

ECB's Pandemic Emergency Purchasing Program (PEPP)

PRINCETON
UNIVERSITY



Webinar



Philip Lane
Chief Economist
European Central Bank)

Introductory
remarks by

Markus
Brunnermeier

PAST AND FUTURE SPEAKERS

- Last



Veronica Guerrieri

“Can supply shocks cause demand shortages”

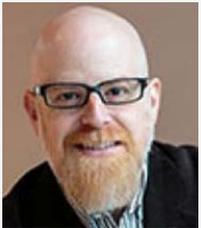
- Today



Philip Lane

“ECB’s Pandemic Emergency Purchase Program”

- Next webinars

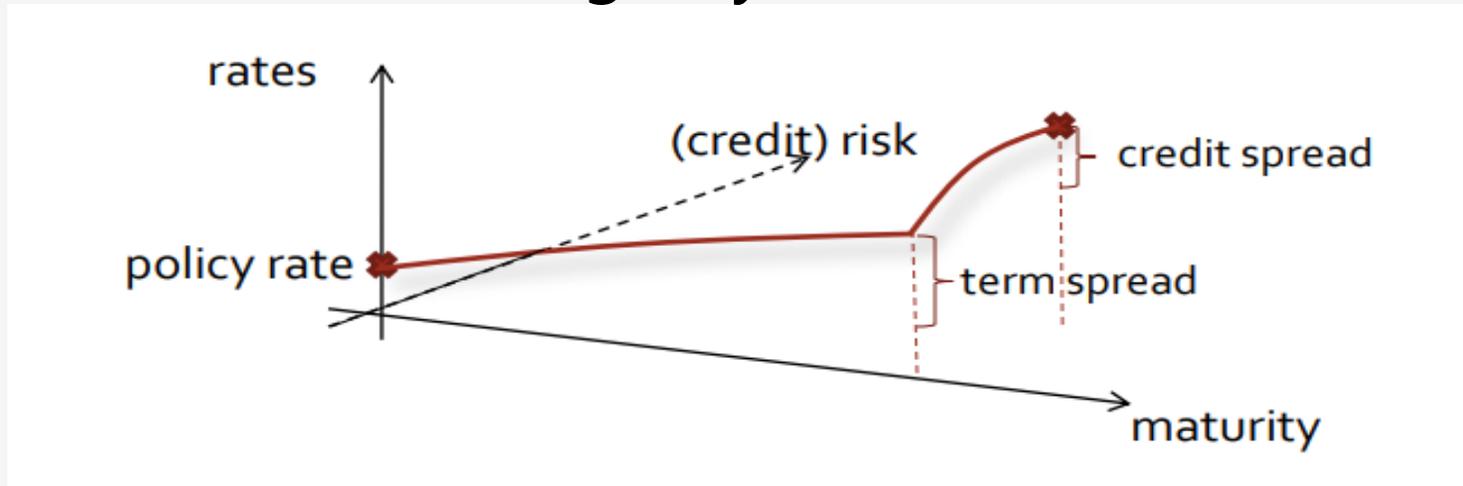


Erik Hurst

“The US Labor Market during COVID:
Real Time Evidence from Payroll Data”

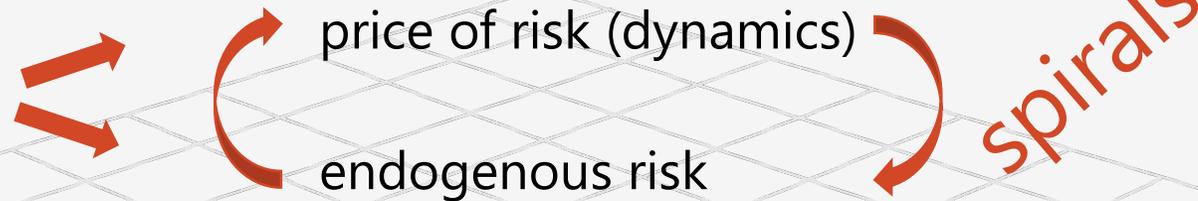
MONETARY POLICY – MORE PRICES THAN RISK FREE RATE

- Risk free rate e.g. Taylor Rule



- Risk premium
= price of risk * (exogenous risk + endogenous risk)

- Redistribute risk



- Affects spreads: term + credit spread

IS SOVEREIGN DEBT DIFFERENT FROM PRIVATE DEBT?

- Sovereign debt often serves as safe asset

- Asset Price = $E[\text{PV}(\text{cash flows})] + E[\text{PV}(\text{service flows})]$

- Service flows/convenience yield

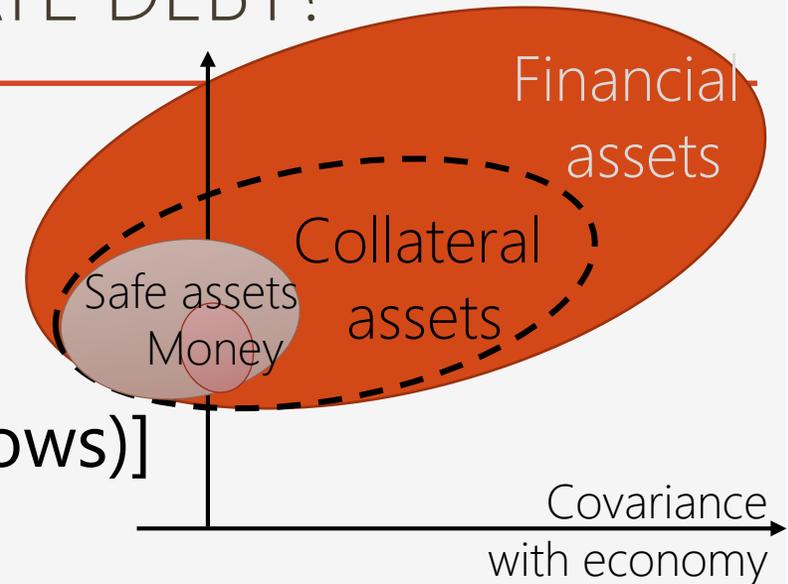
1. Collateral

2. Safe asset [good friend analogy]

- When one needs funds, one can sell at stable price ... since others buy
- Partial insurance through retrading - market liquidity!

$$r^f + \text{risk premium} < g \Rightarrow \text{Debt/GDP ratio} \downarrow$$

3. Money (medium of exchange)



Can burst like a bubble

multiple equilibria

CURRENCY UNION CHALLENGE

- One Currency
- Asymmetrically supplied safe asset
 - Some government bonds might lose safe asset status (“wobbly”)



CROSS-BORDER FLIGHT TO SAFETY

- **Challenge:** Asymmetric supply of safe asset



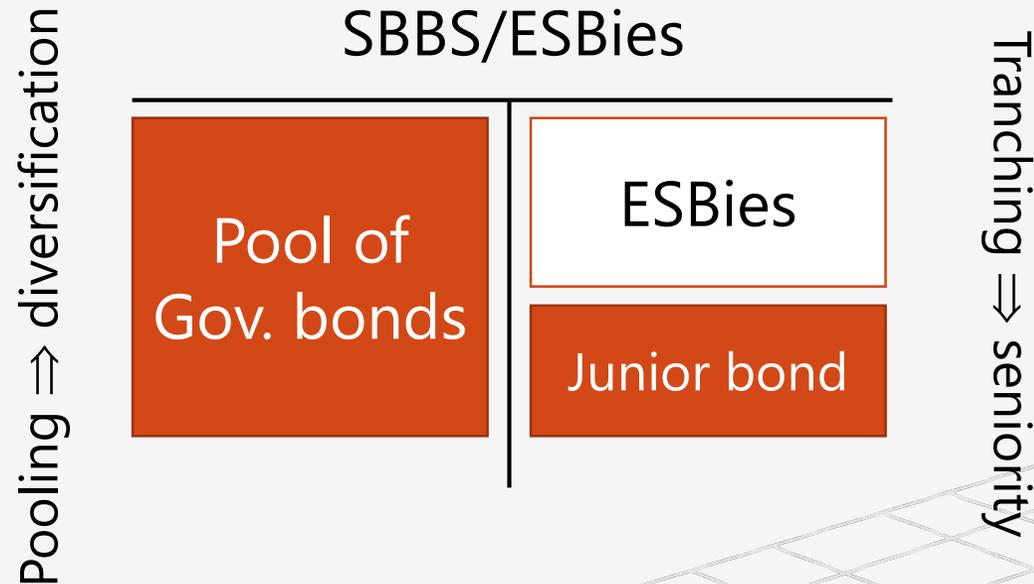
- Safe (low-risk) asset supplied by few euro countries
- Flight-to-safety amplify to cross-border flows

- Price of German debt \uparrow
- Price of Italian/Spanish/Greek debt \downarrow

SAFE ASSET WITHOUT A PASSPORT

■ SBBS/ESBies

- Contractual subordination
- Diversification



■ Proposed by Euronomics (2011)

- Brunnermeier, Garicano, Lane, Pagano, Reis, Santos, Van Nieuwerburgh & Vayanos
- ESRB report, Lane, Langfield,...

