because this stage of the netting has no operational consequence, it is hard to believe that Article 6 is watertight in causing the continuous netting of the mutually-held accounts, and that NCBs can be completely confident that their risk towards one another is one position, as opposed to two separate positions, which will each be treated independently if one of the NCBs goes into liquidation.

Examination of the validity of the novation of NCBs' single, netted bilateral balance with one another into two claims: one of an NCB on the ECB, and an equal one of the ECB on an NCB, under the netting agreement
Where we state above that the first stage of the netting has no operational consequence, it is because the accounts held bilaterally by the NCBs are all zero-balanced directly into the ECB as part of the netting and novation at the end of the business day.

If the accounting were to follow the legal construct exactly, the balances on the nostro and vostro held between each pair of NCBs would firstly be combined into a single figure via either a funds transfer using SWIFT MT202, or by a zero-balancing across the SSP. Then that single figure could be zero-balanced into an ECB account.

What actually happens is that a once-and-for-all zero-balancing accounts for four legal steps:

1. The netting of bilateral gross balances pursuant to Article 6;
2. The novation of bilateral net balances to the ECB, pursuant to the netting agreement;
3. The splitting of bilateral net balances into individual ECB-to-NCB balances, pursuant to the netting agreement;
4. The aggregation by the ECB of all ECB-to-NCB balances into a single claim or obligation, pursuant to the netting agreement.

This is not a good principle to work on; it is better that there be an operational consequence to manifest the taking of each legal step. Otherwise a court-of-law has greater leeway, when looking first at what happened operationally, to "look through" the legal arrangement that a party contends sat behind it, and impose their own, different legal construction.

In a situation where an NCB had an original claim on the Bundesbank, for example an overdraft balance on the Bundesbank's account at that NCB, and this had been novated to the ECB, the Member State government owning that NCB might see it as being in their interests to try to have the netting agreement struck down in their own courts, so that their NCB could maintain its claim on the Bundesbank, rather than the NCB having a claim on the less-creditworthy ECB.

The inducement to do this would be all the larger if the Bundesbank owed that NCB an amount greater than that same NCB's netted claim on the ECB.

One cannot predict what the circumstances might be in which the TARGET2 balances become problematical, who would owe how much to whom at the time, what legal rights the creditor might then lay claim to, and how they might proceed so as to press their claim.

What one can say is that the mismatch between the operational manifestation of the netting and its supposed legal meaning opens up an area of risk that is impossible to quantify without extensive and costly due diligence – which is what commercial banks are obliged to undertake in order to participate in International Cash Management.

One can go further and state that the usage of the technique of novation for the netting of balances on current accounts is an oddity, as compared with its common usage in the world of derivatives. In that business it has become obligatory for a contract between two financial institutions to be split in two and settled though a Central Counterparty, or "CCP".

Article 2.1.a of the netting agreement splits the single, bilateral cash balance between NCBs into two figures that are "novated" to the ECB. The ECB becomes the Central Counterparty for the bilateral balance.

This is the legal construct used for the clearing and settlement of derivatives: if Goldman Sachs and Credit Suisse enter into a derivatives contract over-the-counter, their bilateral contract is split into two separate contracts with the Central Counterparty for the purposes of reducing the risk between contract and settlement.

While this may be a workable technique to use when there is a known quantity – a discreet contract – and two counterparties to it, it is less plausible to use the technique in connection with balances on bank accounts where the accounts themselves still exist and where the balances are returned to the accounts the following day.

The issue of applicable law is relevant here too. A single derivatives contract will have a single agreed applicable law. The bank accounts underlying the TARGET2 netting have the applicable law of the ASI they are held with. By extension the balances on those accounts are subject to the same applicable law as the accounts themselves.

If it were accepted that the zero-balancing - that occurs but which is not mentioned in the netting agreement – moved the balances onto accounts held at the ECB and within the purview of the netting agreement, then the balances would become subject to German law, as the netting agreement Article 4 specifies: the governing law is the local law of the seat of the ECB from time to time.

The problem is once again the mismatch between the operational situation and the legal one: NCBs zero-balance the accounts they run for other NCBs into the account they run for the ECB, and not into the account they hold at the ECB.

The account that Banca d'Italia runs for the ECB is subject to Italian law, and this is the master account under the zero-balancing in which the Banca d'Italia clears the 23 accounts of the other NCBs in its books to the ECB's account.

If it cleared them to its nostro at the ECB – in the ECB's books – then the amount would be sitting on an account subject to the same applicable law as the netting agreement.

