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Debt and the Euro

Luis Garicano
IE & Columbia GSB

15. Dec. 2022

Skill Premium after Covid

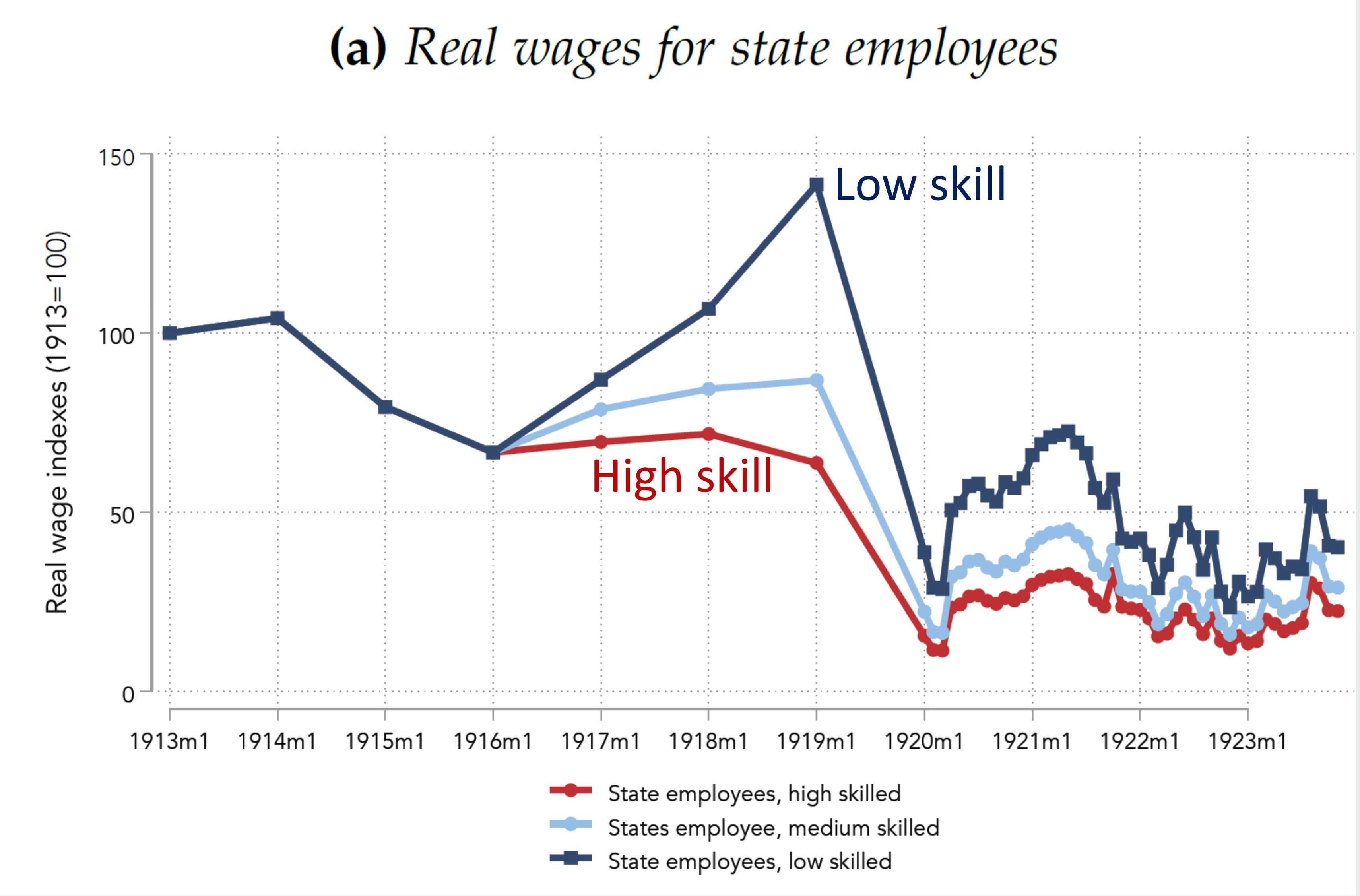
- Different forms of compensation
  - Blue collar workers/service sector
    $\Rightarrow$ higher wages
  - White collar workers
    $\Rightarrow$ WfH, flexibility
    - Preference shift: “search for meaning”
- Long Covid esp. in service sector
  - Slow rebuilding of labor participation
- Labor shortage everywhere

Skill Premium and Inflation

- Class warfare
  - Whenever economy recovers and workers gain bargaining power
    $\Rightarrow$Central Banks lean against it with higher i
  - Price-wage spiral
    - Constrain wage growth for workers with high MPC more
      $\Rightarrow$depress wages growth of the poor (?)
  - Higher i hurts growth stocks more tech sector layoffs
    $\Rightarrow$lowers skill premium

Skill Premium and Inflation: Germany 1916-1923

- Compression during high inflation, but not hyper-



- "Financial Phillips' Curve": German Hyperinflation
  Brunnermeier, Correia, Luck, Werner, Zimmermann (2022)

