TARGET imbalances at record levels: Should we worry?
- Andrew HUGHES HALLETT -

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In-depth analysis for the ECON Committee
Abstract

TARGET is the payments system for making settlements between euro area economies and five other EU economies. Cross-border transactions generate claims/surpluses and liabilities/deficits among national central banks which “net out” for the system as a whole. These imbalances are manageable in relative terms, but look large in absolute terms. None are larger than one third of their corresponding public debt ratios; and despite a big build up in the 2010-13 period, the imbalances now appear to be on a non-expanding cyclical path.

The implications for the EU economies and their policymakers are less easy. The main drivers, beyond the need to fund persistent current account deficits or surpluses, are the use of different funding sources (some outside the euro area), internal and external portfolio re-balancing, loose monetary policy and exchange rate risks. TARGET imbalances support quantitative easing, but are not driven by it. The main threats are the divergence that interrupts further economic integration; and the increasing liabilities taken on by the ECB since 2015. That said, self-correcting mechanisms are weak which makes symmetric adjustments by both creditor and debtor countries essential (because of the adding up constraint); and the difficulty that the imbalances cannot always be eliminated simply by balancing current accounts around the system.
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**AUTHOR(S)**

Andrew HUGHES HALLETT,
Department of Economics, Copenhagen Business School, Frederiksberg, Denmark

**RESPONSIBLE ADMINISTRATOR**

Dario PATERNOSTER

**EDITORIAL ASSISTANT**

Janetta Cujkova

**LINGUISTIC VERSIONS**

Original: EN

**ABOUT THE EDITOR**

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To contact Policy Department A or to subscribe to its newsletter please write to:
Policy Department A: Economic and Scientific Policy
European Parliament
B-1047 Brussels
E-mail: Poldep-Economy-Science@ep.europa.eu

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EXECUTIVE SUMMARY

The Target system is a mechanism for settling payments between euro area economies and five other EU economies. It operates as any other international payments system, except that there are no exchange rates and the individual economies still have national central banks (linked through the ECB) responsible for financial stability in their own jurisdictions. This creates an extra layer of transactions between transacting parties and the backstop central bank which in turn creates a set of claims and liabilities that net out via an adding up constraint on the financial gaps that have to be financed in each member country.

This paper shows that:

i) Target imbalances are the result of more than just funding current account imbalances. They may be due to inadequate credit/liquidity or the exposure to financial instability in the EU economies, which suggests a part of the build-up has been due to the need to smooth consumption, employment and growth when market-based lending dries up.

ii) The sources of funding can play an important role, as can a perception of exchange rate risk and the behaviour of the creditor economies if they withdraw deposits from the ECB. Hence eliminating current account imbalances cannot remove Target imbalances entirely.

iv) The self-correcting mechanisms have been weak, implying that policies need to aim at removing the causes of these imbalances in the long term rather than constraining them.

Where do we stand?

v) The Target imbalances appear alarming because they have increased rapidly since 2009 and because they are large in absolute value. Claims on other EU members by Germany, the Netherlands and Finland increased by factors of between 6 and 12 times their level of 8 years earlier; and the liabilities of Italy and Spain are 10 to 19 times larger.

vi) Relative to GDP (the ability to repay or withstand a default), they are not so large. None exceed a 33% imbalance ratio or one-third of their public debt ratio. But they are increasingly divergent. That suggests the greater threat is to further integration; and that the underlying risks are not yet dangerous, but could easily become so without restraint.

The policy implications of this are:

vii) Symmetric adjustments are absolutely necessary, that is in the claim economies as well as the liability economies, because the imbalances necessarily sum to zero (unless the ECB picks up the difference as it has done since early 2015).

viii) It is in the interests of both claim and liability economies to make those adjustments in order to lower risk exposures, to avoid a slowdown in financially stable economies, and to lower inflation expectations.

ix) To achieve that in the long term, governments must inevitably fall back on structural reform policies. But that opens up a positive role for Target imbalances; to provide financial space, in the sense of equation (1), for economies to undertake the necessary reforms. Short term austerity policies cannot do that.

x) It is necessary to start reducing the ECB’s “liquidity provider of last resort” role for the reasons given at v) above. That function is better carried out via quantitative easing, with support from Target imbalances kept in reserve for use in bad times. Fortunately quantitative easing policies will now be curtailed (October 2017). This is the right strategy.

2 Luxembourg excepted; bearing in mind there is an exposure risk as well as a default risk.
1. INTRODUCTION

TARGET stands for “Trans-European Automated Real-time Gross Settlement Express Transfer”. In May 2008 a new version, TARGET2, replaced the former TARGET system as the real-time gross settlement system owned and operated by the Euro-area. For the ease of exposition, we use the term Target balances here as shorthand to describe the balances accumulated in both TARGET and TARGET2 at each date. In addition, the ECB and NCBs of five non-euro area Member States (Bulgaria, Croatia, Denmark, Poland and Romania) also participate and now have their own Target imbalances.
2. THE TARGET SYSTEM: AN ASSESSMENT

2.1. How imbalances can build up

The Target payments system operates as any normal payments mechanism so long as the payments remain in the domestic economy, but becomes more elaborate with inter-country or international payments. Inter-country payments within the Euro-zone differ from regular international payments only in that there is no exchange rate, no currency controls, but the national central banks continue to play a stabilising role.