While we have Article 6 and the netting agreement as governing documents for the arrangement, there is no zero-balancing agreement. In the corporate world there would have to be a separate zero-balancing agreement for every set of relationships under which zero-balancing was being carried out.

The principle in corporate banking, which surely should not be different in central banking, is that each entry over an account has to have an agreement behind it, or an authorisation, or a payment order.

The TARGET2 zero-balancing is undertaken in the context of the netting agreement, but is not mentioned specifically in it. This is another area where the TARGET2 arrangement could be challenged.

Examination of the validity of the merging by the ECB of its 23 novated claims or liabilities vis a vis each NCB, with the balances on its nostro and vostro with the same NCB, to reach a single claim on or liability to each NCB, under the netting agreement

Since the NCBs and the ECBs are all parties to the netting agreement (and not just the NCBs as Article 6.2 states), the merging of the separate positions of each NCB with the ECB into one ECB-to-NCB position is less problematical, assuming the preceding stages have been successfully completed.

Our view is that this step is not vulnerable in itself: the legal vulnerabilities are in the two preceding stages, and in the fact that the netting agreement is only in force overnight.

Examination of the significance of the limitation of the netting agreement and Article 6 of the 2012 TARGET Guideline ECB/2012/27 to balances at the close of the business day

While Article 6 infers that the bilateral gross balances between NCBs are continuously netted during the business day, there is no operational manifestation of that, and the efficacy of Article 6 is questionable for that reason.

This means it is possible that the NCBs are exposed to one another separately for the credit balances and debit balances they run with one another intraday.

What is certain is that the netting agreement only functions for the "overnight" period, and not intraday. If one believes in the efficacy of Article 6, the NCBs' intraday exposure to one another is limited to the "single obligation" they have with one another. This is the obligation that is novated to the ECB pursuant to the netting agreement which, as stated, only impacts the situation overnight.

As explained in our initial paper of 2017, "overnight" in TARGET2 for this purpose is at most 90 minutes out of 24 hours, and could be as short as 20 minutes.

Under that perspective the entire netting and novation can be regarded as a window-dressing for a short period in order to obfuscate the risks being run intraday.

Phases in the TARGET day

While TARGET2 supposedly is open on D from 07:00 until 18:00, in fact the start-of-day procedures for D begin at 19:00 the previous evening on D-1, with a window for initial Liquidity Provision from 19:00 to 19:30 on D-1.

There are then two Nighttime Settlement Procedures, from 19:30 on D-1 until 07:00 on D, when the normal day's business begins. The normal day finishes at 18:00, and there are then the End-of-Day Processes from 18:00 until 18:45.

The TARGET Information Guide lays out the End-of-Day Processes as follows (pages 61 – 62):
"Between 18:00 and 18:15, the following events will take place:

- transfer back of liquidity from sub-accounts to main accounts (emergency procedure);
- rejection of pending payments at 18:00 (immediately after the running of algorithm 3);
- automatic emergency procedure if a group of accounts manager was not able to balance the accounts in time and there is one uncovered overdraft on one account belonging to a group of accounts
- automatic transfer of liquidity to the PHA (optional);
- use of the standing facilities until 18:15 (18:30 on the last day of the minimum reserve period);
- transfer of liquidity to the SF accounts, booking of overnight credit to SF accounts, automatic
  transfer of overnight credit from the SF to the RTGS account in case of use of intraday credit at the end of the day (optional);
- automatic transfer of liquidity to the HAM account (optional);
- levelling out of group of accounts (emergency procedure);
- sending of balance information to the RM module; and
- sending of account statements MT940/950 (optional).

After 18:30 the internal central bank accounting takes place."

Internal central bank accounting lasts until 18:45, TARGET2's final closure point.

The many "events" are a testimony to the complexity of TARGET2, with its decentralised logical structure and several modules such as PM (Payments Module), PHA (Proprietary Home Account), SF (Standing Facilities), HAM (Home Accounts Module), and RM module (Relationship Management Module).

There is no specific "event" listed that is verbatim what is stated in Article 2.1 of the netting agreement about when the netting and novation take place ("following the successful technical completion of the end-of-day reconciliation procedures effected by the SSP-providing NCBs").

In commercial banks Zero-Balancing is applied after the reconciliation of the customer accounting system, when the end-of-day customer account balances are known.

This could be coincident with the later "events" in the list, meaning that the zero-balancing would be then occurring around 18:15. It could, however, fall under the heading of "internal central bank accounting" occurring between 18:30 and 18:45, after the balances of credit institutions in the different TARGET2 modules had been finalised.