Poll

1. How many EU countries were as of December 2021 above the **60% Debt-to-GDP** limit set by the EU fiscal rules?
   a. Less than 5 (of 27)   b. Less than half (>5)
   c. More than half
2. NextGen sovereign **EU bond issues**
   a. Is exceptional one-off (as legal text states)
   b. Just the beginning of more EU bonds
3. Can the **EU** raise its own **taxes**?
   a. Yes   b. No
4. How much bigger was the **ECB's balance sheet** at the end of 2021 compared to US Fed’s? (as % of GDP)
   a. Roughly the same   b. 25% larger   c. 50% larger
   c. 75% larger   d. Twice as large
5. What is the **interest rate spread** of the 10 years EU debt against the German Bund?
   a. Neglectable   b. 65bps/70bps

Debt and the Euro

Luis Garicano

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

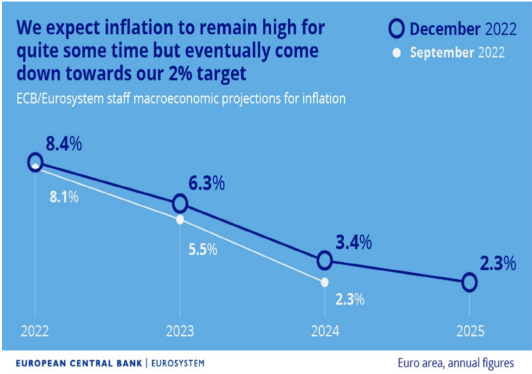
Markus Academy, Princeton Bendheim Center
2022.15.12

Today: QT decision

ECB to start decreasing its huge Balance Sheet in March 23, 15bn/month (333 months!)

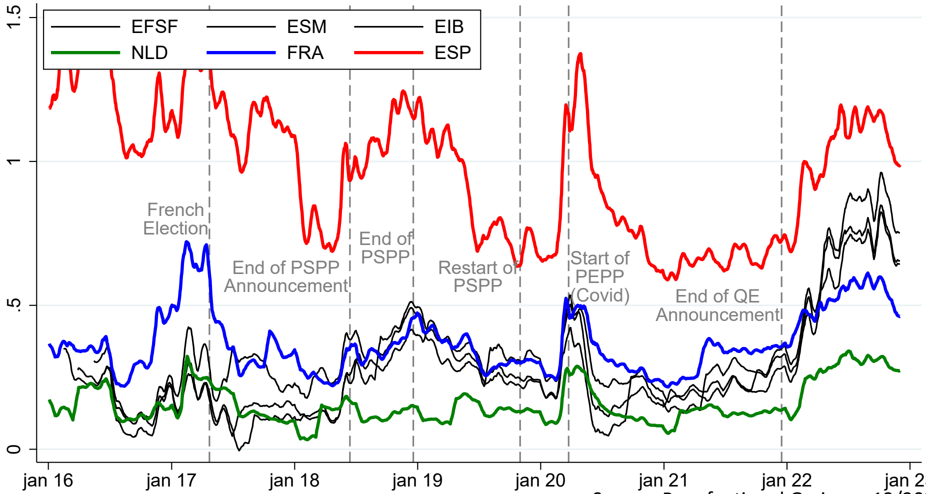
Balance sheet:

- ECB: 67% of Eurozone GDP
- Federal Reserve: 38% of GDP



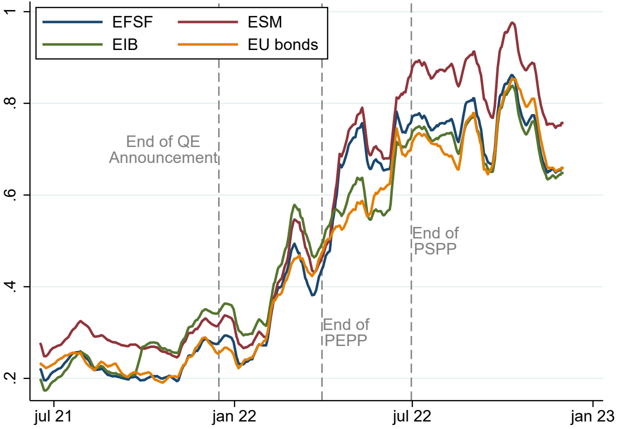
Is European debt a safe asset?

Spread EU debt/German 10y



Source: Bonafanti and Garicano 12/2022

Market has doubts
Spread EU debt/German 10y



Source: Bonafanti and Garicano 12/2022

Debt and the Maastricht Treaty

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?