*Domestic transactions:* Suppose there are two banks, A and B, and a customer of Bank A wants to pay a customer of Bank B. To effect payment, Bank A will record a liability against its customer to be settled on settlement day, and a corresponding credit to its own account. It then enters the payments system to transfer the money to Bank B, whereupon Bank B notes a credit on its own account, but a matching liability to be paid to its customer and a corresponding credit (to be settled) for the customer. At settlement Bank B’s customer gets a cash increase to his/her account, while Bank A’s customer gets a reduction on his/her account and the intermediate steps are netted out.

*International payments:* In this case the process is the same except that the transfer between Banks A and B must go through one or both central banks to change the currency, which adds a new layer of matching credit and liabilities between Banks A and B.

*Inter-country payments via Target:* Again, the process is the same as a domestic transfer until Bank A wants to pay Bank B. This time, Bank A will have to pass the credit taken from its customer to its own National Central Bank (NCB), and from this NCB to Bank B’s NCB, and then on to Bank B. This adds three extra layers of matching credit and liabilities into the process. However, in this case, since the NCBs have the right and responsibility to extend liquidity or credits to their own banks (and hence customers) for the purposes of stabilising financial markets or supporting activity in their economies, NCB A may simply pass on a credit note but no cash – in effect postponing the settlement process until some point in the future. It will then leave itself, and customer A, with an unpaid liability, and NCB B (customer B) with an unpaid claim (credit note) which could be called at any time. This is how Target imbalances can build up along with a risk that the liabilities may not be settled when the claims are finally called.

*Example 1:* A customer in Portugal decides to buy a new BMW. He takes out a loan (with a promise to pay later) from his bank in Portugal which passes on the associated credit note to the Bank of Portugal (NCB PT). NCB PT then passes that credit note as a promise to pay via the ECB, to the Bundesbank (NCB DE) which advances the payment, in cash or as a credit note, to BMW’s German bank and hence to BMW. Portugal has acquired an unpaid liability, matched by an unpaid claim in Germany. Both are held by the relevant NCBs until final settlement. The default risk is therefore born, in the first instance, by the NCBs and their owners (the member governments).

*Example 2:* There are many different ways in which Target imbalances can build up. Consider a German car manufacturer who retains part of its deposits in an Italian bank as working capital to facilitate sales and marketing operations in Italy. Suppose now, out of concern for the risks to those deposits if the Italian bank should become over-leveraged in terms of debt, or growth in the Italian economy slows down, or there is a risk of private sector insolvencies or a sovereign debt crisis. In these circumstances, the car manufacturer is likely to withdraw its Italian deposits and place them in a safer German bank. Deposits in Italian banks held by Germany (held at the Bundesbank: NCB DE) will fall. But the Italian bank may - and in bad

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3 In principle via the ECB, although may be not in practice since there are no currency exchanges or controls.
times probably will - prefer to take a loan from the Banca d’Italia (the Italian central bank, NCB IT) to protect its deposit base and hence its existing loan portfolio. In this case, the net Target liabilities of the Banca d’Italia (NCB IT) will have risen, while net claims at the Bundesbank (NCB DE) have also risen if the deposit transfer remains in the form of a credit note; but will have fallen if the transfer was in cash and is used to reduce past loans from the Bundesbank - although data in Figure 1 demonstrate this option has not in fact been used, except to a limited extent in 2012-14. Note also, this example may or may not imply changes to German or Italian current account balances be-cause the imports that generated the original deposits may have occurred in earlier years.4

2.2. Implications of growing imbalances
A standard element of any macro-economy is the (ex-post) national accounting identity:

\[ S - I = (G - T) + (X - M) \]  

(1)

where \( S = \) savings, \( I = \) investment, \( G = \) government spending, \( T = \) tax receipts, \( X = \) exports and \( M = \) imports. Hence \( G - T \) is the fiscal deficit; \( X - M \) the current account balance or trade deficit; and \( S - I \) is the savings-investment gap, or net financing inflows. Thus, any country that increases its trade surplus (\( X - M > 0 \), as has happened in several member countries and in the Euro’s external account) will end up by having to permit an increase in its fiscal surplus (\( G - T < 0 \)) or an increase in its net savings rate (\( S - I > 0 \)) to match. But the Euro-zone already has large current account surpluses (Germany at 8.0%, Netherlands 9.9%, the euro area at 3.2% of GDP respectively5). So, the implication of expanding Target imbalances is that the claims economies will have to extend their austerity policies yet further, which in turn increases the risk that the claims on liability/deficit countries will not or cannot be repaid.

