Debt and the Euro: From one balance sheet, strong rules to many balance sheets, no rules

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Based on ongoing work with J. Cochrane and K. Masuch (ECB-usual disclaimer applies)

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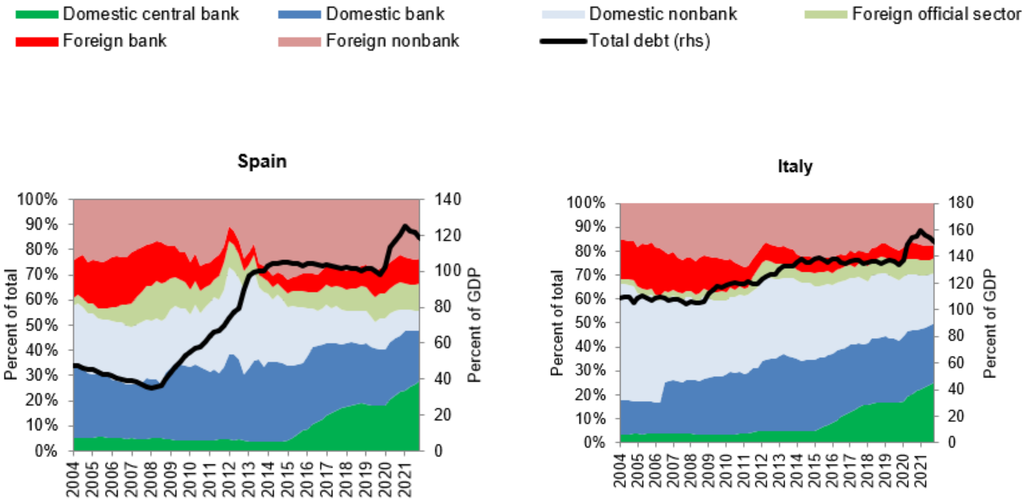
Holders of Advanced Economy Government Debt, 2004-21

(Components in percent; total in percent of GDP)



Source: IMF

Aim

- Describe evolution of EMU with Euro Crisis and COVID/QE
- Changes in
  - Conditionality
  - Risk sharing
  - Adhesion to rules ensuring neutrality
  - Size of balance sheet

I. Fiscal-Monetary interaction: FTPL

- In the simplest model (FTPL), government and central bank have a unified balance sheet.
- When the government controls monetary policy, it has the temptation to monetize debt
    - Much literature on precommitment
- Within a single country, an independent central bank with a separate balance sheet is a useful device to try to precommit against monetization.

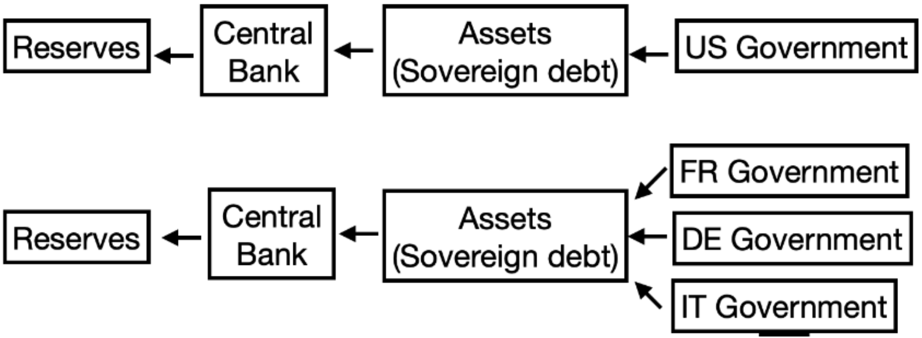

Reserves
Central
Bank
Assets
(Sovereign debt)
US Government

II. What about a central bank with multiple sovereigns?

How is this Different in a Currency Union?

- A central bank has a balance sheet with debt of many countries.
- A single country already had incentives to monetize debt,
  - Now monetize my debt only costs me 1/N the inflation.
- Founders of European Monetary Union were aware of this temptations
  - Set up rules and pre-commit the central bank, e.g via prohibition of monetary financing

Original Design:
single balance sheet, strong rules



Intended Constitution: the Maastricht rules

Objectives of Maastricht treaty (Dec 1992)

- Very limited central fiscal capacity

- Drafters fear the incentives of members to borrow too much and expect bailout by other member states or central bank
  - EMU members agreed to debt and deficit limits in order to reduce the pressure for monetary or fiscal bailouts.

Strategy: a triple lock

1. Prohibition of monetary financing (Art 123)

2. Limits on deficits (3%) and debt (60%)

3. No bail-out (Art 125)

Prohibition of monetary financing

Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as 'national central banks') in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities,.. shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments.