■ E-Bonds

- European agency buys up national bonds and issues bonds
- Agency enjoys seniority like the IMF
- Remaining outstanding national bonds become junior (not pari-pasu)

■ = like national tranching

- (No pooling) ... many junior national bonds.

SBBS: SAFE ASSET WITHOUT A PASSPORT - ANALOGY

- Address root cause: Safe asset is supplied asymmetrically

- Analogy

- Two lines of defense
- Stronger inner circle (keep)

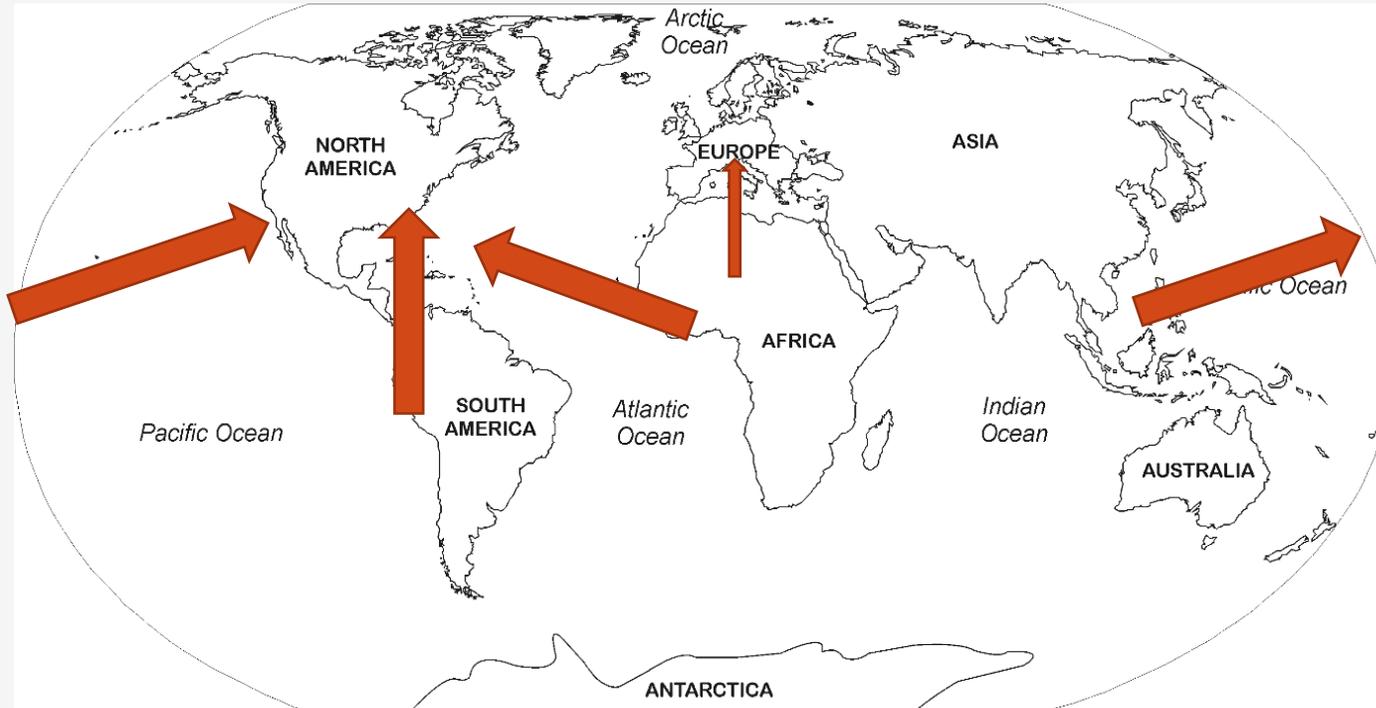


- SELF-STABILIZING Financial Architecture

GLOSBIES – RECHANNELING APPROACH

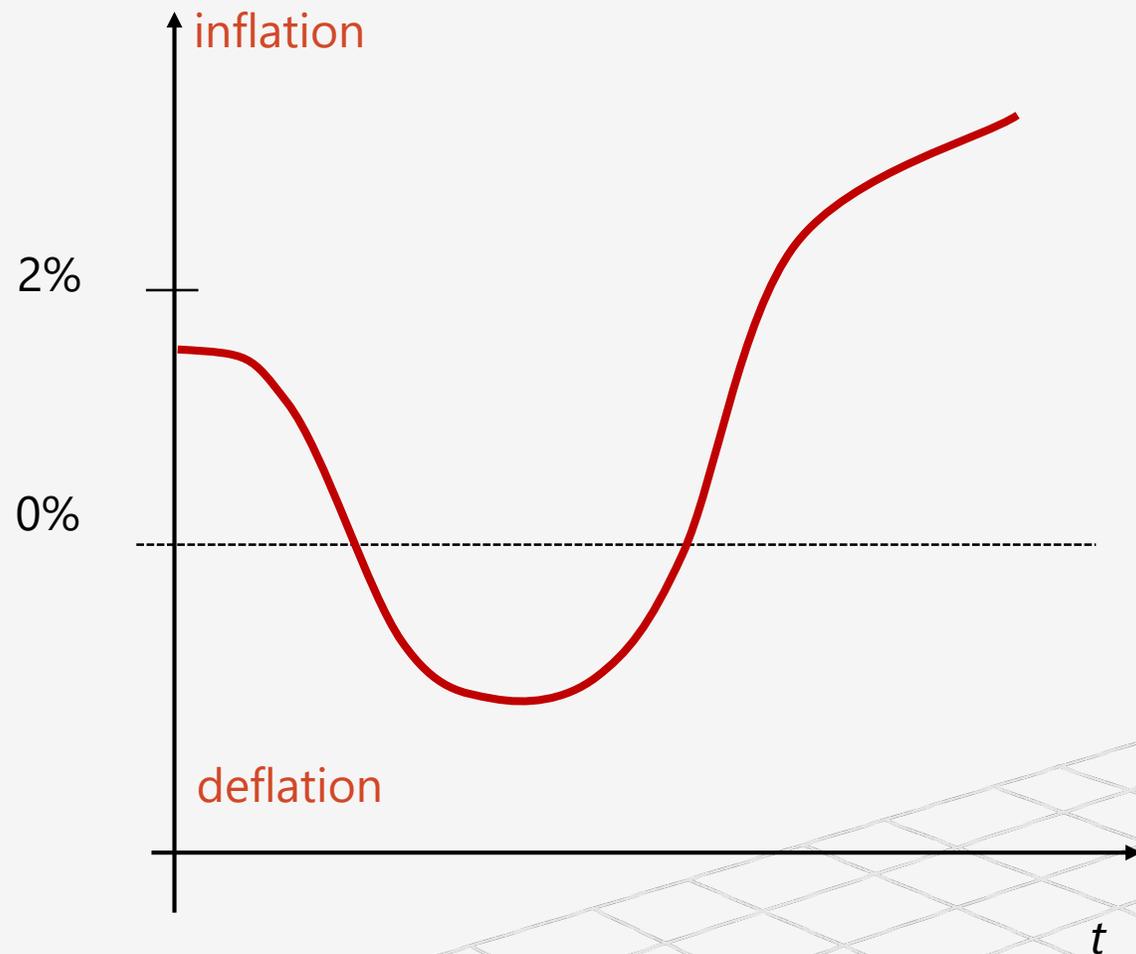
- Same idea but for EMDE
 - “Safe asset for and from emerging market economies”
Brunnermeier & Huang 2018, + Merkel, & Sannikov (2020)