Similarly, a country that wants to increase its trade deficit must ultimately create a fiscal deficit or lower its fiscal surplus (\( G - T > 0 \)) and/or borrow more from abroad (\( S - I < 0 \)). This implies a further relaxation of discipline and creates the risk of a sudden stop or reversal of these financing inflows – in which case the payments system will collapse, or the ECB and claims economies will have to fund a bailout.

Thus, on the face of it, the Euro-zone faces a genuine dilemma. In the long term, either the payments system will face a financing crisis and a Euro-area economic collapse; or the liability economies will ultimately become insolvent. On that view, the question in the title is well posed and we should be worried. Moreover, in the short to medium term, the standard way out through conventional policies would involve both sets of policymakers doing exactly what they don’t want to do: the claims economies to relax their fiscal controls6 and further increase savings over investment, while the liability economies to step up austerity policies and to borrow abroad (and borrow expensively since they are a poor risk).

One could therefore expect serious political economy resistance. The claims economies will resist relaxed fiscal discipline and increased savings rates in times when they are trying to escape slow growth, below average investment rates and financial instability. The liability economies will resist hikes in austerity policies and more expensive/risky borrowing. We should therefore expect political pressures to do nothing or to reverse policies in the Euro-zone. Yet, if nothing is done, the Euro-zone will have to accept growing Target imbalances as a stand-in for explicit long-term transfers between member economies – a respectable policy in many economies, but rejected by several important EU governments.

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4 This example is derived from Buiter et al., 2011.
5 The Economist, September 16th, 2017.
6 This might induce a Euro depreciation, but that is no help without introducing serious structural reforms because the gains will simply go to the most competitive (the claims economies) and make the imbalances worse.
Hence the final difficulty: Target imbalances are *implicit* transfers induced automatically, not subject to decision, overview or debate by policymakers. The rest of the paper therefore examines how serious the imbalances are at this point (sections 3.1-3.2); if they really matter (section 3.3); what lessons can be learned from our experience of Target so far (sections 3.4-3.5); and what drives the growing imbalances (section 4)? The consequences for policies that might or should be used to constrain these imbalances and implications for their exposures to risk appear in the text – predominantly in sections 2.2 and 3.1; but also in sections 3.2, 4.1 and 4.4. Section 5 then provides a summary.
3. TARGET IMBALANCES BY COUNTRY: WHERE DO WE STAND?

Table 1 describes the Target imbalances, by country across the Euro-zone, as they stood at the end of each year from 2008 until August 2017.7

3.1. Imbalances by absolute size and sign

In absolute terms, these imbalances are clearly substantial and have increased (or become more threatening) since 2008. In addition, there have been rapid increases in the claims that could be made on the Target system and its liability economies: most obviously by Germany, the Netherlands, Luxembourg and Finland whose potential claims have risen by factors of 6.4, 6.6, 3.3 and 12.0 respectively. These are the economies with the largest exposures to risk; they stand to lose most if defaults were to cause the Target system to break down or collapse; or if the loans made through the Target system were not repaid. Interestingly the country most exposed (relative to size) is Finland; not Germany as usually supposed. Nevertheless, the increase in potential claims on the system is alarming for any of the most exposed economies (the point raised by the title of this paper).

Table 1: Target Imbalances in 2008-2017, €bn.

<table>
<thead>
<tr>
<th></th>
<th>ECB</th>
<th>BE</th>
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<tbody>
<tr>
<td>2008</td>
<td>234.9</td>
<td>-104.2</td>
<td>115.3</td>
<td>--</td>
<td>-44.4</td>
<td>-35.3</td>
<td>-35.0</td>
<td>-117.7</td>
<td>22.9</td>
<td>-6.5</td>
</tr>
<tr>
<td>2014</td>
<td>-23.6</td>
<td>-12.4</td>
<td>460.8</td>
<td>3.2</td>
<td>-22.7</td>
<td>-49.3</td>
<td>-189.9</td>
<td>-17.0</td>
<td>-208.9</td>
<td>2.5</td>
</tr>
<tr>
<td>2015</td>
<td>-83.8</td>
<td>-7.7</td>
<td>584.2</td>
<td>2.8</td>
<td>-3.0</td>
<td>-94.4</td>
<td>-254.1</td>
<td>-29.2</td>
<td>-248.9</td>
<td>2.4</td>
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<tr>
<td>2016</td>
<td>-159.7</td>
<td>-18.6</td>
<td>754.3</td>
<td>0.9</td>
<td>-1.0</td>
<td>-72.3</td>
<td>-328.1</td>
<td>-13.8</td>
<td>-356.6</td>
<td>5.9</td>
</tr>
<tr>
<td>2017*</td>
<td>-212.9</td>
<td>-22.1</td>
<td>852.5</td>
<td>0.0</td>
<td>5.8</td>
<td>-67.0</td>
<td>-384.4</td>
<td>9.3</td>
<td>-414.2</td>
<td>8.2</td>
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Table 1 continued:

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<th>U-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>--</td>
<td>42.1</td>
<td>-0.7</td>
<td>-18.8</td>
<td>-35.7</td>
<td>-19.0</td>
<td>-3.6</td>
<td>--</td>
<td>5.2</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>-0.8</td>
<td>--</td>
<td>105.1</td>
<td>-1.9</td>
<td>19.4</td>
<td>-30.1</td>
<td>-54.6</td>
<td>2.4</td>
<td>2.2</td>
<td>19.7</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>-1.3</td>
<td>0.2</td>
<td>147.6</td>
<td>-0.9</td>
<td>54.7</td>
<td>-29.2</td>
<td>-61.7</td>
<td>0.2</td>
<td>0.5</td>
<td>20.1</td>
<td>1.5</td>
<td></td>
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<tr>
<td>-5.3</td>
<td>-3.6</td>
<td>187.4</td>
<td>1.0</td>
<td>87.0</td>
<td>-31.2</td>
<td>-71.6</td>
<td>-1.2</td>
<td>-5.1</td>
<td>22.0</td>
<td>9.5</td>
<td></td>
</tr>
<tr>
<td>-6.5</td>
<td>-2.4</td>
<td>183.5</td>
<td>3.4</td>
<td>107.5</td>
<td>-38.0</td>
<td>-79.0</td>
<td>-0.6</td>
<td>-9.7</td>
<td>65.5</td>
<td>3.1</td>
<td></td>
</tr>
</tbody>
</table>

Notes: *August 2017; U5=Bulgaria, Croatia, Denmark, Poland, Romania (aggregate).
Incomplete data for earlier years can be found at http://sdw.ecb.europa.eu/browseTable.do?node=9691112

On the other hand, there are equal increases in the liabilities owed to the Target system; most obviously by Spain, Italy, perhaps Portugal, and by the ECB. In this group, the factor increases are larger: 9.9, 19.0, 3.2 and 1.9 respectively. Risks to the continued functioning of Euro payments are clearly rising, with Italy and Spain in the lead. If there were a financial meltdown in either place it could spread to threaten all Euro-zone economies. Recall the financing identity (1): either the claims countries will lose the financing that supports their “excess” current account surpluses when the liabilities are wiped out or defaulted upon; or

7 Annual figures back to 2008, to fill in the gaps in Table 1, can be found in ECB (2017b).
liability countries will be pushed into recession or serious deflation\textsuperscript{8} as repayments are enforced.

Either way, rising disparities between claims and liabilities means that any policy responses to manage these imbalances will have to be symmetric. That is: incumbent on the surplus as much as on the deficit countries.\textsuperscript{9}

Third, there are a number of countries for whom claims or liabilities have neither increased nor decreased significantly although some changed sign: Belgium, Estonia, Ireland, France, Cyprus, Latvia, Lithuania, Malta, Austria, Slovenia, and the U-5 economies. The interesting thing here is they are all small economies (France excepted) and consequently more averse to risk than members in the other two groups. To avoid the risks that large imbalances elsewhere might pose to their own economies, they have been careful to restrict their own imbalances – a sensible strategy except that it does not eliminate risks to the system as a whole if others do not take the same care at the same time.

Finally, the variations within the claims and liabilities groups are at least as large as those between the two. Since claims and liabilities must balance overall (each row of Table 1 must sum to zero), and because there are no independent interest rates or exchange rates to be set, symmetric policy adjustments are inescapable if the costs and risks of continued imbalances are to be avoided. Germany and the Netherlands for example, would have to choose between accepting continued imbalances, structural reforms to reduce the larger deficits (and hence their own surpluses), fiscal deficits at home and surpluses in the deficit economies which, by (1), will slow down growth in the Euro-zone and hence cut into German and Dutch exports/surpluses. Or they will have to accept additional inflationary pressures from ECB policy (section 3.2). Whichever path they choose, they will impose new costs on themselves. Self-interest to minimise those costs, if not a wish to uphold the Euro economy, will show that symmetric adjustments are unavoidable in a closed system.

3.2. Why the ECB carries its own imbalances

By contrast, the ECB is in a class of its own. It is not entirely clear why the ECB is carrying imbalances from the Target system since it is not an NCB, and therefore not an active link in providing liquidity and credits to would-be deficit economies from elsewhere within the payments system.