Art: 123 TFUE

Deficit and debt limits

Member States

- Deficit limit at 3% of gross domestic product (GDP)
- Debt limit of 60% of GDP

“Enforced” by fines under Stability and Growth Pact (1997)

Union

Article 310(1)(3) TFEU balanced budget rule for the EU’s accounts: “the revenue and expenditure shown in the budget shall be in balance.”

No bailout

The Union [or] ... A Member State shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of another Member State, without prejudice to mutual financial guarantees for the joint execution of a specific project.

Art 125 TFUE

What is not in the treaty (1)

Countries assumed not to get into a debt crisis

But what happens if they do?

- No IMF-like institution to provide help (unlike Bretton Woods)
- No institution or rule to facilitate debt restructuring

What is not in the treaty (2)

- No banking union: no joint banking regulation, joint supervision, resolution or deposit insurance
  - Host regulators do not want to lose political control of banks
  - And ring- fence liquidity and capital
  - Hence little between country private risk sharing
- No tools (even cooperation) for banking crisis- Emergency Liquidity (lender-of-last-resort) is national
- A single supervisor was set-up in 2014, within the ECB (but no deposit insurance or LOLR)

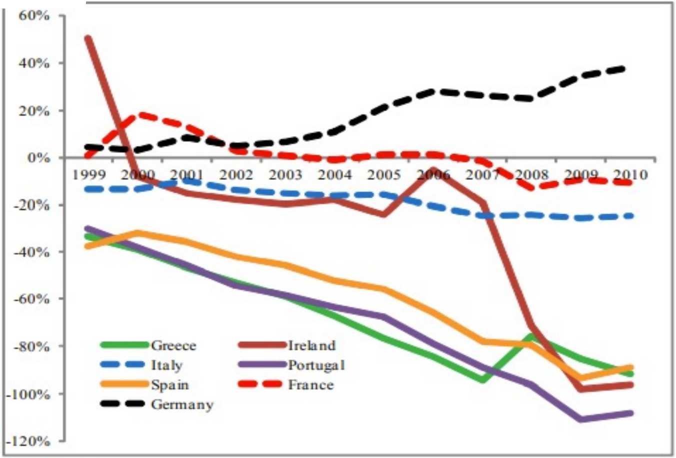
III. The reality: many balance sheets, no rules

III.1 The Euro Crisis and the ECB's country-specific asset purchases

III. 2 The Pandemic and QE

III.1 The Euro Crisis

Net Foreign Asset Positions 1999–2010, in Percent of GDP



Source: IFS data

One example: Ireland

Anglo Irish and Nationwide see collapse of deposits

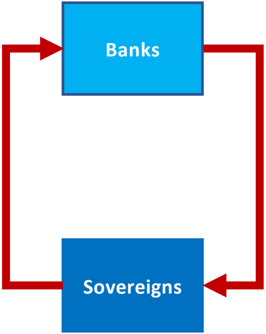
Replaced by Euro-system (with collateral), ELA from CBI (Whelan, 2012)

Table 1: *The IBRC's Liabilities (Billions of Euros)*

	End-2007	*End-2010*	*End-2011*
Total Liabilities	107.2	80.8	52.3
Of Which:			
Deposits	65.8	15.9	1.0
Debt Securities	30.3	7.5	6.3
Subordinated Debt	5.6	0.7	0.5
Other Liabilities	5.4	4.3	3.2
Eurosystem Borrowings	0.0	24.3	2.1
ELA Debts to CBI	0.0	28.1	40.1

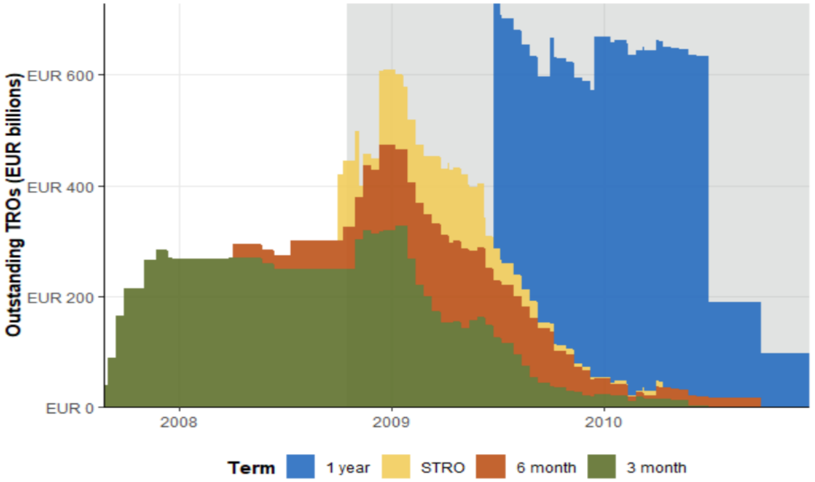
The doom loop

Banks hold large amounts of sovereign debt



Governments bail out their banks (State aid, deposit insurance, resolution) deposits made whole (except in Cyprus)

First reaction: TROs



Note: The shaded area represents the period during which the ECB operations carried a fixed rate and full allotment.