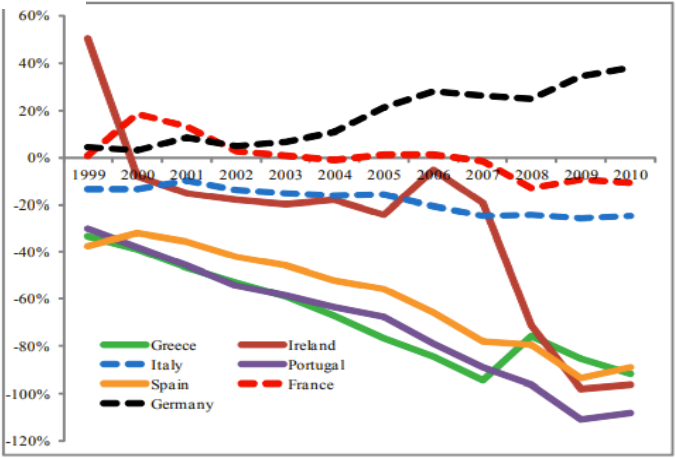
- No IMF-like institution to provide help (unlike Bretton Woods)
- No institution or rule to facilitate debt restructuring

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

Construction tested during 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

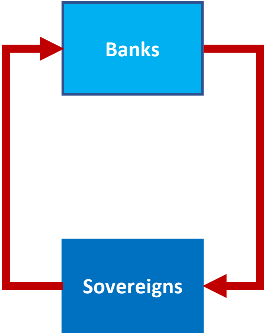
Replaced by Eurosystem (with collateral), ELA from CBI (Whelan, 2012)

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

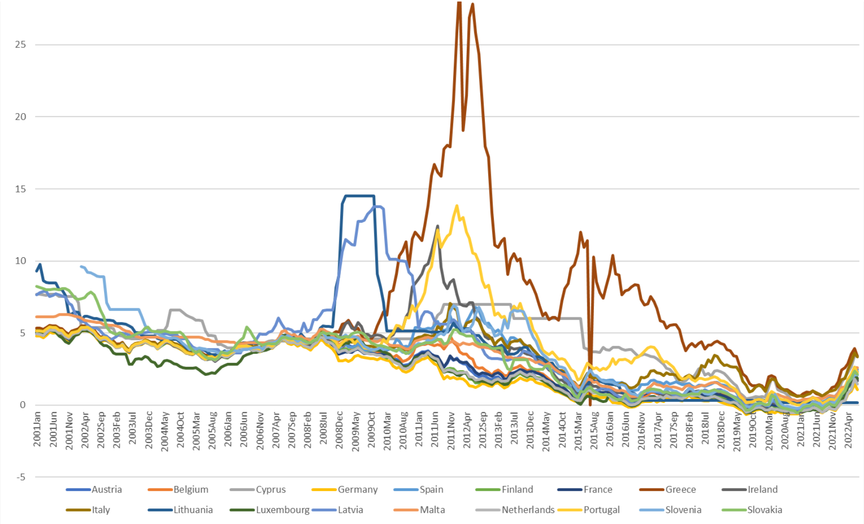
Banks hold large amounts of sovereign debt



Governments bail out their banks (State aid, deposit insurance, resolution)

Rescues plus sovereign bond purchases 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: “Outright Monetary Transactions”

- (Almost) unlimited purchases of public short-term securities, provided that country secured European Stability Mechanism program
  - Agreed by Board of ESM, negotiated and monitored by ECB/Commission (IMF)
- **Fiscal backing**
  - ensure credibility of monetary authority (can withdraw from purchases)
- **Conditionality**
  - Ensures measures are temporary
  - And also ensures political cost- incentives to avoid asking ((Proved too strong eventually)

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 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 ESM

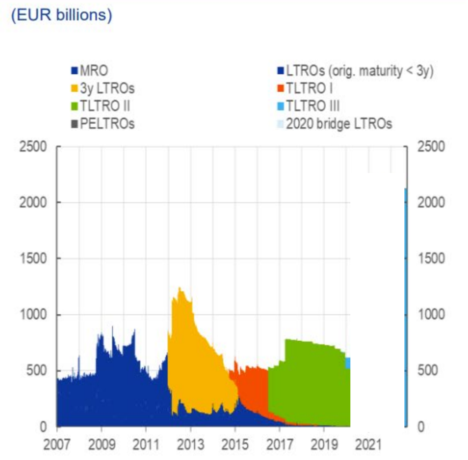
2015: How to do Quantitative Easing without breaking Treaty constraints?

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

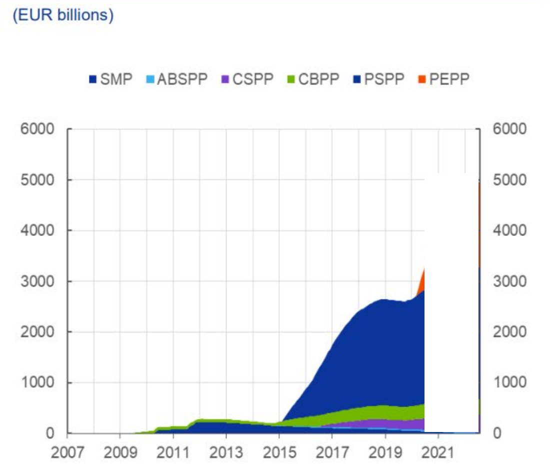
Pre-Pandemic Balance Sheet of ECB

Banks



Sources: ECB and ECB calculations.

Sovereigns



Sources: ECB and ECB calculations.