There are several possible explanations. The ECB may have supplied the necessary credits itself because others were reluctant or have failed to do so. Or as an additional form of quantitative easing when the latter was under pressure from others in the Euro-system. This may have been done when it was perceived necessary to extend extra liquidity to the weaker economies in the euro area, to counteract local risk premia for example; or as a part of the “whatever it takes” policy to support the Euro economy as a whole; or as a way to implement a decentralised asset purchase programme without going outside the ECB’s formal remit. Or the ECB may have accepted extra imbalances to head off a financial crisis in the Euro-zone because others could no longer absorb (in the ECB’s view given their fiscal prospects) the additional credit risks – in which case the ECB has simply underwritten the credits/liabilities taken on by the financially weaker economies.

Whatever the explanation, it is not directly material to this paper. We need only note that the ECB had a claim of €235bn in 2008 that had become a liability of €213bn by 2017. Most

\textsuperscript{8} Similar in style, if not in size (see Table 2), to the debt crisis of 2010-14.

\textsuperscript{9} This is not a new argument; an analysis of the costs imposed on the Euro economies if the policies applied remain asymmetric is set out in Alessandrin et al (2014).
of this build up appeared in the slow recovery period after the great recession. So the ECB’s liability was most likely an effort to boost a disappointing recovery.

However, the point to note is that the Target system was not in itself in trouble since the claims and liabilities net out at each point. Nevertheless, there is a net increase in liquidity (credit) made available to the aggregate Euro economy which is represented by the net claims/credits already advanced, less the liabilities assumed by the ECB. Thus, the redistribution activities within the Euro-zone aside, the increasing Target imbalances can be inflation creating or would at least have created expectations of future inflation.

### 3.3. Target imbalances relative to other debt or claims in the economy

Next, do any of these imbalances actually matter in practice? This is the size, as opposed to distribution, question. Table 2 shows Target imbalances as a share of GDP; and compares the associated liability ratios to public debt ratios as a benchmark or risk indicator in each economy in the same way that the Fiscal Compact does. This gives us a sense of how serious the liabilities and claims (exposure to risk) built up in the Target system really are.

#### Table 2: Target Imbalances as % GDP in 2017, compared to Public Debt ratios

<table>
<thead>
<tr>
<th></th>
<th>ECB/€</th>
<th>BE</th>
<th>DE</th>
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<th>FR</th>
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<tbody>
<tr>
<td>Target</td>
<td>-2.0</td>
<td>-5.7</td>
<td>28.0</td>
<td>0.0</td>
<td>2.4</td>
<td>-31.8</td>
<td>-31.2</td>
<td>0.5**</td>
<td>-24.5</td>
<td>31.0</td>
</tr>
<tr>
<td>Debt</td>
<td>90.7*</td>
<td>106.0</td>
<td>71.2</td>
<td>9.7</td>
<td>93.8</td>
<td>176.9</td>
<td>99.2</td>
<td>95.8</td>
<td>132.7</td>
<td>108.9</td>
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Table 2 continued:

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<th>FI</th>
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</tr>
</thead>
<tbody>
<tr>
<td>-17.6</td>
<td>-3.8</td>
<td>407.8</td>
<td>38.2</td>
<td>17.0</td>
<td>-11.9</td>
<td>-34.2</td>
<td>-1.3</td>
<td>-8.0</td>
<td>37.9</td>
<td>--</td>
</tr>
<tr>
<td>36.4</td>
<td>42.7</td>
<td>21.4</td>
<td>63.9</td>
<td>65.1</td>
<td>86.2</td>
<td>129.0</td>
<td>83.2</td>
<td>52.9</td>
<td>63.1</td>
<td>--</td>
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</tbody>
</table>

**Notes:** ** Unstable monthly figures; the 2016 average would be -4.5%. * Euro-zone.

**Sources:** ECB (2017), Eurostat (2017).

Evidently Target imbalances are smaller and less threatening than current public debt ratios in the Euro-zone. None are as large as one third of their respective public debt liabilities – Finland, Malta, Luxembourg, Latvia, and Germany apart; and in that group only Finland and Malta have an imbalance greater than half their debt ratios. Moreover, no imbalance would, on the face of it, pose a threat to the usual 60% criterion. Perhaps we should not worry.

However, bear in mind that those with positive imbalances could call in their claims at any time to pay off large portions of their public debt. So they pose a threat to the system as a whole, if not to themselves, whereas the others are at risk individually (and hence to the system as a whole). In fact, only Germany, Malta, Luxembourg and the Netherlands would satisfy a maximum total liability of less than 60%.

On the other side, there are obvious dangers among the liability economies. There, Target imbalances add to public debt risk – which puts Belgium, Greece, Spain, Italy, Austria and Portugal further beyond their 60% limit than they are now. Those imbalances might therefore be regarded as serious, if only because the ECB is in no position to help them in the absence of cooperation from the claim economies (i.e. without symmetric adjustments).