Source: ECB 2021.

Eligibility criteria

Eligibility Criterion	**ECB Guideline Enforced from January 1, 2007**	**Changes in Response to Collapse of Lehman Brothers**
Type of asset	Marketable debt instruments Non-marketable bank loans and RMBDs	+ certificates of deposit + subordinated marketable debt instruments (provided a guarantee payable on first demand) - syndicated loans governed by English or Welsh law
Credit standard	High credit standard according to ECAF (in the case of marketable securities, those rated A- or higher)	+ Marketable securities rated at least BBB– - Asset-backed securities rated less than A–
Issuer of marketable assets	Central banks, public sector, private sector, international institutions	+ Credit institutions
Debtor of non-marketable assets	Public sector, non-financial corporations, international institutions, credit institutions	*No change*
Currency	EUR	+ JPY, GBP, USD for marketable debt

Sources: ECB 2006, table 4; Regulation No 1053 2008.

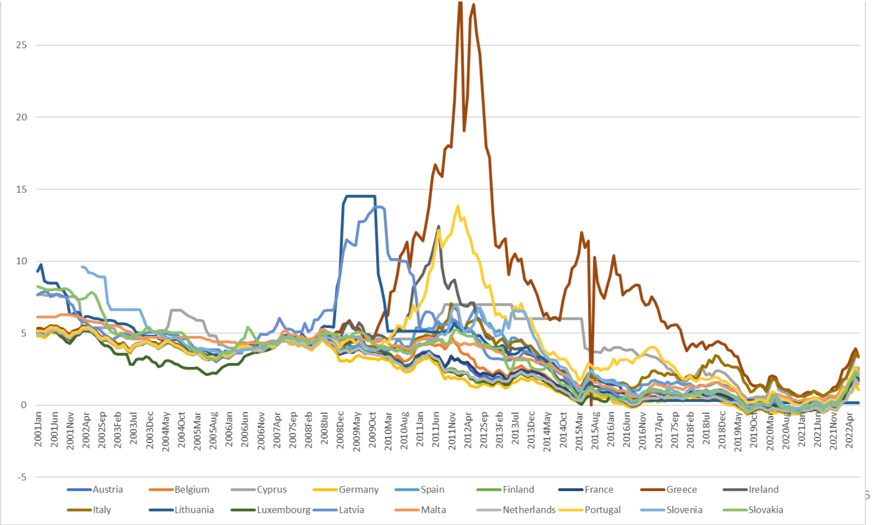
Corey N. Runkel
Yale Program on Financial Stability

Securities Market Program
(May 10, 2010)

- Discretionary purchases by ECB of sovereign debt of Greece, Ireland, Portugal and since Summer 2011, Spain and Italy
  - Motivated by desire to avoid default, avoid financial stability risks as all costs
  - Justified (Trichet, Jackson Hole 2010) by “separation principle”:
    - “non-standard measures have a clear purpose: ensuring that the standard measures themselves are transmitted as effectively as possible despite the otherwise abnormal functioning of some markets.”
- Purchases of debt sterilized through sales of other assets
- No conditionality
  - Except informally—August 2011:
    - Letter Trichet to Spanish PM Zapatero demanding reforms
    - Letter Trichet Berlusconi demanding reforms

Rescues plus ECB's sovereign bond purchases (SMP in 2010-12) not enough to reassure markets

Strong pressures on Italy, with fears of default



“ready to do whatever it takes to preserve the Euro. And believe me, it will be enough”

Draghi, July 26, 2012

Conditionality of “whatever it takes”: “Outright Monetary Transactions”

- (Almost) unlimited purchases of public short-term securities, provided that country secured European Stability Mechanism program
  - : Financed by MS, Agreed by Board of ESM, negotiated and monitored by ECB/Commission in liaison with ECB (IMF).
- **Fiscal backing**
  - ensure credibility of monetary authority (can withdraw from purchases)
- **Conditionality**
  - Ensures financial assistance is temporary and will be paid back
  - Ensures political cost (“stigma”) - incentives for sound policies, so as to avoid ESM program (However, stigma in recent years resulted in political resistance against ESM program, e.g. in Italy)

Draghi on conditionality

The conditionality associated with the program to which governments and the European authorities agree is a crucial element in being able to preserve monetary policy independence. It is important in providing the ECB with adequate assurance that interventions supporting sovereign debt bond prices do not mutate into financial subsidies for unsustainable national policies in the medium term.