2020: Pandemic

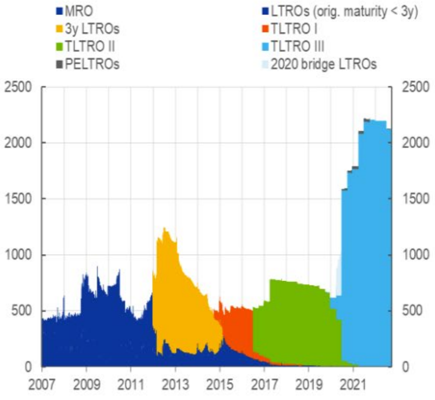
Monetary response

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)

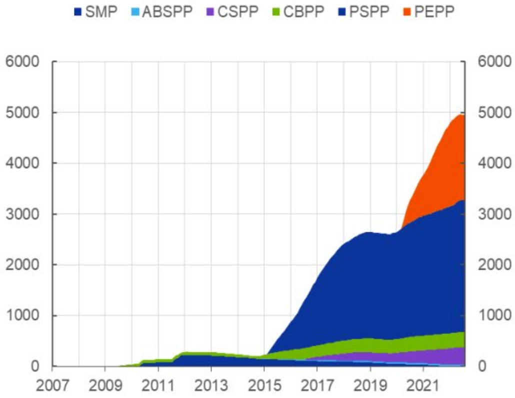
Pandemic Balance Sheet of ECB

(EUR billions)



Sources: ECB and ECB calculations.

(EUR billions)



Sources: ECB and ECB calculations.

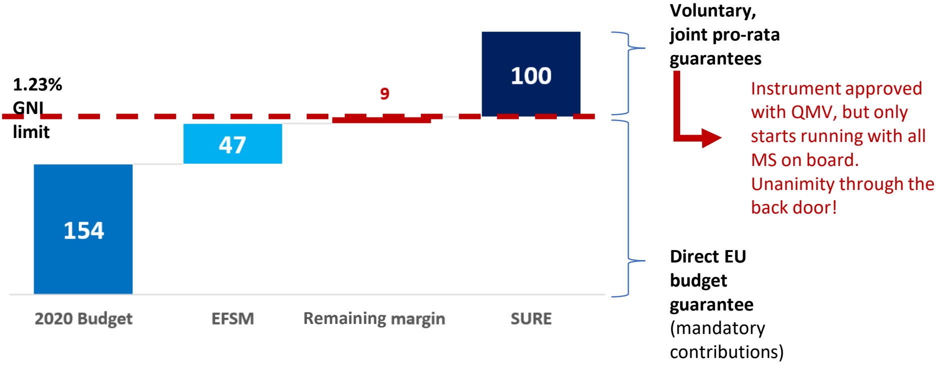
Fiscal response

A joint European fiscal response needed

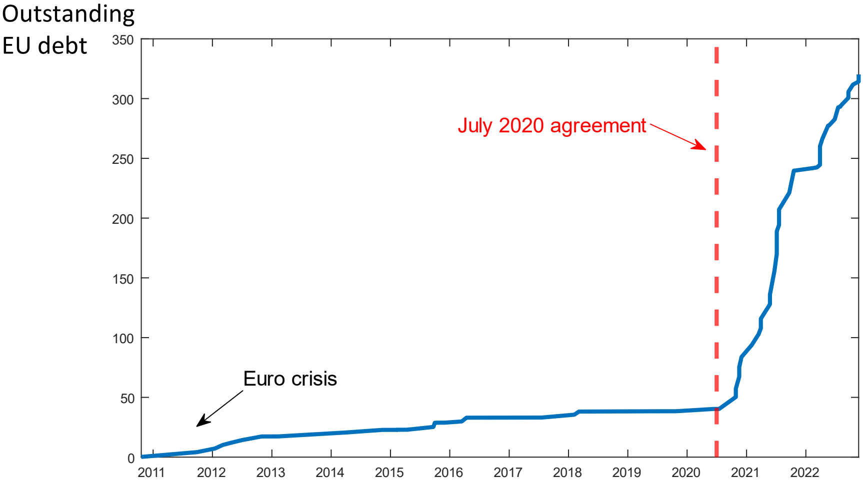
Renew Europe (April 8th) and then EU Parliament (identical) Resolution

"Calls on the European Commission to propose a massive recovery and reconstruction package for investment to support the European economy after the crisis, beyond what the European Stability Mechanism the European Investment Bank and the European Central Bank are already doing, that is part of the new multiannual financial framework (MFF); believes that such a package should be in place while the economic disruption caused by this crisis lasts; ***the necessary investment would be financed by an increased MFF, the existing EU funds and financial instruments, and recovery bonds guaranteed by the EU budget****; this package should not involve the mutualisation of existing debt and should be oriented to future investment;"*