In the extreme case the zero-balancing would be happening at 18:45 CET; in the other case just before 18:15 CET. The system is only fully closed for 15 minutes.

What happens during the start-of-day processes

The window at start-of-day for Liquidity Provision basically reverses the operations undertaken at end-of-day (page 56-57 of the TARGET Information Guide):

"Between 19:00 and 19:30 liquidity is provided for the day-time settlement and night-time settlement if applicable. The following liquidity movements can take place:

- from the SF to the PM;
- from the SF to the HAM;
- from the HAM to the PM; or
- from the PHA to the PM (optional).

These 30 minutes could also be used to update credit lines or to settle repos before opening."

The zero-balancing of NCB-to-NCB balances undertaken at the end of the previous day is reversed at the start of the following day.

It is in the nature of such systems that the last zero-balancing undertaken on D is the first one reversed on D+1, as frequently there is more than one zero-balancing cycle, and they need to be reversed in order: Last In, First Out, in a reverse cascade.

Since the "liquidity movements" listed above in shorthand ("SF to HAM" and so on) may each affect the NCBs' positions with one another, it is logical to conclude that the zero-balancing we are discussing was the very last one executed on D and the very first one to be reversed on D+1.

This means the reversal is happening at 19:05 CET at the latest.

Nature of the End-of-Day and Start-of-Day processes from a Cash Management perspective

The end-of-day zero-balancing operations put through at either 18:15 or 18:45 are reversed as the first transactions of the following day. This would be known in the Cash Management world as a Cinderella Zero-Balancing System.

The initial set of transactions is a classic zero-balancing: a set of fully automated and computer-programmed operations to reduce/increase the balances on a slave accounts to zero and to credit that reduction or debit that increase in full to a master account as the final transaction on D.

The “Cinderella” function is the reversal of all the zero-balancing transactions in full as the opening actions of D+1. Any lending or borrowing relationships that exist during the business day are reconfigured for the purposes of end-of-day accounting, and instantly reconfigured back to what they were afterwards.

We concluded that the initial set of transactions are reversed at 19:05. It could be that the initial transactions are undertaken as late as 18:45: that would not alter the point at which they are reversed.

The “overnight” situation as crystallised by the netting agreement lasts for a maximum of 50 minutes and a minimum of 20 minutes.

For the remainder of the day the NCBs have at best the single net bilateral obligation at risk between one another, and at worst the unconnected balances on their vostro and nostro accounts, whatever they are.

Possible size of gross, bilateral, intraday balances

Intraday there is no physical manifestation of netting, and the balances on these accounts represent claims and liabilities from one NCB to another, and between an NCB and the ECB. We need to remind ourselves that these are real claims and liabilities, as the netting agreement confirms: they are not "accounting balances", or "mirror"/"reference"/"shadow" accounts.

The intraday exposures could be within any possible range. They do not seem to be monitored and there are no limits on them. Between the pairs of NCBs the balances may be netted if one believes in the efficacy of Article 6.

But there is no intraday equivalent of the netting and novation applied overnight by the netting agreement.

This is because of the Article of Faith, inherent to the TARGET2 system, that central bank money in euro is homogenous and it does not matter which NCB it is held in.

If one takes the contrary view, credit balances of one NCB with another are a credit risk on the second NCB and with no further collateral beyond the second NCB's good name. Debit balances appear to be secured, but on government bonds of the respective borrowing NCB's owner, which is not real collateral at all, as the credit risk on the collateral is 100% correlated with the credit risk on the borrower.

The credit risk would only be measured if NCBs undertook a Credit Analysis on one another, and would only be limited if NCBs imposed a credit limit (expressed as a money limit and not as a percentage of eligible collateral pledged) both on their Credit balances held on nostro accounts with other NCBs, and on the Overdraft balances on the vostro accounts that other NCBs held with them.

The quantum of credit risk being taken is unreported and therefore not publicly known. It is at least the aggregate of an NCB's single net claims on other NCBs, without an offset for its single net obligations to others.

But it could be as much as the aggregate of all of an NCB's credit balances held with other NCBs and overdraft balances incurred by other NCBs in its own books, without any offset, depending on whether one believes in the efficacy of Article 6.

This quantum can only be larger than the netted figures that the ECB reports, and even those figures are at end-of-day over month-end. What the figures are at end-of-day during the month, and intraday, can only be guessed at.

