Target2 and the Euro Crisis

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About Me

- PhD MIT (1997)
- Federal Reserve Board (1996-2002)
- Central Bank of Ireland (2002-2007)
- University College Dublin (2007 – present)
- Member of expert panel advising European Parliament ECON committee on monetary policy dialogue with ECB (2009 – present)
- Research focused on applied macroeconomics

Plan for this Talk

- What is the Target2 system?
- What are central bank Target2 balances?
- Why have Target2 balances risen during the euro crisis?
- Debunking some misleading claims about Target2.
- Assessing policy recommendations for changing Target2 system.
- Risks related to Euro exits or Euro breakup.

TARGET2 BASICS

What is Target2?

- TARGET2: Real-time gross settlement (RTGS) system for euro-denominated payments.
- Owned and operated by the Eurosystem via a Single Shared Platform provided by Banca d'Italia, Banque de France and Bundesbank.
- Payment transactions are settled one by one on a continuous basis in central bank money (i.e. reserve accounts credits and debits).

Target2 Facts and Figures

- Handles 91% of the total value of payments in large-value euro payment systems.
- 348,505 average daily transactions in 2011, with an average daily value of €2.4 trillion (over one quarter of annual Euro-area GDP).
- The average value of a payment in 2011 was €6.8 million. Median value was €12,000.

Payment in Central Bank Money

- All Eurosystem banks maintain reserve accounts with their National Central Bank (NCB).
- When Bank A makes a payment to Bank B via TARGET2, Bank A’s reserve accounts at its NCB is deducted and Bank B’s reserve account is credited.
- These payments affect the liabilities of Eurosystem central banks.
- They result in intra-Eurosystem balances which are aggregated and netted out at the end of each day. leaving each NCB with a single net bilateral position vis-à-vis the ECB.

Balance Sheet of NCB with Intra-Eurosystem Liabilities

Assets	Liabilities
Assets acquired by making loans and buying securities	Central Bank Capital
	Money created by making loans and buying securities
	Of which:
	Reserve Accounts
	Bank Notes
	Intra-Eurosystem Liabilities

Balance Sheet of NCB with Intra-Eurosystem Assets

Assets	Liabilities
Assets acquired by making loans and buying securities	Central Bank Capital
Intra Eurosystem Assets	Money created by making loans and buying securities plus money created elsewhere and transferred.
	Of which:
	Reserve Accounts
	Bank Notes

Target2 Intra-Eurosystem Balances

- Average to zero.
- Disappear from consolidated Eurosystem balance sheet, so the sum of all NCB balance sheets is greater than Eurosystem balance sheet.
- Interest on liabilities is paid at the main refinancing rate, collected by ECB, and passed on to Target2 creditors.
- Have no maturity or limit and are not collateralised.

How Mr. A in Spain
Pays Mr. B in Germany

Mr. A

- Deducts money from his account with ..

Santander

- Who write a cheque on their account with…

Banco de España

- Deducts Santander's account. Incurs debt to ..

ECB

- Which incurs a debt to ..

Bundesbank

- Which credits the reserve account of ..

Commerzbank

- Which credits the bank account of ..

Mr. B.

How Has Everyone's Balance Sheet Changed?

Mr. A

- Reduced assets of €100

Santander

- Reduced liabilities to Mr. A of €100
- Reduced assets at BdE of €100

Banco de España

- Reduced Liabilities to Santander of €100
- Increased Intra-Eurosystem liabilities of €100

How Has Everyone's Balance Sheet Changed?

Bundesbank

- Increased Intra-Eurosystem assets of €100
- Increased reserve liabilities to Commerzbank of €100

Commerzbank

- Increased reserve assets of €100.
- Increased deposit liability to Mr. B of €100.

Mr. B

- Increased assets of €100

Capital Flight and Liquidity Problems

- What if there are large withdrawal demands on Santander and they run out of liquid assets that can be sold without incurring fire-sales losses?
- Remember that Mr. A and Mr. B may be the same person and withdrawals may be capital flight.
- In that case, the Banco de España can create money to loan to Santander. Does this via a collateralised refinancing operation.