By way of drawing a parallel between OMTs and our standard liquidity operations: as the credit provided to banking counterparties cannot be, and must not be, interpreted as an injection of capital into failing banks; in the same vein, under OMTs, in compressing the premium for the risk of redenomination, the ECB cannot and does not intend to provide financial support to governments which reinstate solvency conditions which have not already been approved ex ante.

The euro, monetary policy and reforms, Rome, 6 May 2013

The fiscal side of bailouts
European Stability Mechanism

Capital	EUR bn
Subscribed capital	€704.8bn
Paid-in capital	€80.5 bn
Committed callable capital	€624.3bn
Maximum lending capacity	€500 bn
Remaining lending capacity (August 2019): 82%	€410.1bn

Zoppè, A. and Dias, C., 2019. The European Stability Mechanism: Main Features, Instruments And Accountability. Economic Governance Support Unit of the European Parliament.

Evaluation

Mario Draghi avoided break up of the euro area without creating risks of high inflation and unsustainable public finances.

Two key ingredients:

- Conditionality
- Fiscal backstop provided by the EU governments via the ESM

III.2 QE and the Pandemic

Can the ECB do QE given prohibition of monetary financing?

- Recall Art. 123 TFEU explicitly prohibits monetary financing
  - "Any type of credit facility with the European Central Bank […] in favor of […] central governments, regional, local or other public authorities […] shall be prohibited"
- ECB: two limits on their purchases would ensure this was a Monetary Policy
  - Do not buy more than 33% of any issuance
  - Buy their sovereign bonds following its own capital contribution key
- **No risk sharing:** In addition, to avoid setting undesirable incentives for governments/free riding, the risks of public bond purchases are (mostly) not shared,
  - Borne by the individual national central banks and thus ultimately the respective member state (similar to ELA)

Asset Purchase Programs
(Jan 2015)

Zero lower bound in traditional interest rate channels

Asset purchase programs:

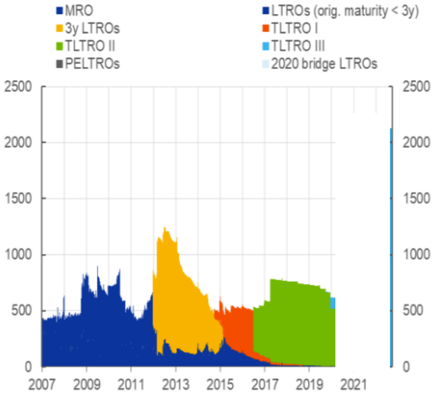
- Covered bonds (CBPP3)
- Asset-backed securities (ABSPP)

22 January 2015, the ECB announced the Public Sector Purchase Program (PSPP), which would be solely focused on sovereign debt, and consolidated the three programs into the Asset Purchase Program.

Pre-Pandemic Balance Sheet of ECB

Banks

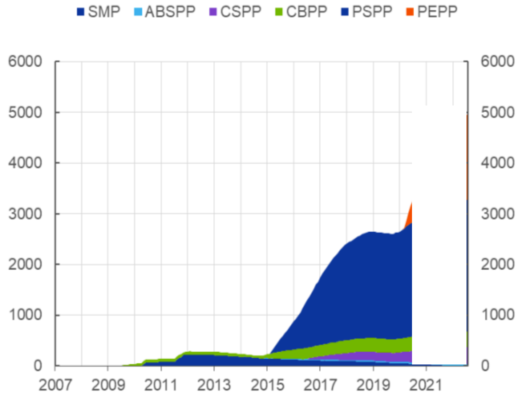
(EUR billions)



Sources: ECB and ECB calculations.

Sovereigns

(EUR billions)



Sources: ECB and ECB calculations.

ECB’s pandemic emergency purchase program
(March 2020)

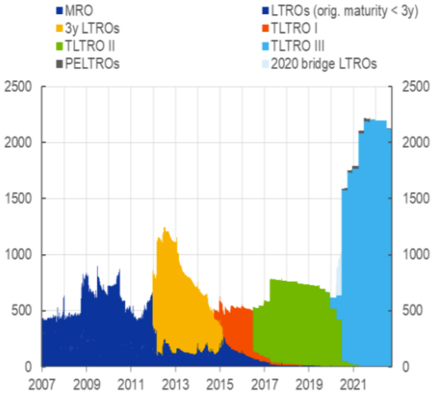
- Purchase private and public sector securities.
  - Initial €750 billion -- total of €1,850 billion.
- Rationale: protect monetary policy transmission mechanism and the outlook for the euro area from COVID-19 risks
- Benchmark for sovereigns remains Eurosystem capital key- but
  - flexibility of purchases over time,
  - across asset classes
  - among jurisdictions (including Greece—a waiver)
- Crucially: bias towards certain sovereigns together borne by their own NCB