GloSBies



- See also Andres Velasco (2020), Mauricio Cardenas (2020)

WORRY: INFLATION WHIPSAW



■ Inflation/deflation pressures

- Forced savings
- Risk
- + capital misallocation
- + (re)-distribution
- + government commitment
- + Pent-up demand
- /+ Lending policy
- + Margin for large firms
- Weak financial sector

Brunnermeier, Merkel, Payne, Sannikov (2020)

CENTRAL NEEDS



- Accelerator
- Brakes
 - CB independence
avoid fiscal dominance
 - Prudential regulation
avoid financial dominance
 - Sell ECB bonds, if necessary,
pooled and in tranches
(establish SBBS legal framework)
 - Prevent banks from paying
out dividends

POLL

1. Wobbly safe asset status and central bank
 - a. Relying on central bank **activism** is ok
 - b. **Self-stabilizing** financial architecture (with **SBBS**) would be preferable

2. Central should
 - a. focus on deflation pressures in the short-run but be **wary of** the possibility of a **inflation whipsaw**
 - b. worry only about inflation only after we exceeded the inflation target for a while

3. New monetary framework?
 - a. The focus on **interest rate rules** is still of first order importance
 - b. Including (term/credit) **spreads** is sufficient
 - c. One has to take asset purchase programs (**quantities**) and its side effects explicitly into account



EUROPEAN CENTRAL BANK

EUROSYSTEM

Understanding the pandemic emergency purchase programme

(For further discussion on this topic, see my post on the ECB blog)

Princeton BCF Covid-19 Webinar Series



22 June 2020

Philip R. Lane
Member of the Executive Board

Pandemic emergency purchase programme (PEPP)

- Announced 18 March 2020
- Monetary policy stance
 - (in combination with other elements)
- Market stabilisation
 - general role (similar in other monetary regimes)
 - special nature of a monetary union
- Also: revised liquidity operations; collateral easing measures; supervisory measures

Market stabilisation: general role

- Sharp downgrade in outlook; elevated uncertainty
- Portfolio rebalancing scramble: more liquidity; less leverage
- Overshooting risks: liquidity spirals (interaction of market liquidity and funding liquidity); fire sales; lack of market-makers
- Stabilising role of central banks (liquidity provision to counterparties; purchases in sovereign and private securities markets)

Market stabilisation: euro area context

- Multi-country monetary union
- Heterogeneity in multiple dimensions:
 - Fundamentals: macroeconomic indicators, public finances, ...
 - Non-fundamental: investor beliefs, liquidity, ...

time-varying

Pandemic emergency

- Covid-19 as an exogenous shock
- Mostly **common** fundamental effects:
 - Blanket lockdowns
 - Generally elevated death rates
- **Asymmetric** non-fundamental effects:
 - Flight to safety in February/March
 - Asset prices: inversely correlated sovereign bond yields
 - Quantities: historically large cross-border financial flows
 - Heightened market segmentation

*unwarranted
tightening*

Multiple equilibria

Without intervention:

- Endogenous risk amplifies exogenous shock
 - Non-fundamental effects can “select” bad equilibrium

With intervention:

- Eliminate excess (endogenous) risk
 - Well-engineered interventions can offset non-fundamental effects; restore good equilibrium

→ Central banks have an essential stabilisation role

Central banking in a pandemic

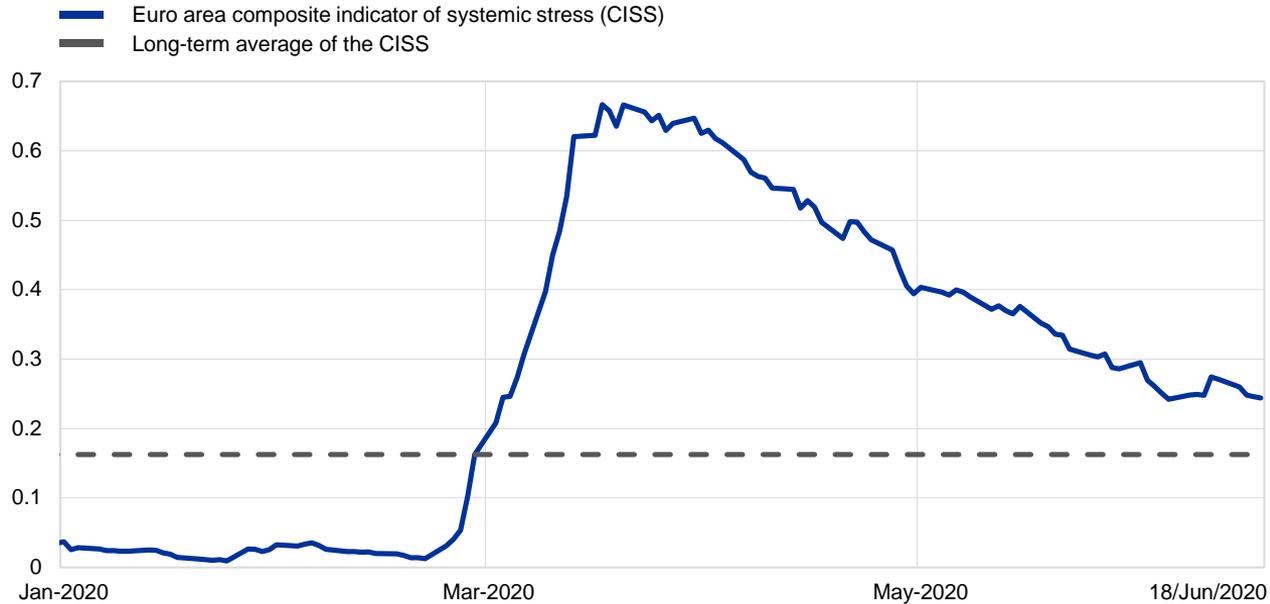
Krishnamurthy, Nagel and
Vissing-Jorgensen (2018),
Review of Finance

- Lessons from recent history
 - Non-standard policies can be effective in offsetting non-fundamental effects
- Proportionality
 - Extensive evidence that adequate market stabilisation requires large-scale intervention
- Interaction with other policies
 - Fiscal policy and EU framework
 - Common safe asset
 - Capital markets union

} “Recovery Fund”

Euro area composite indicator of systemic stress (CISS)

(percentages per annum)