Balance Sheet Changes with Money Creation by BdE

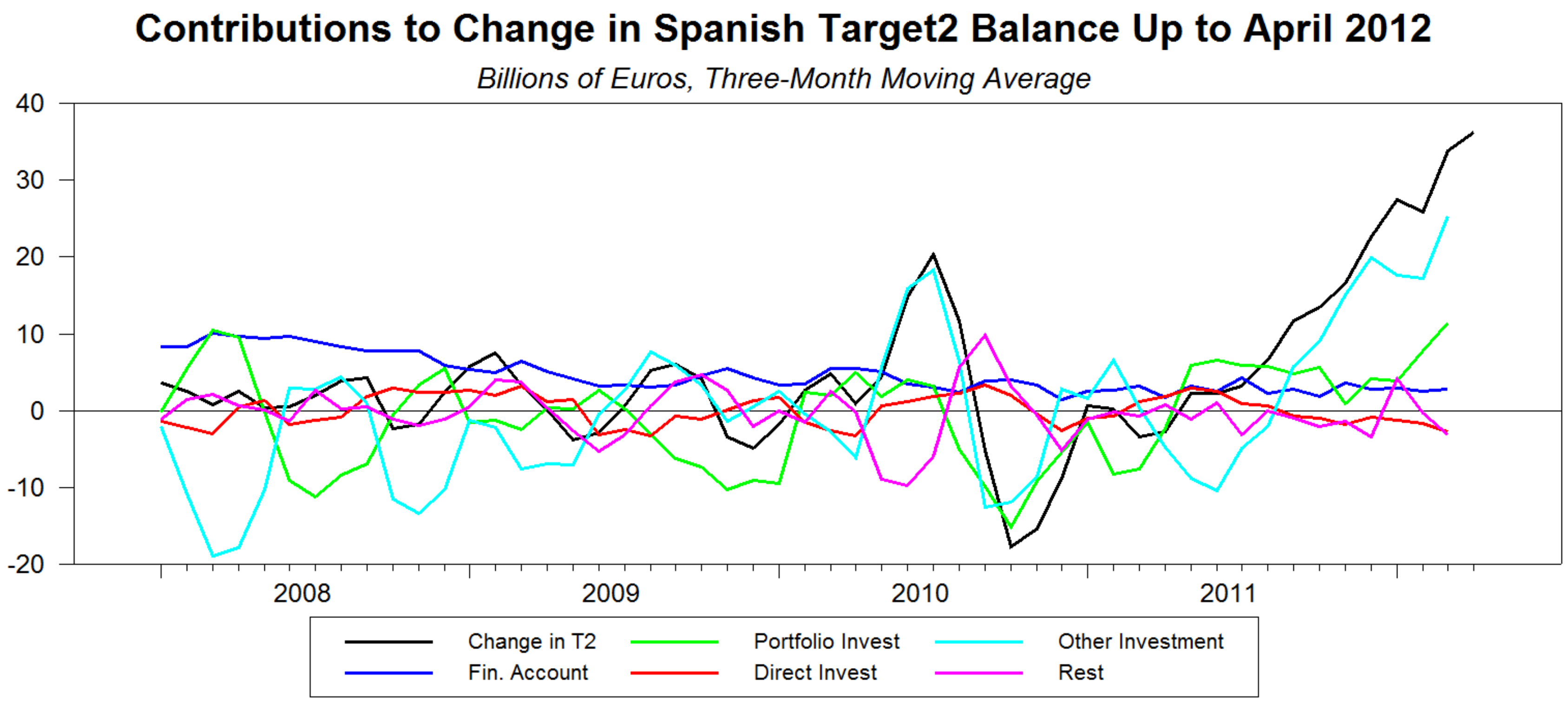
Mr. A	• Reduced assets of €100
Santander	• Reduced liabilities to Mr. A of €100. Increased liabilities to BdE of €100
Banco de España	• Increased assets of €100 via loan to Santander. • Increased Intra-Eurosystem liabilities of €100