And subsidized loans to Banks (TLTRO)

- Direct subsidy to Banks
  - At below market rates
  - Must fulfill certain “stimulus” conditions:
    - Fulfill lending targets
  - But targets are easy to fulfill
    - Hence a huge increase in deposits at banks, “parked” at central bank
  - TLTRO III (March 2019)
    - 3 years, interest costs 50 basis points below average deposit facility rate
    - Aim to improve lending conditions

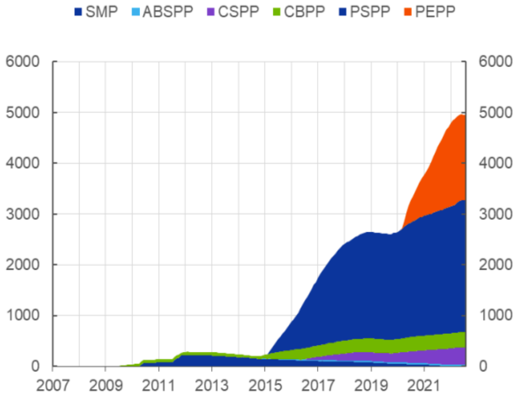
Pandemic Balance Sheet of ECB

(EUR billions)



Sources: ECB and ECB calculations.

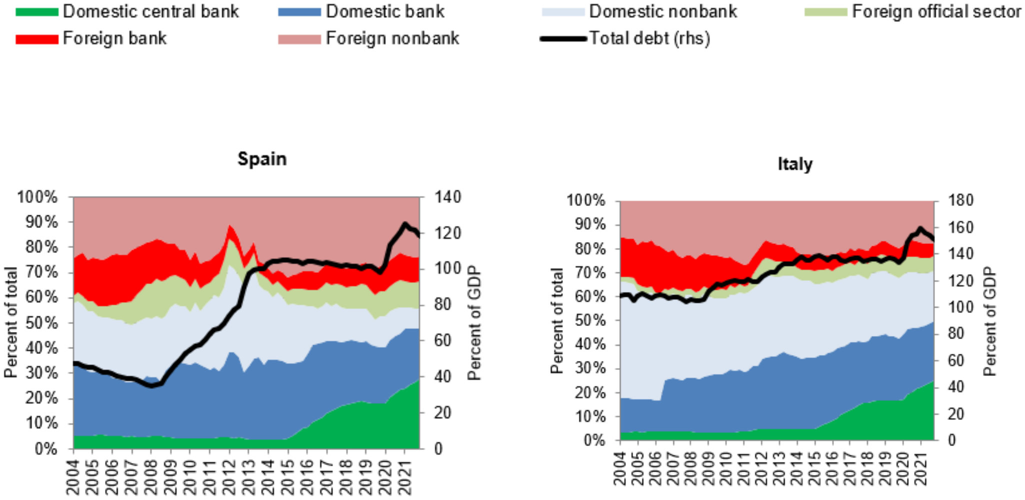
(EUR billions)



Sources: ECB and ECB calculations.

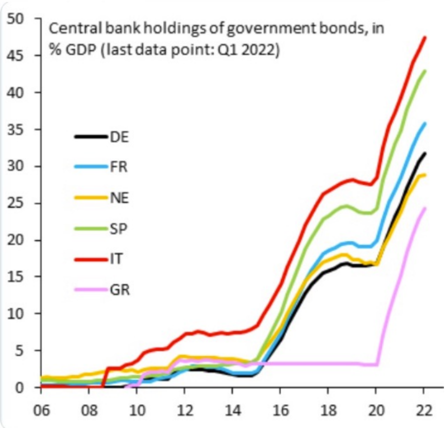
Holders of Advanced Economy Government Debt, 2004-21

(Components in percent; total in percent of GDP)



Source: IMF

ECB holding of sovereign debt



Source:Robin Brooks, IIF

Exiting QE/Exiting Exceptional monetary policy: TPI

Transmission Protection Instrument
(July 2022)

ECB must fight inflation and contribute to financial stability

- Transmission protection instrument

  “Can be activated to counter unwarranted, disorderly market dynamics that pose a serious threat to the transmission of monetary policy across the euro”

- But very far from OMT “strict conditionality”

Conditionality?