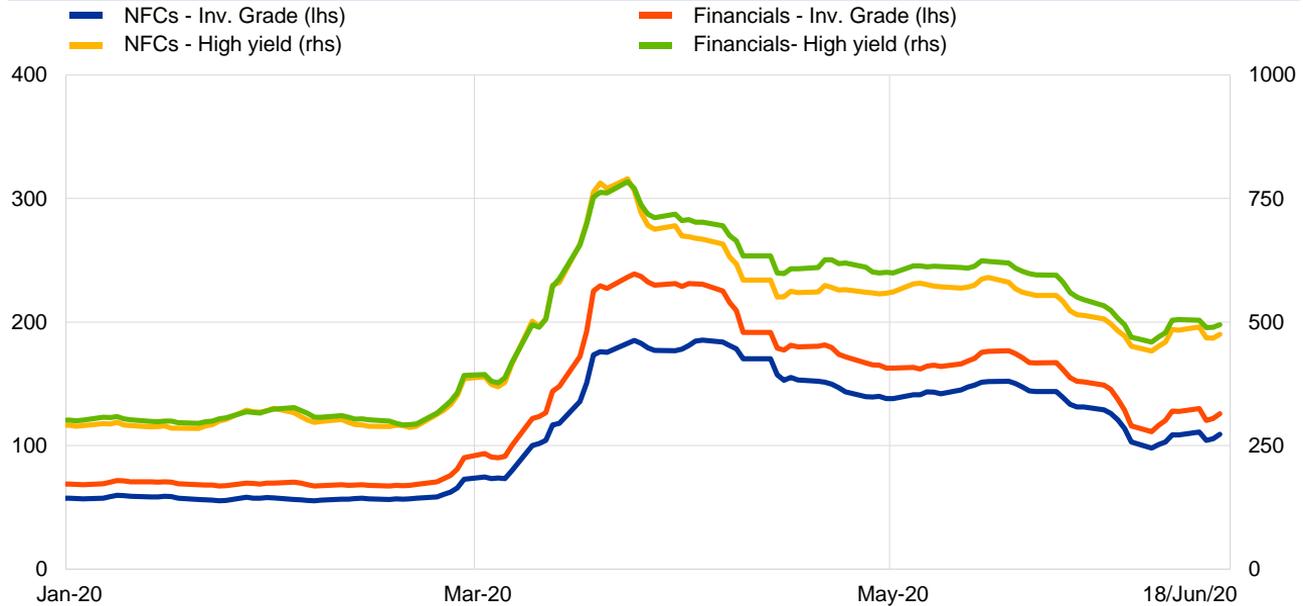


Sources: ECB, Refinitiv, own calculations and Hollo, D., Kremer, M. and Lo Duca, M. (2012), "CISS – A Composite Indicator of Systemic Stress in the Financial System", *Working Paper Series*, No 1426, ECB, March.

Notes: The long-term average is calculated over the period 1999-2020. The latest observations are for 18 June 2020.

Corporate bond spreads in the euro area

(basis points)



Source: Markit iBoxx.

Note: The latest observations are for 18 June 2020.

Euro Stoxx index

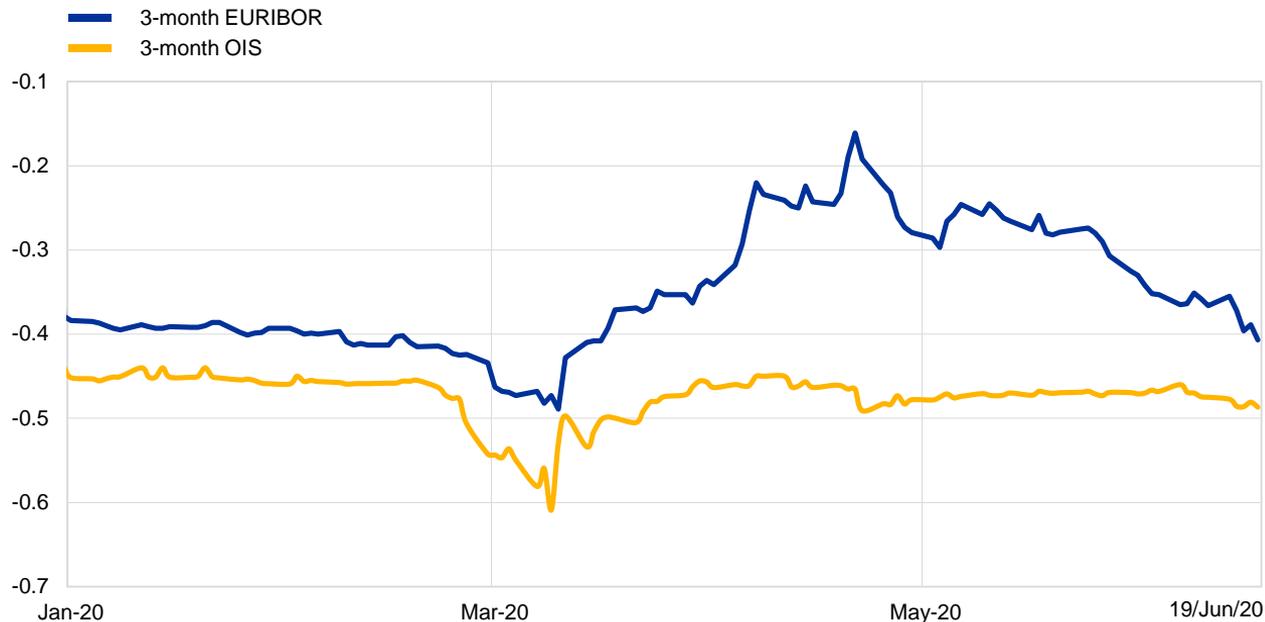
(rebased to 100 on 1 January 2020)



Sources: Bloomberg and ECB calculations.

Note: The latest observations are for 19 June 2020.

3-month EURIBOR and 3-month OIS (percentages per annum)

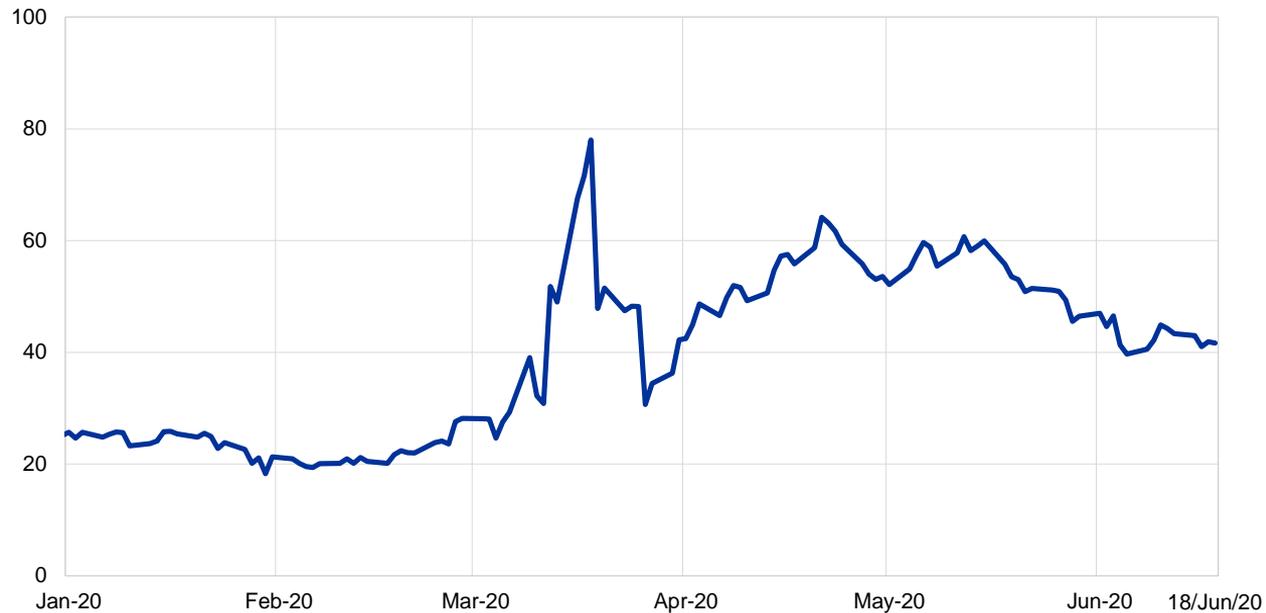


Sources: Bloomberg and ECB calculations.

Note: The latest observations are for 19 June 2020.