TARGET2 AND CAPITAL FLIGHT

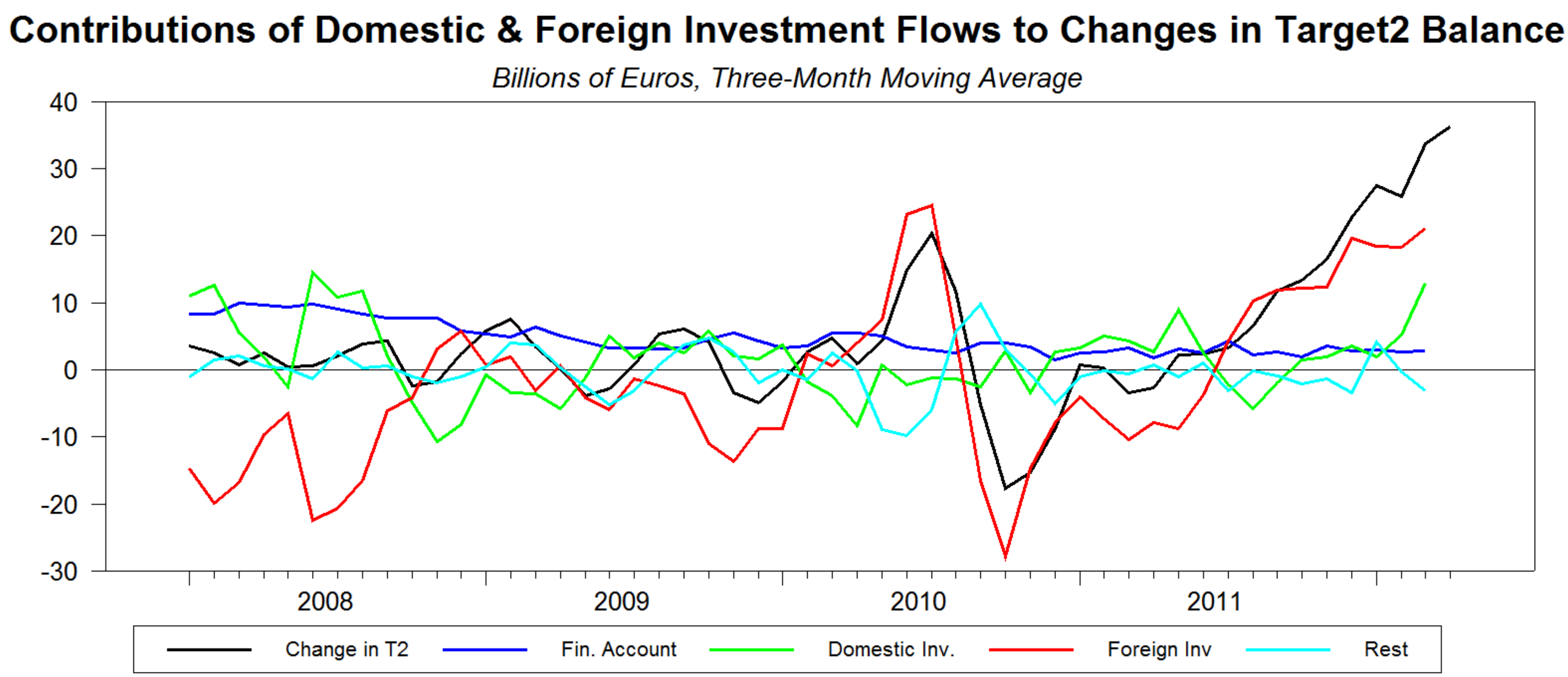
Target2 and Balance of Payments

- Target2 transfers are recorded in the "Financial Account" part of BoP statistics.
- Current Account + Capital Account + Financial Account + Errors and Omissions = 0
- Change in Target2 Balance can be decomposed into part due to current account deficits plus outward portfolio flows offset by central bank funding.