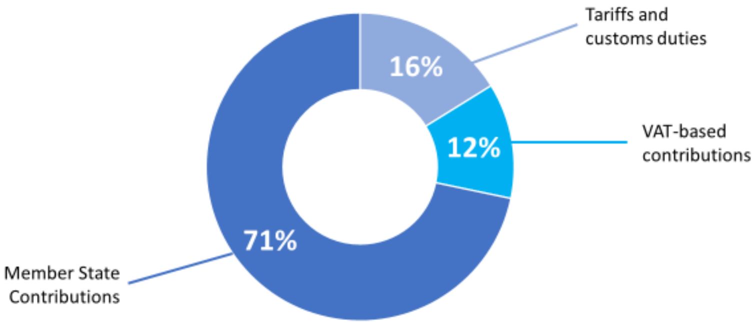
SURE: the limits of the EU budget



NextGen: a huge new-common program
Albeit one-off and exceptional



EU Budget revenues today

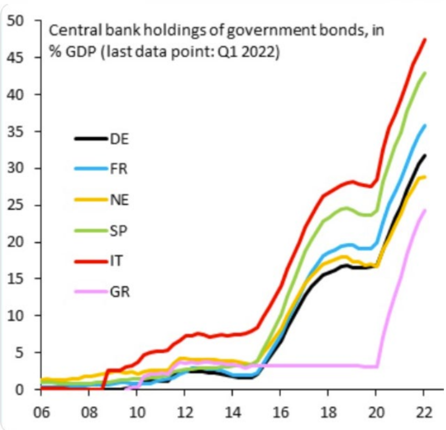


A quasi Hamiltonian moment

- Joint borrowing
  - But no joint revenues to pay for it
  - It is EU budget– but this is negotiated every 7 years
- Also, statistically missing
  - Debt does not exist as debt of member states
- Hence appearance of a new EU fiscal capacity

How do we exit?

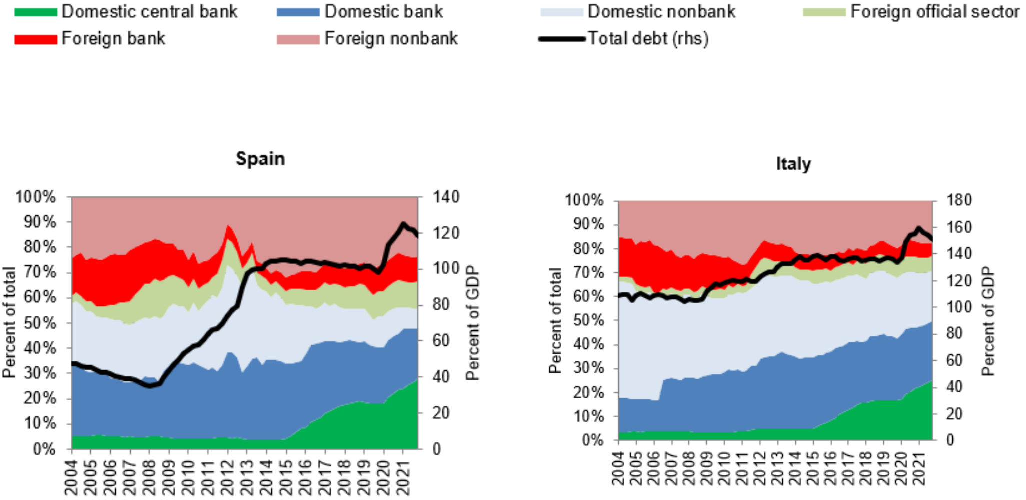
ECB: Asset purchases have mutated from monetary to quasi-fiscal policy



Source:Robin Brooks, IIF

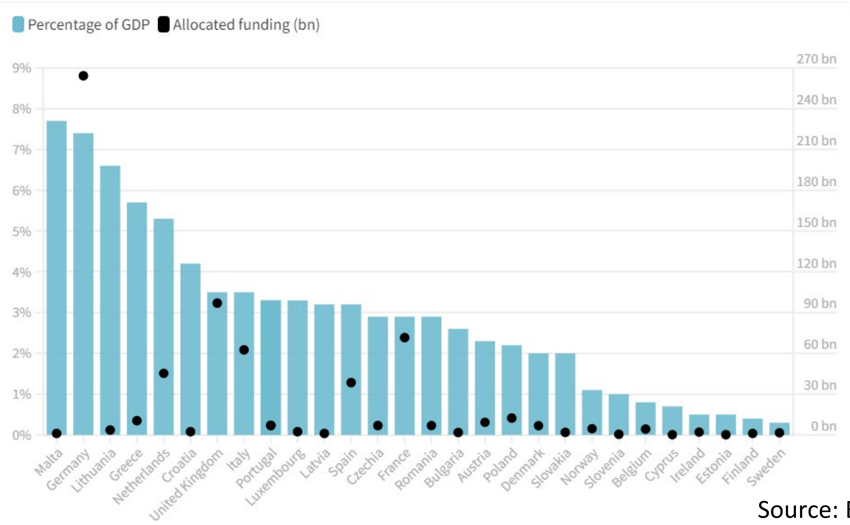
Holders of Advanced Economy Government Debt, 2004-21

(Components in percent; total in percent of GDP)