1. Compliance with the EU fiscal framework (suspended till end 2023)
2. Absence of severe macroeconomic imbalances (EU Comm)
3. Debt sustainability, taking into account the analysis of several institutions, including the EU Commission, the ESM, the IMF and the ECB (How real?)
4. Compliance with some EU “Semester” recommendations and “Recovery Plans” commitments (EU Comm)

Different from OMT

- No Fiscal backstop from member states
- No “program” conditionality

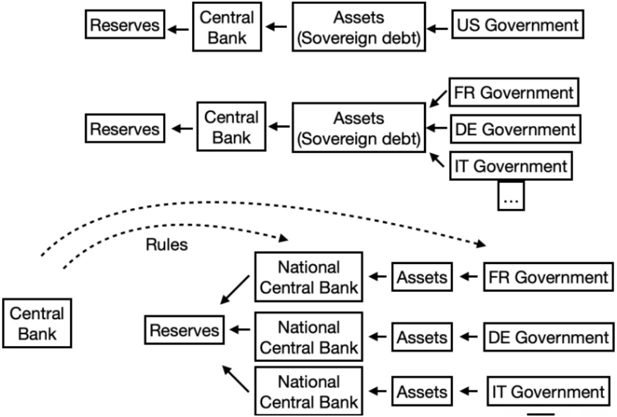
Can the ECB truly withdraw support?

Fiscal/Financial dominance

- Hard for ECB to raise rates without causing fiscal tensions
    - Hard for ECB to determine the “market dynamics” or tensions are “warranted” by fundamentals-if that causes a debt crisis and/or a government to fail
- Or unwind sovereign loan portfolio

IV. The “emergent” ECB constitution (far from Maastricht Rules)

De facto constitution



No risk sharing on huge share of balance sheet

Assets and liabilities in separate balance sheets with independent profits/losses

- From the start of EMU: LOLR/Emergency liquidity assistance
- More recently, crucial: QE (NCB hold own debt
  - Interest income also not shared, so the Italian Treasury over time benefits from higher profits made by Bank of Italy due to spreads on Italian bonds

- Hence, unclear inflation/default choice.
  - What happens if one state collapses?

Elements of instability

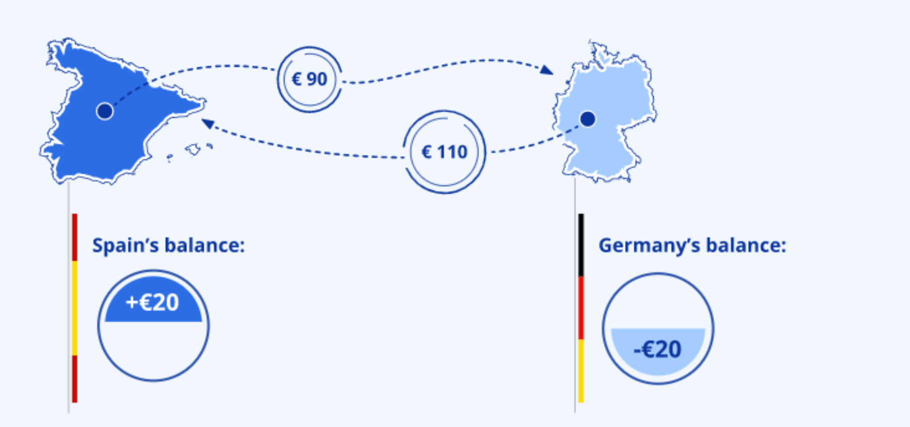
Evidence of risk:

- Growing T2 balances
- National central banks holding national debts

Target 2 Balances: a quick explainer

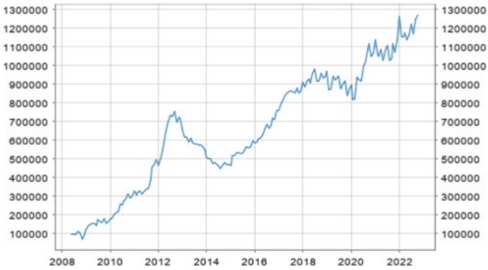
- National central banks remain in place post MU
- Individual banks have reserves with their national central banks.
  - Suppose a Spanish citizen imports a car from Germany.
  - The Spanish purchaser directs his bank to send euros to the Spanish central bank, which sends euros to the German central bank, which sends them to the exporter's bank account.
  - But the central banks do not actually transfer euros
    - The Spanish central bank agrees to owe the euros to the ECB,
    - Which then owes euros to the German central bank.
    - A target2 credit and debit are created.