The end-of-day position of Den Nederlandsche Bank as at 31/10/18, to continue with our example, could have been composed of the following claims and liabilities:

Claims in € billion

NCB	Country	Amount
EestiPank	Estonia	1.7
Central Bank of Ireland	Ireland	7.3
Bank of Greece	Greece	7.8
Banque de France	France	26.4
Bancad'Italia	Italy	20.0
Central Bank of Cyprus	Cyprus	3.9
Latvijas Banka	Latvia	1.5
Lietuvosbankas	Lithuania	1.3
Banquecentrale du Luxembourg	Luxembourg	20.7
Central Bank of Malta	Malta	6.2
Banco de Portugal	Portugal	19.8
Banka Slovenije	Slovenia	2.2
Národnábanka Slovenska	Slovakia	1.7
ECB vostro	--	3.6
Total claims		122.8

Liabilities in € billion

NCB	Country	Amount
Nationale Bank van België	Belgium	6.2
Deutsche Bundesbank	Germany	5.4
Banco de España	Spain	2.8
Oesterreichische Nationalbank	Austria	1.7
Suomen Pankki	Finland	3.3
Българсканароднабанка	Bulgaria	0.2
Danmarks Nationalbank	Denmark	3.1
Hravatska norodna banka	Croatia	2.8

NCB	Country	Amount
Narodowy Bank Polski	Poland	3.2
Banca Naţională a României	Romania	0.7
ECB nostro	--	1.7
Total liabilities		31.1

Netting in € billion

NCB	Amount
Total claims	122.8
Total liabilities	31.1
Net position – a claim	91.7

€91.7 billion is indeed the net claim of Den Nederlandsche Bank as at 31/10/18, as shown in the ECB's reports – but we can see here that it will be composed of higher "gross" claims, offset by a certain amount of liabilities.

Even the figures shown here have already been netted once, as we saw with the example of Den Nederlandsche Bank's relationship with Banca d'Italia. The €20.0 billion net claim is derived in our example from a gross claim of €31.6 billion offset against a liability of €11.6 billion.

The ECB's figures show none of:

- Bilateral gross positions between NCBs at end-of-day;
- Bilateral net positions between NCBs at end-of-day;
- NCB positions with the ECB at end-of-day, either gross or net.

In addition, the netting is only the overnight treatment.

Risk on intraday balances, controls, and the delusion that the quantum of risk does not matter

TARGET2 rests on an Article of Faith that it transmits central bank money only, and central bank money is free of credit risk. If one believes this, it does not matter which TARGET2 participant one holds one's money with, and it is safe to hold an unlimited amount. If one believes in the Article, there is no need for credit limits on other participants, no need for a Credit Analysis, and no need for extra due diligence or possibly for any due diligence at all.

The participants in TARGET2 do not have independent credit ratings and the ratings of their owners – the Member States themselves – act as a surrogate, because the government bonds of a Member State are another form of central bank money, supposedly free of credit risk. A comparison of public credit ratings is sufficient to dispel the illusion contained in the Article of Faith.

The Article of Faith demands a belief that a holding of Italian government bonds – rated Baa3 by Moody's – carries the same credit risk as a holding of Netherlands government bonds – rated Aaa by Moody's.

Commentary on the netting agreement itself
Just as Article 6 of the 2012 TARGET Guideline ECB/2012/27 runs to only four paragraphs totalling 183 words, so the netting agreement is very short for a document dealing with such an important matter and such large amounts of money.

It even calls itself the wrong thing: Multilateral Netting is a system for handling inter-company invoices of multinationals e.g. sales between different subsidiaries of Ford Motor. The ultimate result of such a system must be 0 - because every receivable of one subsidiary is a payable of another.

The initial impression made by the document - 34 pages long – is of substance but this impression is soon dispelled as only three of the pages have any legal text:

Page number	Content
1	Title page
2-6	Lists of participants
7	Recitals
8-9	Agreement substance
10-34	One signature page each per participant

The substance is just two pages - pages 8 and 9.

The agreement is meant to achieve complicated matters between parties from different countries who are unrelated to one another and who are, presumably, subject to applicable laws in their own countries.

In the corporate banking world such an agreement would need to cover off numerous legal and regulatory issues, ensuring – inter alia – that:

- The parties had the legal powers to enter into such an agreement;
- That each party had authorised the entering into of the agreement in accordance with its own statutes;
- That there were no laws in their own country that could render their participation null and void, or confer on a third-party (such as a liquidator) the right to "cherry-pick" the agreement.

Parties would normally be asked to present various documents as pre-conditions to the agreement coming into full force and effect such as:

- Copy of their own statutes demonstrating how the party makes a decision such as to sign the agreement;
- Copy of Board Minutes or of whatever body is needed to take the decision to sign the agreement, nominating the persons who are to sign, or an extract from the Trade Register listing the people and their powers to bind the company;
- Legal opinion positively confirming the validity of the pre-condition documents and the lack of blockers deriving from legal and regulatory issues.