### 3.4. Is there a risk that the Euro-zone is diverging?

This question is prompted by the increasing differences between the imbalances reported in Table 1, both within and between the claims and liability economy groups. The answer is “yes”. Table 3 shows cross-section variances and standard deviations for the years 2008-
2017. The cross-section standard deviation (i.e. in original units) has trebled in 9 years; an average increase of 33% per year. Hence one cost of large or increasing Target imbalances is less convergence/integration between the Euro economies.

### Table 3: Increasing Divergence: variance/standard deviation of Target imbalances

<table>
<thead>
<tr>
<th>Year</th>
<th>Variance</th>
<th>SD</th>
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<tbody>
<tr>
<td>2008</td>
<td>5999.6</td>
<td>77.5</td>
</tr>
<tr>
<td>2014</td>
<td>15585.3</td>
<td>124.8</td>
</tr>
<tr>
<td>2015</td>
<td>24541.7</td>
<td>156.6</td>
</tr>
<tr>
<td>2016</td>
<td>42119.9</td>
<td>205.2</td>
</tr>
<tr>
<td>2017</td>
<td>54948.1</td>
<td>234.4</td>
</tr>
</tbody>
</table>

3.5. The pattern of Target imbalances over time

The final step in this section is to take a look at the time series development of the larger Target imbalances, on the argument that if serious consequences are likely, then we should be able to see them starting to emerge already.

In practice, the imbalances among both claims and liability economies show a remarkably consistent pattern (figures 1 and 2). There is a steady build-up of positive and negative imbalances till 2011, then a much more rapid build-up in 2011-12: a step function increase in fact, more marked and clearly defined on the negative side. Since this was the height of the financial crisis, the rapid build-up represents induced (and recycled) support from the stronger to the financially weaker economies – as do the smaller steps in the 2008-2011 period. The ECB did not play a role in this process until 2015. Nor is there any significant difference in the behaviour of the positive or negative imbalances.

But, that said, the imbalances in 2017 (positive or negative) are almost exactly the same as the imbalances in 2012 – and continue to mirror each other if we add expanding ECB liabilities into the other liabilities in Figure 2. This latter observation underpins the idea that the ECB provided support in 2015-17 to boost the disappointing recovery by assuming some of the liabilities in the system. That, in turn, allowed a net expansion of liquidity and credit to the weaker players in the Euro economy.

Figure 1: The six NCBs having the highest claims on Target (positive imbalances)
TARGET imbalances at record levels: Should we worry?

Figure 2: The six NCBs with the highest Target liabilities (negative imbalances)

Consequently, it looks like there is a clear cyclical pattern to the imbalances after 2011, but little (if any) trend except to the extent that the ECB’s liabilities/liquidity support expanded after 2014. The most important thing to do, therefore, is to explain the step increase in imbalances before 2012 and the ECB’s support after 2014. This we do in the next section.
4. DRIVERS OF TARGET IMBALANCES

4.1. The step increase in Target balances before 2012

That Target imbalances, positive and negative, increased rapidly in the period 2008-12, and then levelled off (cyclicality apart), is incontrovertible (Figures 1 and 2). To give an idea of the scale of those changes, Figure 3 gives more detail on the period to 2012 period.

How did these Target imbalances arise and what are the implications? Examples 1 and 2 in section 2.1 present a stylised model of balance sheets in the Euro-zone. It assumes two countries, Germany and either Portugal or Italy, each with three sectors – the national central bank, the banking sector, and the rest of the economy.

What does the data say? The upper panels of figure 4 illustrate how Target claims and the German current account surplus both grew from 2002 through 2011. The lower panels show the corresponding changes in Ireland, where Target net liabilities grew sharply after 2007 while the current account deficits were small if not marginal.

Figure 3: Target Imbalances up to 2012, Cbn, the main economies

![Figure 3](image)


Figure 4: Target imbalances and current account balances in Germany and Ireland in 2002-2011, Cbn, Examples 1 and 2 (section 2.1).
TARGET imbalances at record levels: Should we worry?

The important points to note here are that the increases in claims, Germany, and liabilities, Ireland, are significantly larger than the changes in the underlying current account balances – from 2008 onward in particular. Second, the current account imbalances have increased all through. But most of the changes in the Target imbalances came after 2008 (as we saw in figures 1 and 2) rather than before 2008. In addition, even when increasing, the changes in Target claims and liabilities are multiples of the changes in the current account balances after 2008, but were smaller than the current account imbalances before 2008.

These observations underline that: i) even if growth in Target imbalances is driven by trade imbalances, as in Example 1, there are typically other forces at work, possibly more important numerically, as Example 2 implies; ii) the pressure for increases in Target imbalances is going to come from the desire to smooth spending/earnings in bad times when credit and deposits in the banking system are weak; and iii) once the claims/liabilities have built up, there is very little desire to pay them back, Ireland in 2009-10 excepted. This may be because of the risks of default and contractions in credit/loan portfolios in liability countries. Figures 1 and 2 then apply after 2011.