Target II Balance: explainer

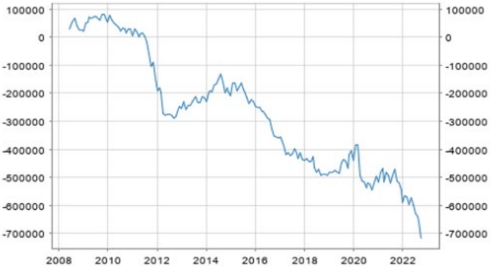


Growing Target 2 Imbalance

Germany Target 2 Balance



Italy Target 2 Balance



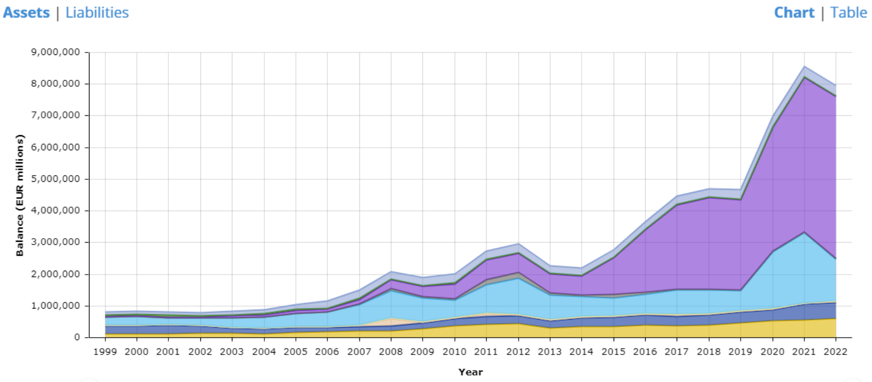
How should balance revert?

- Germany’s private sector could accumulate financial assets from Italy, sending euros right back to Italy
  - But the private sector adjustment is not happening, as the Italian residents indirectly get cheap funding via Target II loans and thus see no need to pay higher rates
- Hence rather than buy an Italian bond or stock, Germans leave money in the bank
  - Reserves at German central bank, pay 2.5% interest rates (until July 2022 this was minus 0.5%).
- German central bank permanently holds the asset -- a Target2 credit at the ECB

Elements of instability

- Growing T2 balances
- National central banks holding national debts

Balance sheet



Assets 20/10/2022

	Total	Loans to euro area residents				Holdings of debt securities issued by euro area residents				Money market fund (MMF) shares [1]	Equity and non-MMF investment fund shares [1]	External assets	Fixed assets	Re-maining assets
		Total	General govern-ment	Other euro area resi-dents	MFIs	Total	General govern-ment	Other euro area resi-dents	MFIs					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Eurosystem (total)	12,739.6	5,678.9	10.2	10.9	5,657.9	4,718.9	3,776.1	419.9	523.0	0.3	53.6	1,529.9	8.2	749.7
BE	377.0	88.5	0.0	0.0	88.5	231.4	128.2	96.1	7.1	0.0	0.4	41.0	0.4	15.3
DE	2,953.8	1,686.6	4.4	0.6	1,681.6	958.4	693.8	77.8	186.8	0.0	2.4	281.3	1.0	24.0
EE	16.9	2.3	0.0	0.2	2.1	0.8	0.5	0.0	0.3	0.0	0.1	12.7	0.0	1.0
IE	216.9	122.3	0.0	0.0	122.3	72.9	70.0	0.0	2.9	0.0	0.2	18.4	0.6	2.5
GR	252.2	57.7	5.3	0.4	52.0	90.7	88.5	0.0	2.2	0.0	0.5	80.8	0.6	21.9
ES	1,231.5	299.7	0.0	0.2	299.4	541.0	473.2	44.9	22.9	0.0	1.3	211.9	0.3	177.4
FR	2,038.2	510.0	0.0	0.3	509.7	1,049.7	841.2	124.0	84.5	0.3	18.9	360.2	1.3	97.8
IT	1,494.7	442.0	0.0	1.1	440.9	731.7	673.7	28.8	29.2	0.0	15.8	218.5	1.8	84.9
CY	33.6	20.2	0.0	0.0	20.2	6.6	6.6	0.0	0.0	0.0	0.0	4.2	0.0	2.5
LV	26.1	0.8	0.0	0.0	0.8	6.1	5.5	0.4	0.2	0.0	0.5	12.7	0.0	5.9
LT	31.7	11.2	0.0	7.7	3.6	13.2	13.2	0.0	0.0	0.0	0.6	5.5	0.0	1.1
LU	366.9	337.0	0.0	0.0	337.0	12.3	7.3	0.0	5.0	0.0	0.1	16.7	0.1	0.7
MT	11.9	6.8	0.0	0.0	6.8	2.3	2.0	0.0	0.2	0.0	0.4	1.9	0.1	0.6
NL	600.1	253.0	0.0	0.0	253.0	203.2	150.8	0.1	52.3	0.0	3.1	60.8	0.3	79.6
AT	271.0	86.8	0.4	0.0	86.4	106.7	94.5	0.3	11.9	0.0	8.5	33.0	0.2	35.8
PT	226.8	42.4	0.0	0.2	42.2	96.3	94.1	0.0	2.1	.	0.2	31.3	0.1	56.5
SI	31.6	12.1	0.0	0.0	12.1	14.1	12.8	0.3	1.0	0.0	0.1	4.8	0.1	0.5
SK	67.8	11.2	0.0	0.0	11.2	23.4	20.5	0.1	2.8	0.0	0.1	31.7	0.1	1.2
FI	198.5	91.3	0.0	0.0	91.3	82.3	49.2	19.3	13.8	0.0	0.3	15.6	0.1	8.9
ECB	2,292.5	1,597.0	0.0	0.1	1,596.9	475.8	350.5	27.6	97.7	0.0	0.0	86.9	1.1	131.7