None of this has been required and one can only speculate as to why not:

- The NCBs and the ECB are not subject to law in the same way in which every other natural and non-natural legal person in the EU is subject to law;
- The parties entered into the agreement in the knowledge that the agreement will never be tested, that a breach of the agreement will be handled at the time, by separate negotiation between the parties, and without the participation of any representatives of the public;
- The individuals who drafted, reviewed and signed the agreement have no knowledge of the way such services as Zero-Balancing and Notional Pooling are documented in the corporate banking world, nor of the legal and regulatory issues these services bring up.

As it is, the agreement is an extremely thin and unconvincing document upon which to anchor the treatment of such enormous amounts of money.

Summary and Conclusions

TARGET2 is the lynchpin of Economic and Monetary Union.

The TARGET2 imbalances as documented by the ECB are very large, but even these figures are the result of two preceding stages of netting:

1. To net the balances of the two accounts that NCBs hold bilaterally;
2. To net the 25 positions that each NCB holds with the ECB as a result of the novation process with one another and with the balances on the nostro/vostro accounts each NCB has directly with the ECB.

The original unnetted figures at both of these preceding stages are unreported.

The efficacy of Article 6 of the 2012 TARGET Guideline ECB/2012/27 is questionable in achieving the first stage of netting.

The usage of the technique of novation for the second stage is questionable in that the balances on accounts are novated without the account being closed, and the balance is returned to the account within an hour.

The usage of a single operational procedure – a zero-balancing of NCBs' accounts with one another into an ECB account – to cover all of the legal construct of Article 6 and the phases in the netting agreement introduces a mismatch which would be highly dangerous if applied in a corporate banking environment.

The ECB's presentation of the figures is valid for 50 minutes per business day at most, given that the zero-balancing occurs in the TARGET2 end-of-day either at 18:15 or 18:45 CET, and it is reversed using the Cinderella function at around 19:05 CET when the books are opened for the following business day.

For the remaining 23+ hours of the business day, the NCBs have direct risk on one another, either without any netting if one believes that Article 6 fails to achieve it, or in the amount of their single, net bilateral obligation, whatever that is.

The credit risk is either a direct, unsecured risk on the NCB by virtue of maintaining a credit balance on a nostro account with it, or a secured risk through granting an overdraft to the NCB on its vostro account.

The security is likely to be securities issued by a public sector entity in the same country as the NCB, which represents 100% correlated security: since the debt of the NCB is guaranteed by the government of its Member State, securities issued by that same Member State or its agencies carries the same credit risk.

The quantum of credit risk being taken is unknown. It is certainly higher than what is shown in the ECB's accounts and monthly reports. Both are misleading in that the netting contract does not confer upon the ECB the mechanisms and the right to treat the NCBs as a Single Counterparty.

The ECB should put all its Claims on NCBs as Assets on its balance sheet, and all its Obligations to NCBs as Liabilities. This would inflate the ECB's balance sheet by over €1 trillion.

This raises the issue as to whether it is better for NCBs to have a credit risk on the ECB than on the NCBs (i.e. on their Member States). The ECB is unrated and thinly capitalised, and can only pay back the TARGET2 Obligations if it receives payment on the TARGET2 Assets.

The only benefit of the novation and netting to major TARGET2 creditors is that the ECB loss-sharing mechanism would serve to reduce their share of any loss from the amount that is owed to them by the NCBs direct, to a portion of the loss determined through their ECB capital key.

The comfort derived from this may prove to be illusory as it is contingent upon other NCBs (and Member States) being willing to accept a larger share of the loss than their direct exposure would indicate, and the loss share will naturally rise as the Member State/NCB causing the loss will not be able to pay its share.

It may rise still further if other Member States/NCBs do try to "cherry-pick" the arrangement in the ways that are open in the corporate banking world.

Given that the underlying bank accounts are distributed around the NCBs and subject to their local laws, the avenues available for "cherry-picking" are wider than is the case in a corporate banking set-up, which is customarily established in a single location and subject to a single governing law.

How matters would play out in practice if there were a major problem is a matter of conjecture. It cannot be held as certain that the incident would be handled in line with that is written in the agreements.

Indeed, given the questionable efficacy, the possibility of challenge and the likely need for swift remedial action, it is more likely that the TARGET2 imbalances will be formally converted into what they are latently: government-to-government loans from a very small number of solvent countries to a larger universe of ones requiring ongoing financing and in large amounts.

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