10-year euro area GDP-weighted sovereign yield spread over 10-year OIS rate

(basis points)

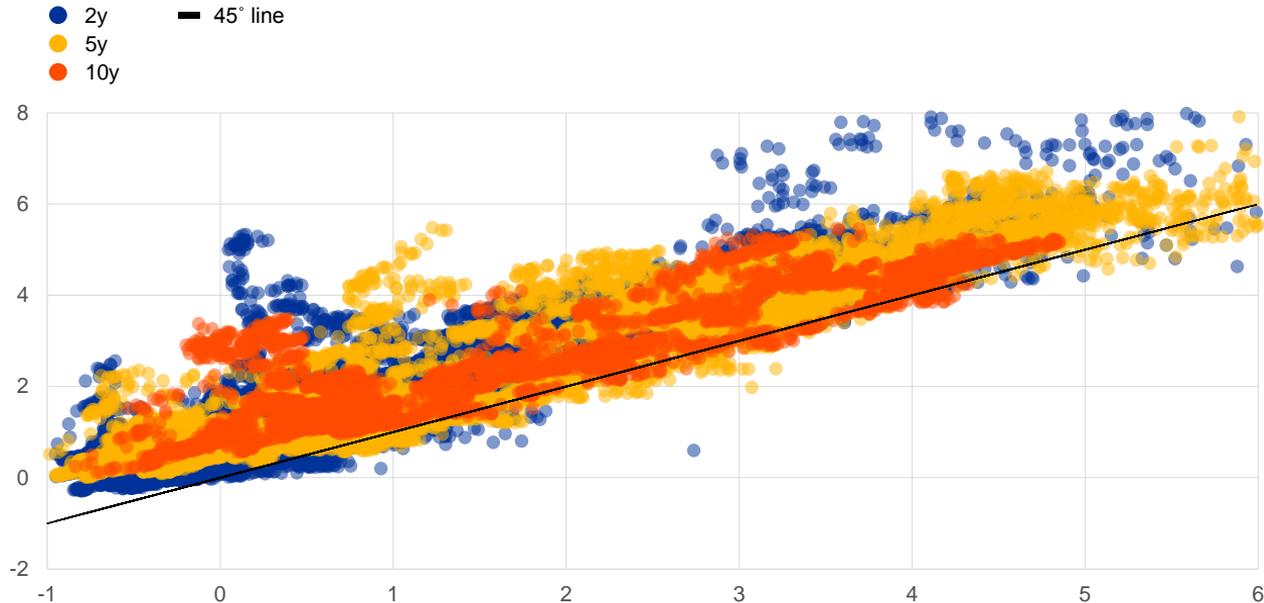


Sources: Refinitiv and ECB calculations.

Note: The spread is the difference between the euro area GDP-weighted 10-year sovereign yield and the 10-year OIS rate.

Bank and sovereign bond yields

(daily; percentages per annum; x-axis: sovereign yields; y-axis: bank bond yields)

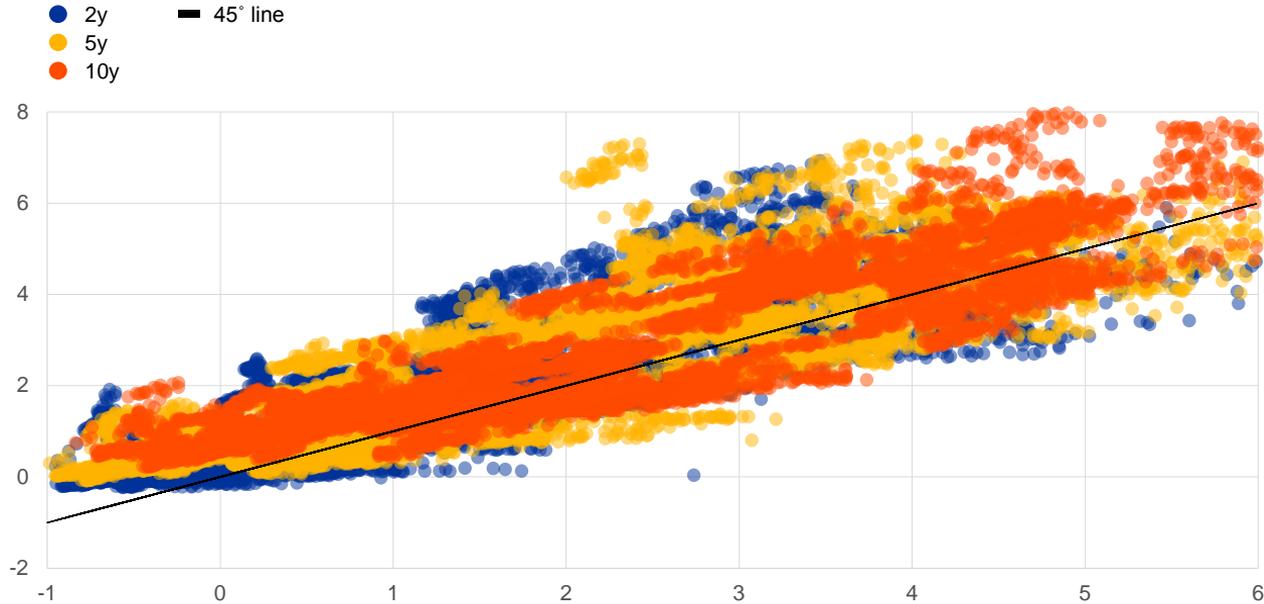


Sources: Markit iBoxx, ECB and ECB calculations.

Notes: The chart reports the correlation between (the level of) bank bond yields and sovereign yields. Each dot corresponds to a daily recording of the average yield for senior unsecured bonds (IG) issued by banks with a given maturity in a given country and the sovereign yields with the same maturity for the same day in the same country. The latest observations are for 18 June 2020.

Corporate and sovereign bond yields

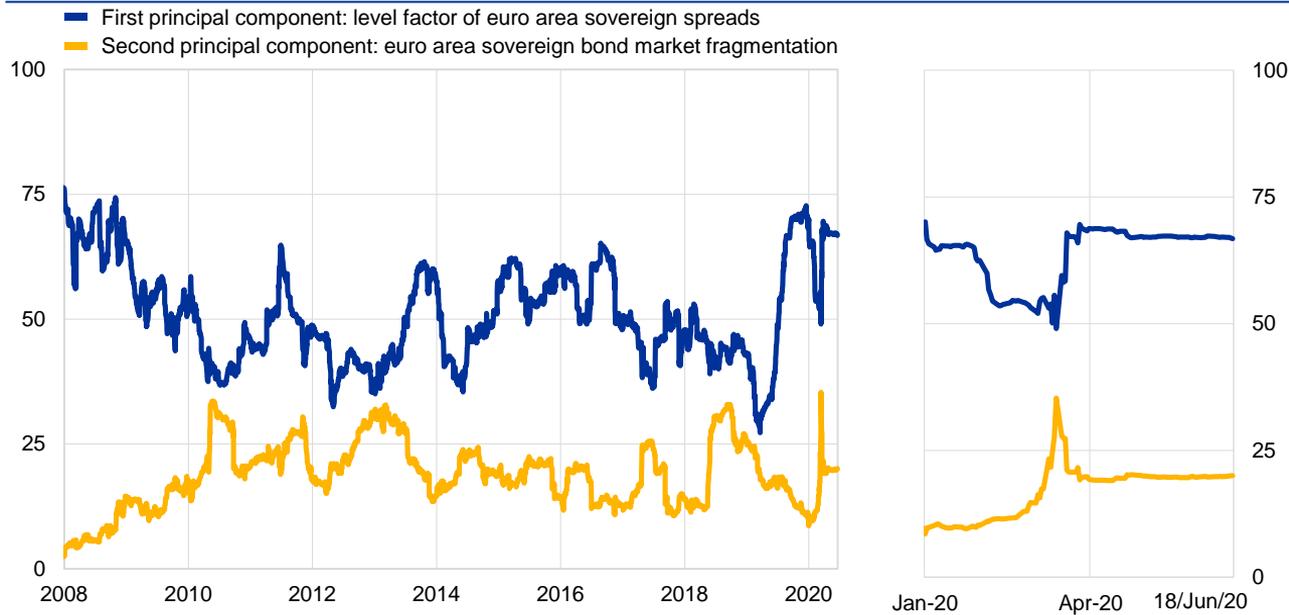
(daily; percentages per annum; x-axis: sovereign yields; y-axis: corporate bond yields)



Sources: Markit iBoxx, ECB and ECB calculations.

Notes: The chart reports the correlation between (the level of) corporate bond yields and sovereign yields. Each dot corresponds to a daily recording of the average yield for senior unsecured bonds (IG) with a given maturity issued by non-financial corporates in a given country and the sovereign yields with the same maturity for the same day in the same country. The latest observations are for 18 June 2020.