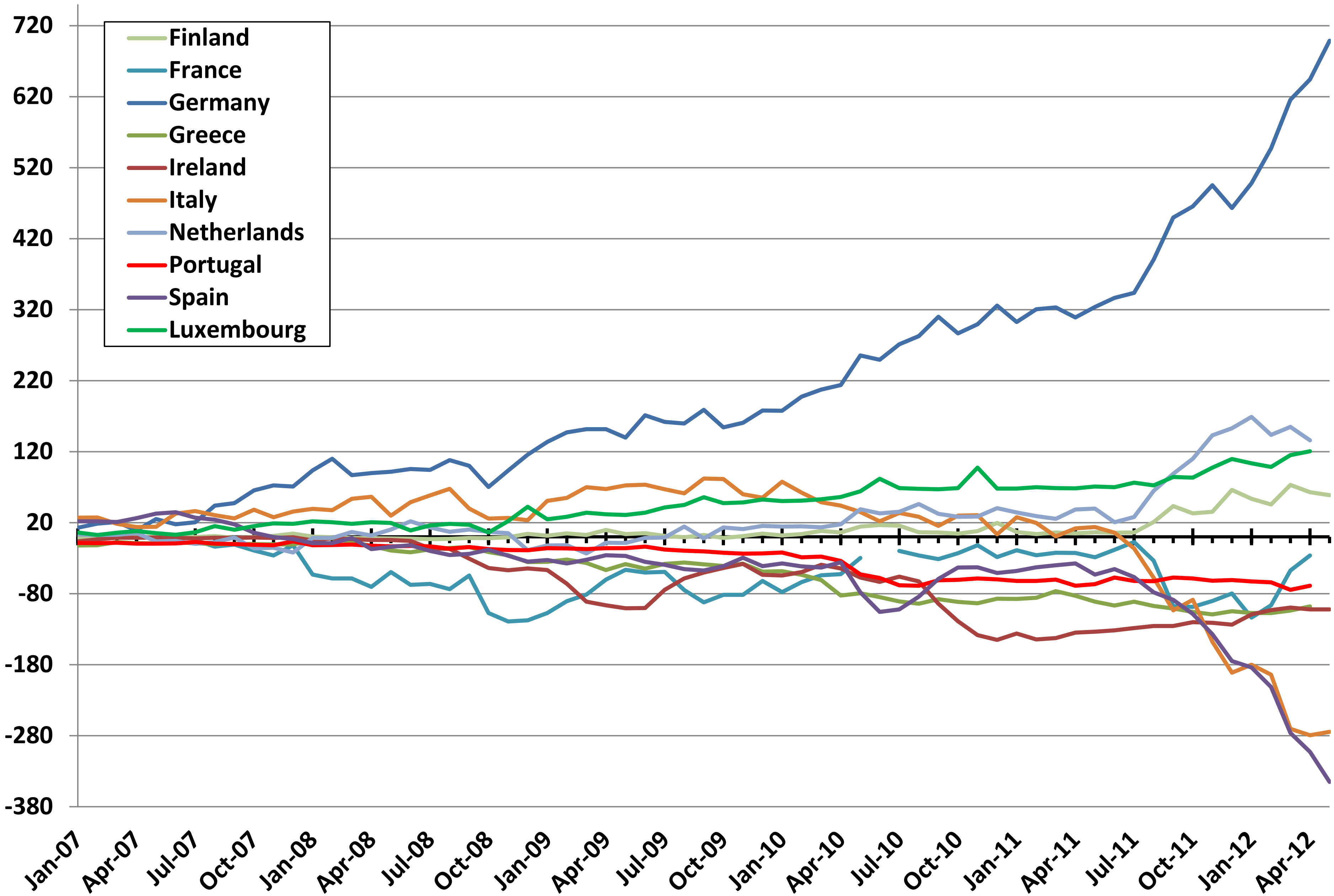
Deposit Flight Driving Spanish Target2



Mainly Driven by Foreign Depositors



Net Balance with the Eurosystem / Target [bn €]



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Target2 as Official Financing?