Source: ECB.

1) Amounts issued by euro area residents. Amounts issued by non-euro area residents are included in external assets.

Liabilities 20/10/2022

Table 2. Liabilities

	Total	Currency in circulation	Deposits of euro area residents				Debt securities issued	Capital and reserves	External liabilities	Remaining liabilities
			Total	Central govern-ment	Other general govern-ment/other euro area residents	MFIs				
	1	2	3	4	5	6	7	8	9	10
Eurosystem (total)	12,739.6	1,601.0	8,968.8	519.7	239.6	8,209.5	0.0	632.5	798.8	738.6
BE	377.0	54.0	279.1	3.4	0.6	275.1	0.0	20.1	20.9	2.9
DE	2,953.8	392.2	1,643.0	101.5	99.6	1,441.9	0.0	92.0	291.7	534.9
EE	16.9	4.1	11.7	0.6	0.2	10.9	0.0	0.5	0.4	0.2
IE	216.9	25.1	151.5	38.7	0.0	112.9	0.0	11.7	6.1	22.5
GR	252.2	36.5	195.6	27.8	6.1	161.7	0.0	12.5	0.8	6.9
ES	1,231.5	176.9	961.7	81.4	15.2	865.0	0.0	64.8	20.9	7.2
FR	2,038.2	298.3	1,358.7	121.8	1.4	1,235.5	0.0	182.1	174.6	24.4
IT	1,494.7	249.8	1,089.2	38.9	18.3	1,031.9	0.0	104.1	34.3	17.4
CY	33.6	3.3	27.8	3.8	0.6	23.4	0.0	1.6	0.6	0.4
LV	26.1	5.7	19.6	2.7	1.1	15.8	0.0	0.6	0.0	0.2
LT	31.7	8.5	19.1	4.5	1.4	13.2	0.0	1.5	2.4	0.2
LU	366.9	5.1	178.4	1.3	1.4	175.7	0.0	1.8	85.5	96.2
MT	11.9	1.6	8.5	1.0	0.3	7.2	0.0	0.5	0.5	0.8
NL	600.1	85.0	424.5	8.3	2.9	413.3	0.0	44.6	32.7	13.3
AT	271.0	44.0	210.3	21.9	0.2	188.2	0.0	17.6	7.4	-8.4
PT	226.8	34.6	155.6	22.1	2.4	131.1	.	24.6	11.6	0.3
SI	31.6	7.1	16.6	7.0	0.9	8.7	0.0	-0.6	1.2	7.4
SK	67.8	16.7	38.5	0.8	0.1	37.5	0.0	-2.3	8.3	6.6
FI	198.5	27.1	156.8	2.7	0.0	154.1	0.0	-0.8	14.5	0.9
ECB	2,292.5	125.3	2,022.7	29.6	86.8	1,906.3	0.0	55.6	84.5	4.4

Source: ECB.

No risk sharing: who would recap the NCBs?

- Suppose a government defaults
  - No actual obligation in EU Treaty for national fiscal authorities to recap their NCBs in case of negative equity
- Would the ECB would bail out the national central bank in such an event?
  - If not, country crash out of EMU – but against the rules!

QE has left system dangerously unbalanced

- Role of NCBs is meant to align incentives
  - Ensures losses from QE/LOLR fall on country
  - Inevitable given lack of single fiscal authority?
- But also means monetary union is even more incomplete
  - The ECB has few assets or liabilities of its own
    - Large asset and liabilities in separate NCBs balance sheets with own P&L
  - In case of default of increasingly risky sovereign debts, Eurosystem at severe risk
  - Risk compounded by QE

Dangerous evolution of the "constitution"

- Starting from a EMU with clear rules maintaining commitment to no monetary financing, close to a single balance sheet
- To:
  - Purchasing securities of own sovereign
  - Hence on own risk
  - With few conditions
  - Size matters

Thanks!