Notice also, while liabilities at the Central Bank of Ireland have increased, the Irish money supply has not increased. But liquidity supplied to Irish banks has, and with it new credit and loans to Irish firms and households. The same may be true in Germany if the deposits are returned as credit notes and used to back new credit/loans to the German economy. That may be useful for boosting the economy in times of stress, via quantitative easing. But it carries with it the possibility of inflation or raised inflation expectations at other times. By contrast, if deposits are returned as cash used to pay down past liabilities, credit and new loans offered by German banks may actually shrink.

4.2. The increase in ECB liabilities after 2014

There has been a marked increase in ECB liabilities in the Target system (table 1). We have noted a number of reasons for that in section 3.2. Chief among them: the ECB may have supplied the necessary credits itself because certain NCBs were reluctant to do so. Or as support for quantitative easing when the latter was under pressure from other parties. Or when it was perceived necessary to extend extra liquidity to weaker euro area economies (to counteract local risk premia for example, or as a part of the “whatever it takes” policy) in generalised support of the Euro economy; or as a way of implementing a decentralised asset purchase programme without going outside the ECB’s remit. Or the ECB may have assumed some imbalances in order to head off a Euro financial crisis because certain NCBs were in no position to accept additional liabilities given their fiscal prospects and debt levels – in which case the ECB is simply underwriting the credits and liabilities taken on by the financially weak member economies in the disappointing recovery post-2014.
Hence, while it is correct to say that Target imbalances cannot always be linked to current account deficits in those countries, the ECB may be induced to play "liquidity provider of last resort" in order to stabilise the financial markets in those economies when the NCBs fail or cannot do so. Similarly, Target imbalances do not necessarily restrict central bank credit to commercial banks in other member states unless deposits are withdrawn from weak economy banks and transferred to stronger economies when strong economy banks reduce deposits at their NCB, in which case the ECB may find it necessary to create new liquidity to replace that lost by the weak economy banks.

4.3. Can the ECB (European System of Central Banks, ESCB) become insolvent?
Buiter et al (2011) argue "no" as a consequence of persistent Target imbalances, for two reasons. It is true that the ECB might conceivably have to bail out any NCBs (and via them, commercial banks in that economy) that pose an unacceptable systemic risk because of their Target liabilities. But that is simply a matter of internal ESCB transactions. The ECB itself can, unlike the NCBs, create additional liquidity if needed; and, as Buiter et al point out, it can also call on its shareholders (member governments) to supply additional capital to back those extra credits.

A different risk could appear however. A default on a Target liability ultimately underwritten by the ECB could create a loss on the ECB’s balance sheet and that causes a change in income flows: the interest payments made to the ECB would cease. But the extra profits paid to national governments by the ECB would also cease. Those two effects wash out. And a write down of the ECB’s assets need not have implications for taxpayers since central banks do not need to maintain certain capital/asset ratios to function. Even if the ECB felt the need to repair its capital base, it would ask its shareholder governments for extra capital in the form of bonds – in effect replacing lost assets with new interest payments and income refunds. No implications for taxpayers therefore.

4.4. Other factors driving Target imbalances
The Role of Quantitative Easing: It is sometimes said that the ECB’s quantitative easing or large-scale asset purchases programme has been responsible for expanding the Target imbalances. This is unlikely to be true since the effects of ECB’s large-scale asset purchases would only be felt in or after 2015 when QE started in the Euro-zone. The data in figures 1 and 2 show that nothing substantive happened in or after 2015 that had not been happening before. Nevertheless, the opportunity is there and should be evaluated.

One obvious feature of the Target system is that when net liabilities build up at the ECB (outside the system of NCBs), those liabilities will be the counterparts to liquidity extended to the weaker economies (sections 3.2, 3.5). If net deposits at the ECB are not reduced at the same time (as in example 2), then the Target system acts as a form of, or substitute for quantitative easing expansions – with the difference that the liquidity provisions are not always targeted at the vulnerable banks as might be intended in a financial crisis. Instead, the Target system first impacts the banks that handle imports. Target imbalances can therefore act as a support for quantitative easing policies, but without the risk of creating asset price bubbles, additional wealth inequalities or inflation (since additional liquidity is matched to extra supply, and is only advanced where there is excess capacity).

In this regard, the Target system serves to reallocate liquidity and credit around Europe’s decentralised banking system by substituting Euro-funding when and where market-based
funding has dried up. The internal risks (default risk, exposure to insolvencies) remain of course.

**Financing sources:** In the description above, the Target system has reacted to demand driven increases in the need for liquidity. But with the advent of large-scale asset purchases in QE, it may become (or has become) a supply driven process to place the extra liquidity. This distinction is important because one can always choke off demand for extra liquidity by running the Euro-zone economies in a more balanced manner. But to choke off the supply side requires unwinding the QE programme as well as creating more balanced growth. That is altogether more difficult and would take a good deal longer.