- Some have argued that “Target2 credit” has acted as a form of official financing to the periphery which has financed the “sudden stop” in capital flows.
- This confuses accounting rules with reality.
- An alternative accounting approach would see BdE handing over assets (e.g. loans) to the ECB to hand over to Bundesbank with no T2 liabilities or credits.
- So the BdE does not need the T2 liabilities.
- Indeed, it is the BdE that is financing the sudden stop: Unlike classic sudden stop, BdE can’t run out of reserves because it prints the reserve currency.

PROPOSALS TO ALTER TARGET2

Proposals to Limit Target2 Balances

- Hans-Werner Sinn has proposed placing limits on Target2 balances.
- Consider what this means.
  - It's September 2012 and I'm writing a cheque to a German bank account. However, the cheque bounces. Even though I have sufficient money in my account, I'm told that Ireland has reached its limit on its Target2 balance, so the ECB is refusing to transfer my money. In other words, the euros in my bank account can't do the same things that a euro in a German bank account can do.
- Limits on transfers of this kind would mean the end of the euro as a single currency.

Annual Settlement?

- In a less extreme proposal, Sinn has advocated an annual settlement of Target2 balances.
- This could be done easily once agreement was made on which NCB assets get transferred from e.g. Spain to Germany. Bundesbank could take ownership of loans to Spanish banks.
- This would eliminate the balances but underlying risks would be identical since Eurosystem rules require losses on Spanish refinancing loans to be shared.

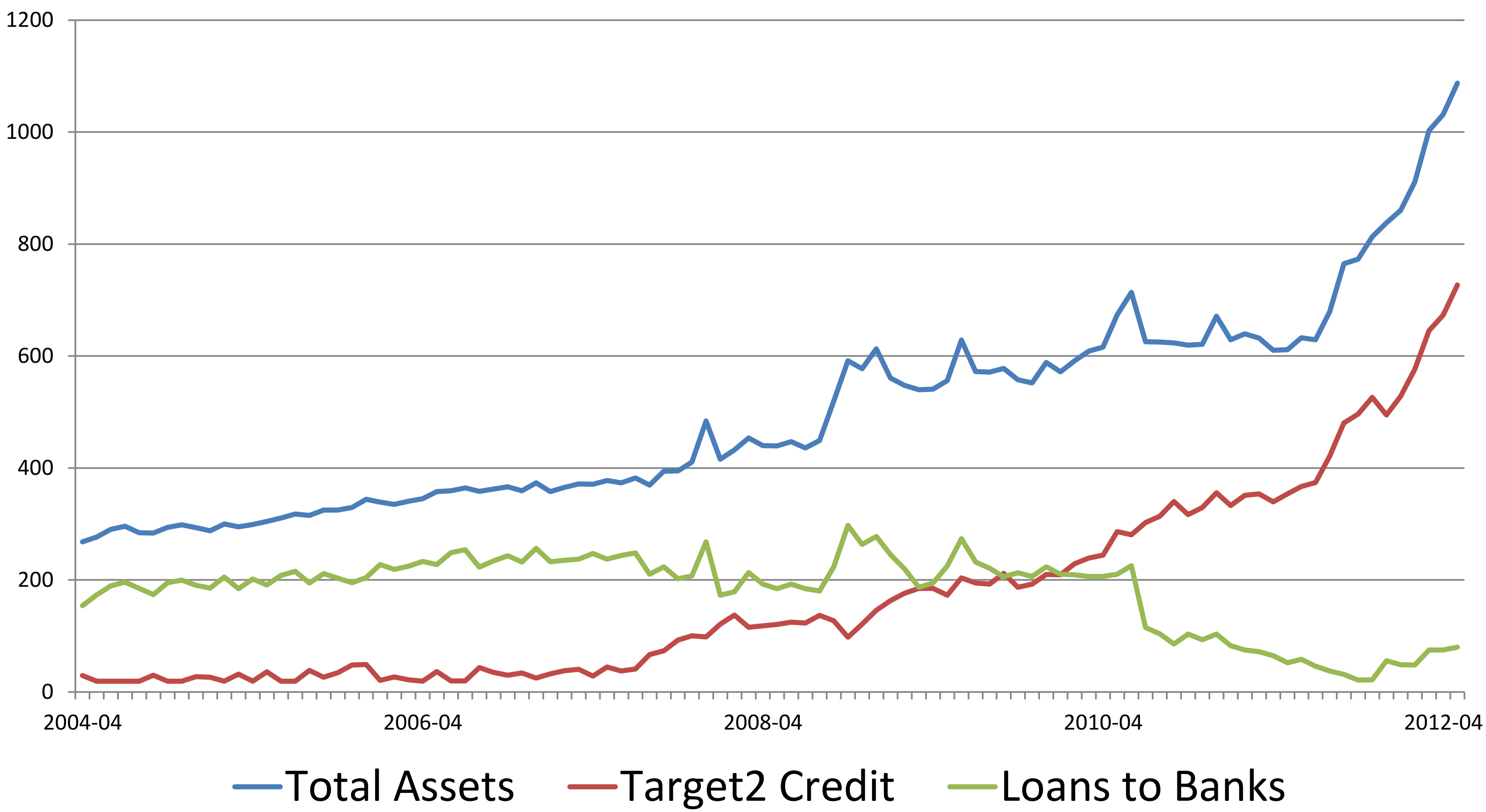
Settlement with Super-Senior Debt?