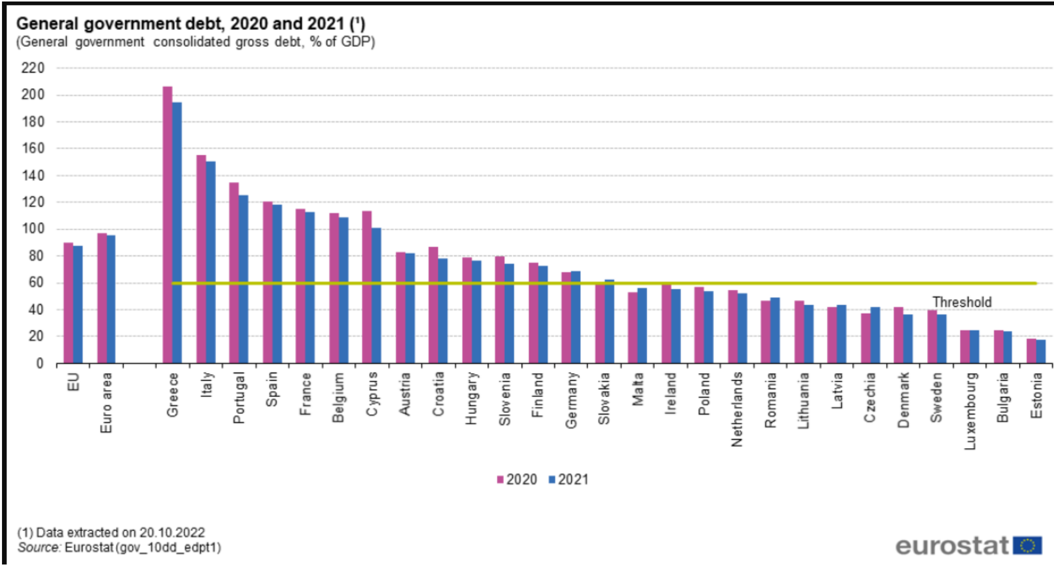
Source: IMF

Energy crisis: Free for all on state aid



Source: Bruegel

Debt


General government debt, 2020 and 2021 (¹)
(General government consolidated gross debt, % of GDP)
220
200
180
160
140
120
100
80
60
40
20
0
Threshold
EU
Euro area
Greece
Italy
Portugal
Spain
France
Belgium
Cyprus
Austria
Croatia
Hungary
Slovenia
Finland
Germany
Slovakia
Malta
Ireland
Poland
Netherlands
Romania
Lithuania
Latvia
Czechia
Denmark
Sweden
Luxembourg
Bulgaria
Estonia
2020
2021
(1) Data extracted on 20.10.2022
Source: Eurostat (gov_10dd_edpt1)
eurostat

Net Accrued pension entitlements

The accrued-to-date pension entitlements in each of the previous schemes represent the sum of the present value of all future pension payments to be received by the beneficiaries of such schemes that are accrued to that date.

The estimate of the total of the accrued pension entitlements in each scheme as at 31 December of the year n is obtained as:

$$\boldsymbol{D_n} = \sum_{s,x,t} \boldsymbol{\lambda_{n,s,x}} \times \boldsymbol{N_{s,x,t}} \times \boldsymbol{P_{s,x,t}} \times (\mathbf{1} + \boldsymbol{r})^{n-t}$$

Where:

$\boldsymbol{D_n}$ are the pension entitlements accrued as at 31 December of year n, in a given scheme.

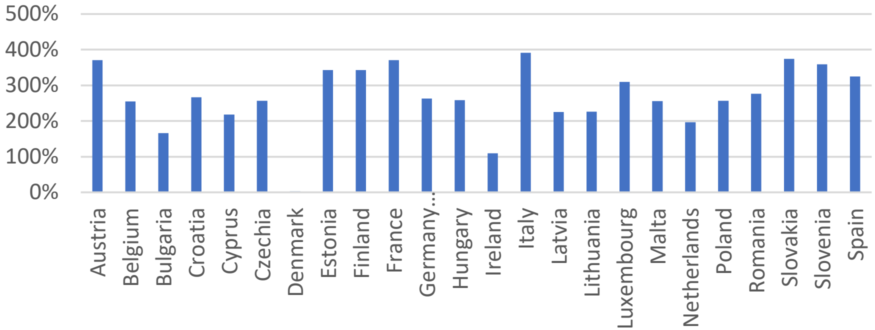
$\boldsymbol{N_{s,x,t}}$ is the number of pensions with beneficiary of sex s and age x in the year t.

$\boldsymbol{P_{s,x,t}}$ is the average amount of the pension with beneficiary of sex s and age x in the year t.

$\boldsymbol{\lambda_{n,s,x}}$ is the **accrual** factor, defined as the accrued fraction of the entitlement to receive the totality of a pension with beneficiary of sex s and age x at the end of year n. It is the quotient between the number of years contributing to the pension until the reference year and the expected total number of years contributing until the acquisition of the condition of pensioner (or disabled person, in the case of disability scheme).

$\boldsymbol{r}$ is the annual discount rate.