It is also claimed that Target imbalances have been facilitated, if not extended, by external financing – principally through deeper, more liquid and more competitive capital markets in London (ECB, 2017a; Cecchetti et al, 2012). This poses a new risk in that, after Brexit, the NCBs will face shallower, less liquid financial markets; hence higher margins to cover any given level of risk. Some commentators estimate that it will cost an extra €77bn to finance the existing financial shortfalls overall, less of course for the Target imbalances alone.

**Portfolio rebalancing internally:** Around 80% of large-scale asset purchases have been made with nondomestic counterparties, whether for refinancing Target imbalances or not, and 50% of those purchases have involved non-euro area counterparties (ECB, 2017a). These financing operations could have had significant influence in facilitating the build-up in Target imbalances, the external/ex-euro area component being numerically larger than the rebalancing within the euro area.

ECB (2017a, see Box 1) demonstrates that, since early 2016, total Target imbalances have increased more slowly that the simulated total would have done had the only cross-border rebalancing come from QE purchases. In other words, some of the internal cross-border portfolio rebalancing has come from liquidity flowing back from the claims economies to the liability economies (but only to the extent of about 12% of total imbalances). This suggests that the risk of insolvencies in the liability economies is receding, albeit slowly, and that the risk exposures in claims economies are likewise reducing. However, this trend to safety will only continue so long as the recovery continues to make deposits/assets held in the liability economies progressively less problematic. Thus, the overall impact of internal rebalancing has remained relatively small. There is no obvious slowdown in the growth of claims or liabilities in 2016. But a slowdown is apparent in 2017 while the ECB’s liabilities continued on trend unchecked. That suggests some rebalancing has flowed from claims to liability economies, while imbalances as a whole have continued as before.

**External portfolios, monetary policy and the exchange rate:** The larger rebalancing outside the euro area, as reflected in increasing ECB liabilities in the Target system, shows no sign of abating. It has been driven by persistent negative interest rate differentials between the euro area and outside (particularly in swapping euro debt instruments for those held as reserves outside). The persistence of Target imbalances is therefore driven in part by the ECB’s low interest rate policies, and partly by risk aversion in the liability economies. Indeed, ECB (2017a) reports that most external rebalancing in those economies is transacted through the Target system – increasing the internal imbalances and those at the ECB. This argument neatly encapsulates the fact that Target imbalances may be increased by fear of currency (redenomination) risk, as well as exposures to credit risk.

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12 This switch could explain the rise in claims/liabilities since 2015, but not the larger increases in 2010-12 (see Figures 1, 2).
13 Reported in Hughes Hallett (2016).
There is a countervailing mechanism, however, in that these movements will depress an already depreciated euro because of the negative interest rate differentials. The resulting improvements to the euro area’s balance of trade will then slow and ultimately reverse the capital outflows. This process will be slow, however, since the benefits will initially flow to the most competitive member economies (the claims economies). From there, additional liquidity has to flow down to the liability economies – as noted in the previous subsection. This interest rate/exchange rate channel could be helpful, but is likely to produce some internal divergence at the same time as reducing the overall imbalances.
5. CONCLUSIONS

Several causes lie behind the recent build-up of Target imbalances in the Euro-zone:

i) They are the result of more than just funding current account imbalances. In many cases they may be due to the fear of credit risk or the exposure to financial instability in less competitive/weaker EU economies, which in turn suggests a large part of the build up has been due to the perceived need to provide liquidity to smooth consumption, employment and growth in bad times, in periods of significant financial stress, or when market-based lending dries up. This has been observed in the period 2008-12; but not after 2014.

ii) The source of funding can play an important role, as can the perception of exchange rate risk and the behaviour of the creditor economies if they withdraw deposits from the ECB to reduce their risk exposures. In practice the last has not been a problem; the first two have.

iii) Hence removing current account imbalances cannot remove Target imbalances entirely.

iv) The self-correcting mechanisms have been weak, implying that policies should aim at removing the causes of these imbalances in the long term rather than constraining them.

The policy implications of this are:

v) Symmetric adjustments are absolutely necessary, that is in the claim economies as well as the liability economies, because the imbalances necessarily sum to zero (unless the ECB picks up the difference as it has done since early 2015).

vi) It is in the interests of both claim and liability economies to make those adjustments to lower risk exposures, to avoid a slowdown in financially stable economies, and to lower inflation expectations.

vi) To achieve this in the long term, governments must inevitably fall back on structural reform policies. But that opens up a positive role for Target imbalances; to provide financial space, in the sense of equation (1), for economies to undertake the necessary reforms. Short term austerity policies cannot do that.

viii) It is necessary to start reducing the ECB’s role of “liquidity provider of last resort” in this context, for the reasons in point iv) and Section 3.2. This function is better carried out via quantitative easing, with Target imbalances held in reserve for bad times. Quantitative easing policies are now being curtailed (October 2017), which is the right strategy.
REFERENCES

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