- Sinn, however, rejects the idea of settlement of Target2 balances via swapping of existing central bank assets.
- He proposes settlement via bonds "collateralised by each corresponding government with state-owned real estate or senior rights to future tax revenue" (presumably with transfer of Spanish refinancing loans to Spanish government?)
- There is no precedent for this movement away from risk-sharing in the Eurosystem and its adoption would be another step towards euro break-up.

RISKS TO GERMANY

The Bundesbank's Assets

(Billions of Euros)



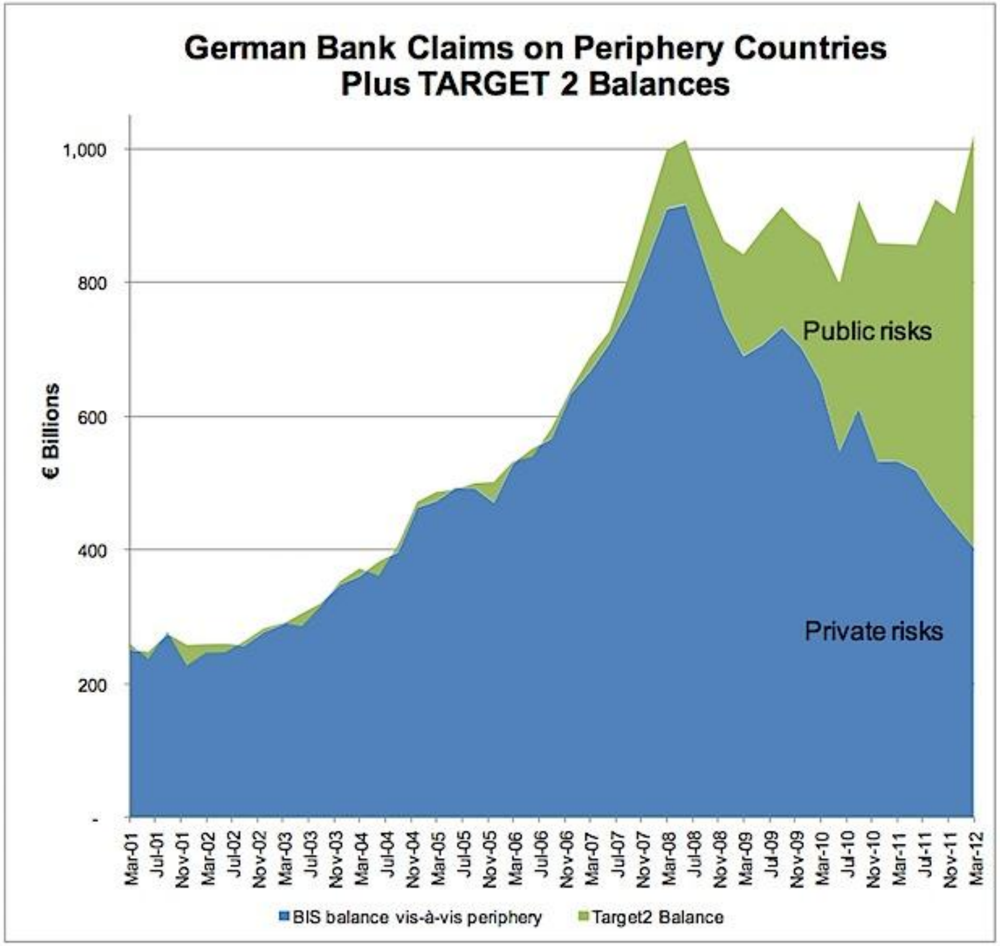
Bundesbank Not Selling Assets

- Tornell and Westermann (2011) claimed that
  - *"GIIPS central banks borrowed mainly – via the ECB – from other central banks, in particular the Bundesbank. In order to fund these loans, the Bundesbank sold its holdings of German assets."*
- The reduced holdings of other assets reflect reduced loans to cash-rich German banks. No assets have been sold to "fund" the Target2 credit.
- And Target2 credits do not have the classic feature of loans (lending people funds you currently have). They are new funds added to the Bundesbank's balance sheet.

German Exposure to Periphery

- There have been lots of news stories in Germany about how Target2 has increased the exposure of Germany to the periphery.
- In fact, the capital flight has merely substituted a public claim for a private claim.
- German banks have been able to unwind their loans and deposits to peripheral banks because of ECB lending and the smooth functioning of the Target2 system.

Chart from Carmel Asset Management



Risks While Euro Stays Intact?

- The Eurosystem has made a large amount of loans to peripheral banks. In some cases, these loans are against dubious-quality collateral.
- Does Germany's large Target2 asset mean it is "on the hook" for more losses than other NCBs.
- No: Losses on eurosystem loans are shared according to ECB capital key.
- Risks to Germany would be identical if, for example, it was France that had the big T2 credit.

Risks from Single Country Exit

- What happens to Germany's Target2 credit if, for example, Greece leaves the euro?
- One possibility is that Greece continues to honour obligations on its €100 billion Target2 liability.