Average R-squared of 10-year sovereign spreads on the first two principal components

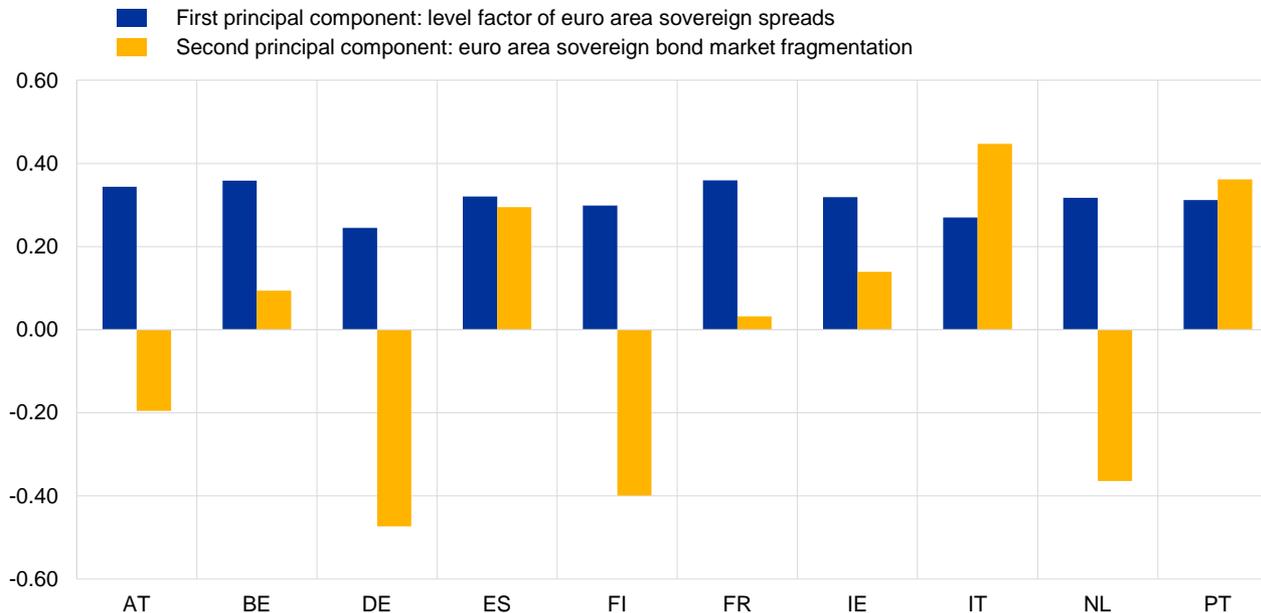


Sources: Refinitiv and ECB calculations.

Notes: The regressions are in first differences. The length of the rolling windows is 99 days, which corresponds to four-and-a-half months (of 22 trading days each month) of data, so that the last estimated R-squared covers the coronavirus crisis period from mid-January to the end of May. The average R-squared reported for the second principal component (PC) is the average difference between the R-squared of the regression on the first PC and the R-squared of regressions on the first and second PCs.

Loadings of standardised sovereign spreads on the first two principal components

(first differences)

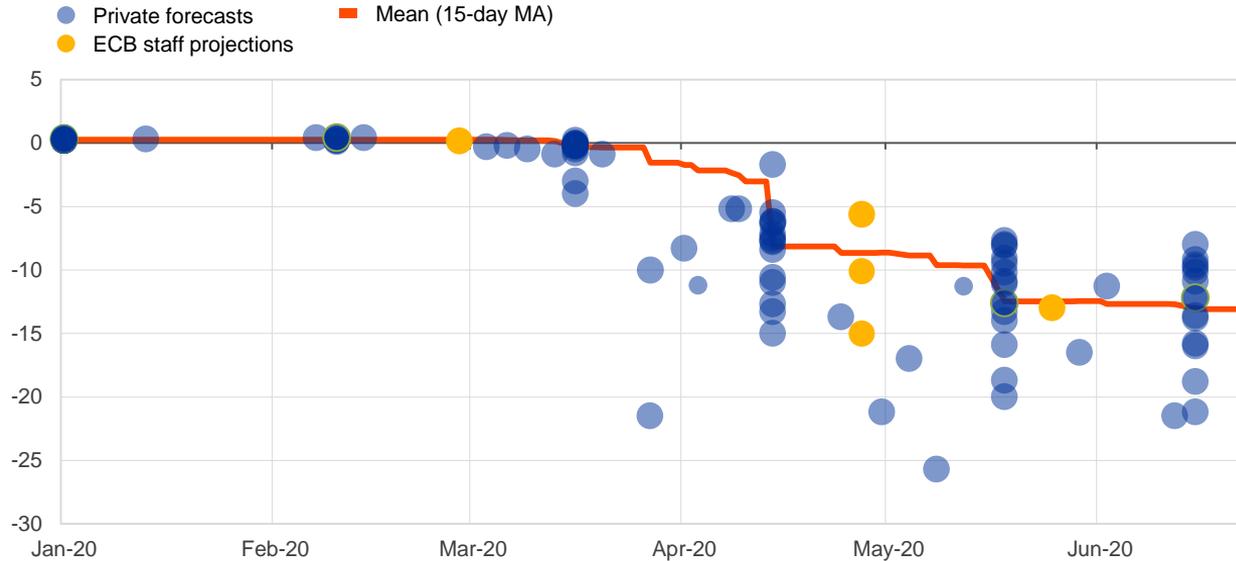


Sources: Refinitiv and ECB calculations.

Notes: The regressions are in first differences. The length of the rolling windows is 99 days, which corresponds to four-and-a-half months (of 22 trading days each month) of data, so that the last estimated R-squared covers the coronavirus crisis period from mid-January to the end of May. The average R-squared reported for the second principal component (PC) is the average difference between the R-squared of the regression on the first PC and the R-squared of regressions on the first and second PCs. The latest observations are for 18 June 2020.

GDP projections for Q2 2020

(quarter-on-quarter percentage changes)



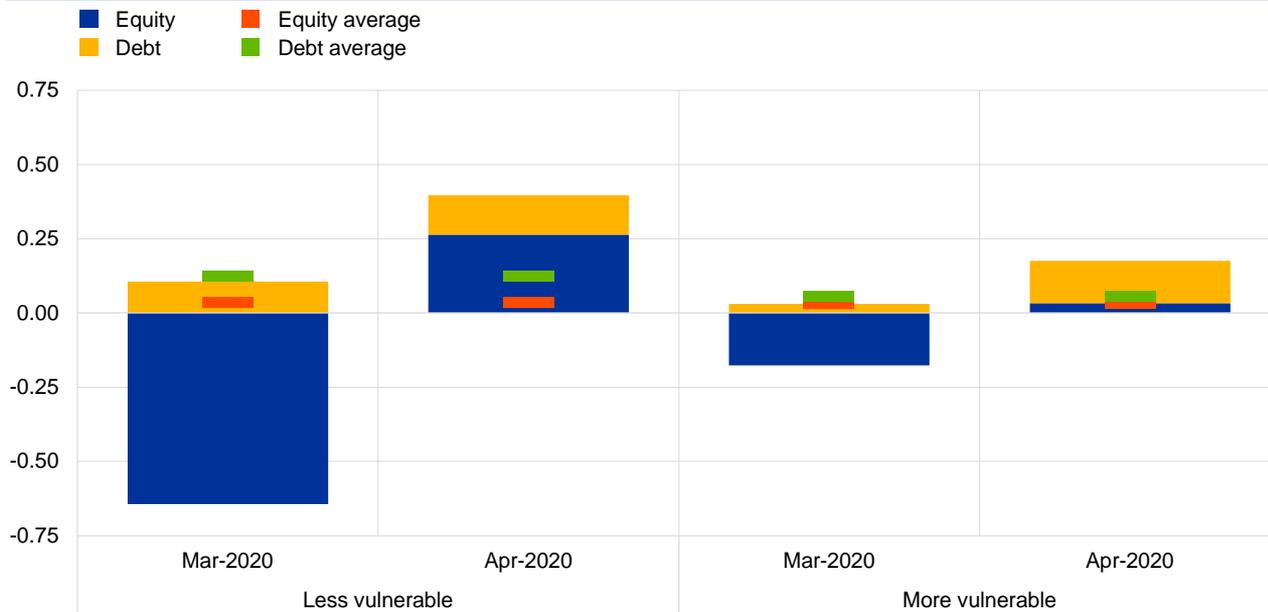
Sources: Bloomberg and ECB staff calculations.