Accrued-to-date pension entitlements in social insurance



Eurostat, last available (2018) NASA_10_PENS1$DEFAULTVIEW

No incentives to bring fiscal position under control

ECB Rules: TPI

Transmission Protection Instrument
(July 2022)

ECB must fight inflation and ensure 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 conditionality

Can the ECB truly withdraw support?

Fiscal dominance

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

Fiscal Rules

Stability and Growth Pact

	Preventive Arm	Corrective Arm	Governance	Flexibilities
1992 Maastricht Treaty	**Deficit-to-GDP ratio < 3.0% GDP and Debt-to-GDP ratio < 60% GDP**. In case of no-compliance, **Excessive Deficit Procedure (EDP)** that can lead to financial sanctions (0.2% GDP + Variable part)			**Deficit > 3% acceptable** if only exceptional, part of government investments and progressive path
1997 Stability and Growth Pact	**Medium-term budgetary objectives**: Cyclically adjusted budgets. First, objective from surpluses to deficits up to 1.5% Then, objetive balanced budgets **Annual adjustment** 0.5% **Stability and Convergence** programmes to demonstrate MTO compliance	Schedule laid down: up to three years until fine can be imposed	The **Council had very wide powers** and could independently determine the measures to be taken	**Special circumstances to avoid EDP**: GDP fall of 2% or 0.75% + other indicators
2005 SGP Reform	**MTO** flexibilized: If MS has low debt and high potential growth **MTO deficit up to 1%** If MS has high debt and low potential growth **MTO in balance or surplus** Annual ***mean* adjustment 0.5%**			**Any negative activity growth** and below the potential level would constitute an exemption. **Deviations from MTO** and the adjustment path are permissible for structural reforms
2011 Six-Pack Reform	An **expenditure benchmark** is introduced: Compliance if expenditure growth < potential GDP growth Corrective action under Preventive arm leading to sanctions **Significant Deviation Procedure** if MS deviates 0.5 % from MTO Expenditure Benchmark	**Debt reduction benchmark**: excess over 60% must be reduced at an average **annual rate of 1/20th**	**Sanctions automatically** triggered by Commission in the Preventive and Corrective Arm, *unless* rejected by majority vote by Council	
2012 Fiscal Compact	Introduction to **national law** through constitutional amendments and automatic correction mechanism		**Commission proposals and opinions** to initiate EDP approved unless rejected by reverse majority and SDP under automatic correction mechanism	**Unusual event clause**: deviations from MTO Creation of **general escape clause** Deviation of deficit correction
2013 Two-Pack Reform	Obligation of submission of **Draft Budgetary Plans (DBP)**	States under EDP must submit **Economic Partnership Programmes (EPP)** Introduction to **national law**	Commission can request revision of DBP and can issue **autonomous recommendations** in case states could miss their EDP deadline	
2015 Communication on Flexibilities	**Annual adjustment relaxed to reflect macro conditions: from 0% to 1%**			**European investments** are not considered **Investments** accomodated in MTO **Structural** forms taken into account Accomodation of the **cycle** **Modulation** of effort over cycle

The result

Steps leading to sanctions under the corrective arm…

If excessive deficit

Commission opinion and proposal on the existence of a excessive deficit

passed by Qualified Majority Voting*

Council decision on the Existence of Excessive Deficit

Back to policy recommendations to end it

Commission recommendations for a Council recommendation

passed by Qualified Majority Voting*

Council decision on deadline to end EDP

If no adequate action

Commission proposal for decision on inadequate action

passed by Qualified Majority Voting*

Council decision on inadequate actions to end EDP

leading to sanctions

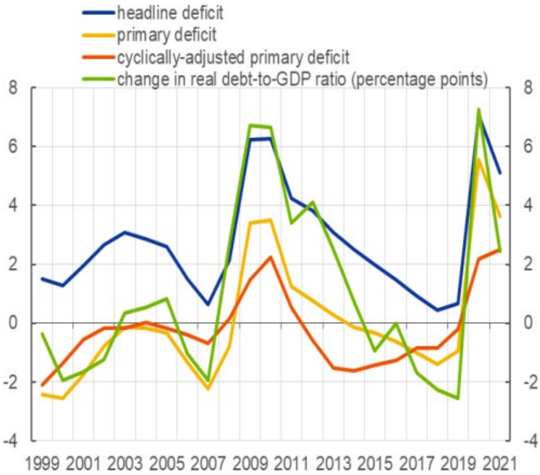
Commission recommendation for a Council decision to impose a fine

passed by Reverse Qualified Majority Voting

Council decision to impose a fine

How many fines?

(% of GDP, unless otherwise indicated)



A EU Commission proposal: reform of the rules (Nov 2022)

Currently suspended. A reform is needed- Commission proposes

- No more incremental change
- Abandon preventative arm,
- Replace with Medium term adjustment based on Debt Sustainability Analysis
  - Classify countries in 3 groups (low, medium, high risk)
  - High risk: multiannual adjustment path of primary expenditure (exclude unemployment insurance and interest payments) (currently target is cyclically adjusted deficit)
  - Path of “plausible decline” over 10 years
  - Adoption of plan by EU Council based on Commission assessment
  - Trade-off (potentially) adjustments for reforms

Key problem: political economy

- Path of “plausible decline” over 10 years
  - Starting in 4 (or 7, for medium or exception high!) years-
- Adoption of plan by EU Council based on Commission assessment
  - Can commission be trusted?
- Sanctions: reputational (appear before EU Parliament, lowered fines to make them credible)

Commission: a neutral referee or a political monitor?