- If not, it leaves ECB with Target2 obligations it cannot serve.
- ECB may be recapitalised as a result. Again, however, Germany's share would be its 27% capital key.

Risks from Full Euro Breakup

- Suppose the euro breaks up altogether and all countries with Target2 liabilities renege on their repayment.
- Will German citizens have to pay over €700 billion in taxes to recapitalise the Bundesbank?
- My answer is no.

Can a Central Bank Go Broke?

- Central banks can "go broke" if their target is to maintain a fixed exchange rate: You can run out of other people's money.
- It can also create so much currency that the public refuses to use it (Zimbabwe).
- But, ultimately, a fiat currency's value, its real purchasing power, is determined by how much money has been supplied and the various factors influencing money demand, not by the stock of central bank assets.

Laurence Meyer on Central Bank Capital

- *"Indeed, in the abstract, a central bank with the nation's currency franchise does not need to hold capital. In the private sector, a firm's capital helps to protect creditors from credit losses. Creditors of central banks, however, are at no risk of a loss because the central bank can always create additional currency to meet any obligation denominated in that currency."*

Literature on Central Bank Capital

- Best review is Bindseil, Manzanares and Weller (2004).
  - Concludes there is no operational need for positive central bank capital.
  - Evidence relating weak central bank balance sheets with poor inflation performance likely reflects other factors influencing lack of central bank independence.
- Suggests a somewhat elusive possible "reputational" argument for positive central bank capital. (Possibly just confusing causation\correlation).

German Inflation After a Break-Up?

- New DM would likely be a hard and highly-valued currency with credibility from institutional commitment to keep currency in relatively low supply (not the assets of the Bundesbank).
- Appreciation of DM likely leads to a period of deflation.
- If, for reputational reasons, Bundesbank's accounts need to show positive capital, it can be provided with German government bonds.
- Likely level of non-inflationary seignorage revenues from Bundesbank probably increases after a break-up. So no need to raise new taxes.