Note: Mean of forecasts revised on the last business days.

Latest update: Dates for the ECB/Eurosystem staff macroeconomic projections exercise refer to the cut-off dates rather than the publication dates: 28 February 2020 for the March exercise; 27 April for the ECB scenarios published on 1 May 2020 (see Battistini, N. and Stoevsky, G. (2020), "Alternative scenarios for the impact of the COVID-19 pandemic on economic activity in the euro area", *Economic Bulletin*, Issue 3, European Central Bank); and 25 May for the June exercise.

Cross-border portfolio investment flows by country group – assets

(monthly flows in % of euro area GDP)

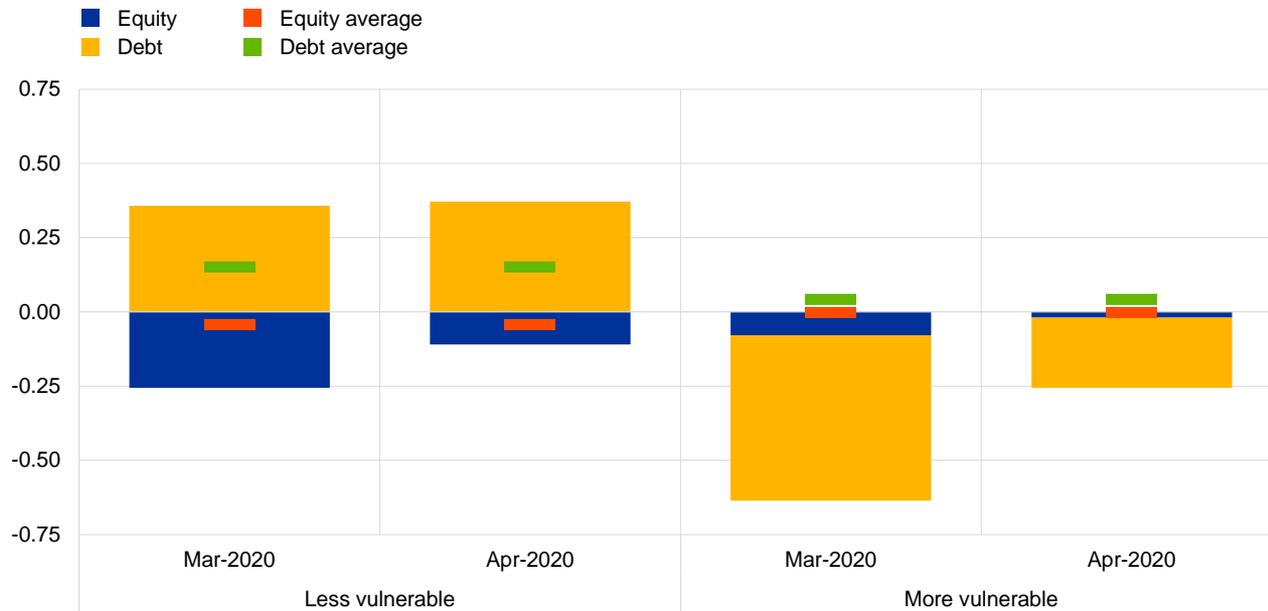


Sources: ECB and Eurostat.

Notes: "Less vulnerable" countries are Austria, Belgium, Finland, France, Germany and the Netherlands; "more vulnerable" countries are Italy, Greece, Portugal and Spain. First estimates/provisional data for Spain regarding April 2020. Data recorded on the basis of the Sixth Edition of the IMF Balance of Payments Manual (BPM6). The latest observations are for April 2020.

Cross-border portfolio investment flows by country group – liabilities

(monthly flows in % of euro area GDP)

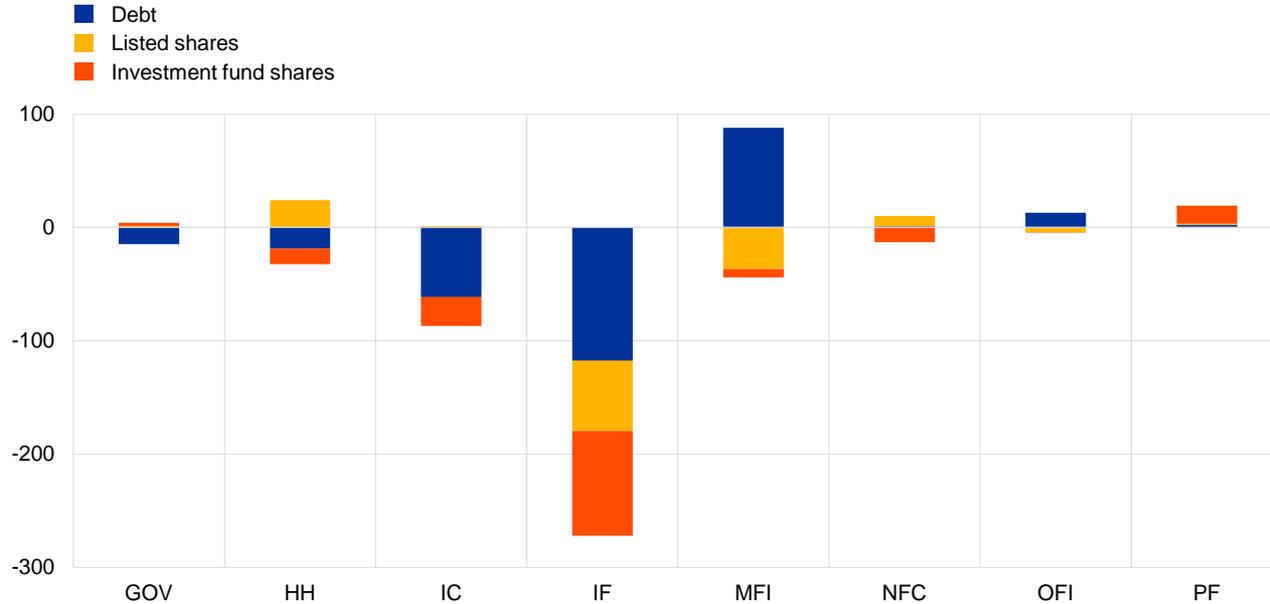


Sources: ECB and Eurostat.

Notes: "Less vulnerable" countries are Austria, Belgium, Finland, France, Germany and the Netherlands; "more vulnerable" countries are Italy, Greece, Portugal and Spain. First estimates/provisional data for Spain regarding April 2020. Data recorded on the basis of the Sixth Edition of the IMF Balance of Payments Manual (BPM6). The latest observations are for April 2020.