NextGen EU grades

	Date plan submitted	Date Commission's assessment	(1) Comprehensive and balanced response	(2) Country-specific recommendations	(3) Growth, jobs, economic, social and institutional resilience	(4) Do no significant harm to environment	(5) Green transition	(6) Digital transition	(7) Lasting impact	(8) Monitoring and implementation	(9) Cost justification	(10) Preventing corruption, fraud and conflicts of interests	(11) Coherence
Austria	01/05/2021	6/21/2021	A	A	A	A	A	A	A	A	B	A	A
Belgium	01/05/2021	23/06/2021	A	A	A	A	A	A	A	A	B	A	B
Bulgaria	not yet submitted												
Croatia	15/05/2021	08/07/2021	A	A	A	A	A	A	A	A	B	A	A
Cyprus	17/05/2021	08/07/2021	A	A	A	A	A	A	A	A	B	A	A
Czechia	02/06/2021	19/07/2021	A	A	A	A	A	A	A	B	B	A	B
Denmark	30/04/2021	17/06/2021	A	A	A	A	A	A	A	A	B	A	A
Estonia	18/06/2021	05/10/2021	A	A	A	A	A	A	A	A	B	A	B
Finland	27/05/2021	04/10/2021	A	A	A	A	A	A	A	A	B	A	A
France	29/04/2021	23/06/2021	A	A	A	A	A	A	A	A	B	A	A
Germany	28/04/2021	22/06/2021	A	A	A	A	A	A	A	A	B	A	A
Greece	28/04/2021	17/06/2021	A	A	A	A	A	A	A	A	B	A	A
Hungary	12/05/2021												
Ireland	28/05/2021	16/07/2021	A	A	A	A	A	A	A	A	B	A	A
Italy	01/05/2021	22/06/2021	A	A	A	A	A	A	A	A	B	A	A
Latvia	30/04/2021	22/06/2021	A	A	A	A	A	A	A	A	B	A	A
Lithuania	15/05/2021	02/07/2021	A	A	A	A	A	A	A	A	B	A	A
Luxembourg	30/04/2021	18/06/2021	A	A	A	A	A	A	A	A	B	A	A
Malta	13/07/2021	16/09/2021	A	A	A	A	A	A	A	A	B	A	A
Netherlands	not yet submitted												
Poland	03/05/2021												
Portugal	22/04/2021	16/06/2021	A	A	A	A	A	A	A	A	B	A	A
Romania	31/05/2021	27/09/2021	A	A	A	A	A	A	A	A	B	A	A
Slovakia	29/04/2021	21/06/2021	A	A	A	A	A	A	A	A	B	A	A
Slovenia	01/05/2021	01/07/2021	A	A	A	A	A	A	A	A	B	A	A
Spain	30/04/2021	16/06/2021	A	A	A	A	A	A	A	A	B	A	A
Sweden	28/05/2021												

What next?

How is debt overhang solved?

Pay:

- Reforms leading to growth (g>>r): take on vested interest
- Consolidation (austerity): but hurt taxpayers and general public

Not pay:

- Default: the more the CB holds the debt, the less it works – requires larger haircut on private holders (consolidated budget perspective)
- Inflation: Also since QE shortened consolidated debt duration a little bit of inflation will not help
  - but short maturities require more inflation to get rid of debt

QE works against interest rate increases

Balance sheet has €4.5 tn excess reserves or excluding TLROs (eliminate remuneration)= €3tn of excess reserves

Market expects terminal rate at 3%

0.03% x €3tn means ECB pays banks €90bn/year

For debt maturities 5 years on, income on the other side of balance sheet locked

Every increase in rates increases income of banks and increases liquidity

an income effect undoing the price effect of interest rate increases

Risk that ECB is trapped

- Higher policy rates may eventually backfire via R-G
- Without QT, ECB is inviting fiscal dominance
  - Next crisis will happen before balance sheet is normalized- no buffers built
  - 19 countries/not one counterparty
- And then inflation is the only answer (whether sustained or increasing)

Thanks!

Legal Engineering

For the first time, borrowing for spending (not back-to-back lending)

How to go around balance budget (310(3))requirement?

- In the past:
  - Comm rescue fund- EFSM (back-to-back lending) was capped at €60 bn in 2010 – limited by the headroom available between the approved expenditure by the legislators and the own resources ceiling
  - Further assistance required the establishment of the EFSF –and later on the ESM– outside the EU legal framework- off budget.
- Now: Need to amend the ORD (unanimity- all national parliaments) in 2020 to make the NGEU fit inside headroom and issue 750bn common debt
  - If no other new own resources are introduced by the time the repayment of the debt is due, Member States will have the obligation to step in