Portfolio asset flows by sector in Q1 2020 – euro area

(quarterly flows in EUR billions)

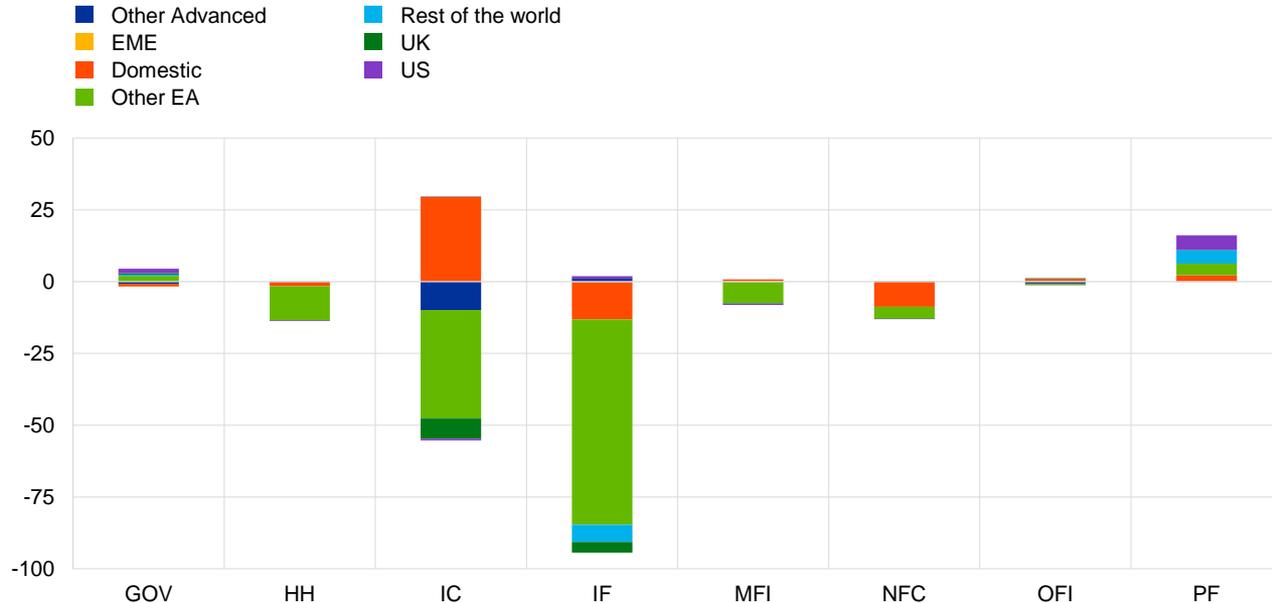


Source: ECB securities holdings statistics.

Notes: Data for Q1 2020 are preliminary and do not include Italian insurance companies. GOV refers to public institutions; HH refers to households; IC refers to insurance corporations; IF refers to investment funds; MFI refers to monetary financial institutions; OFI refers to other financial institutions; PF refers to pension funds.

Portfolio asset flows (investment fund shares) by sector and country of issuance in Q1 2020

(quarterly flows in EUR billions)

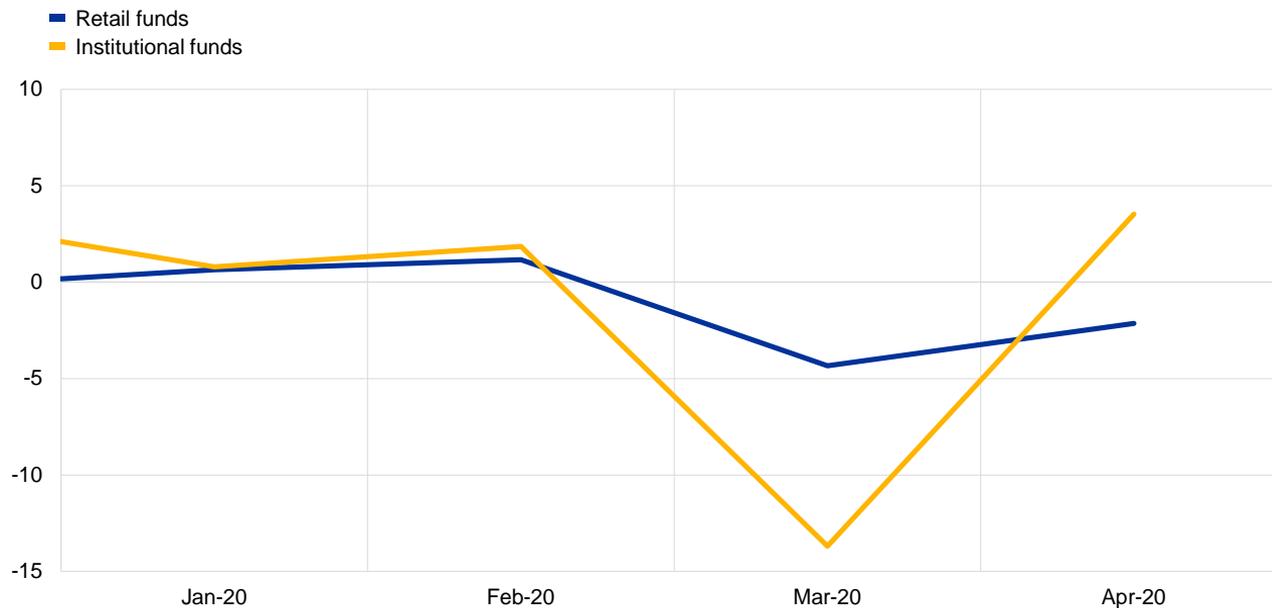


Source: ECB securities holdings statistics.

Notes: Data for Q1 2020 are preliminary and do not include Italian insurance companies. GOV refers to public institutions; HH refers to households; IC refers to insurance corporations; IF refers to investment funds; MFI refers to monetary financial institutions; OFI refers to other financial institutions; PF refers to pension funds. "Domestic" are flows where the holder country is the same as the issuer country; "Other EA" are euro area flows excluding domestic flows.

Flows into investment funds domiciled in Europe excluding the United Kingdom

(monthly flows in EUR billions)

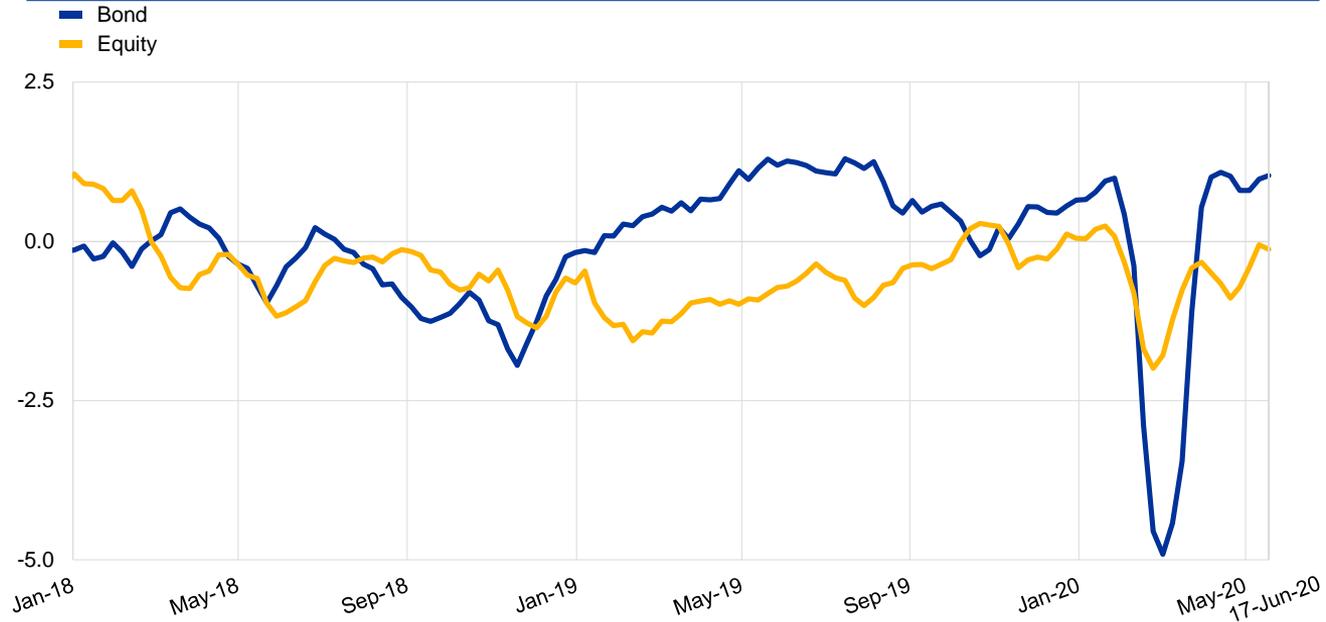


Source: EPFR.

Note: The latest observations are for April 2020.

Euro area investment fund flows – assets

(5-week cumulated flows in % of estimated stocks)

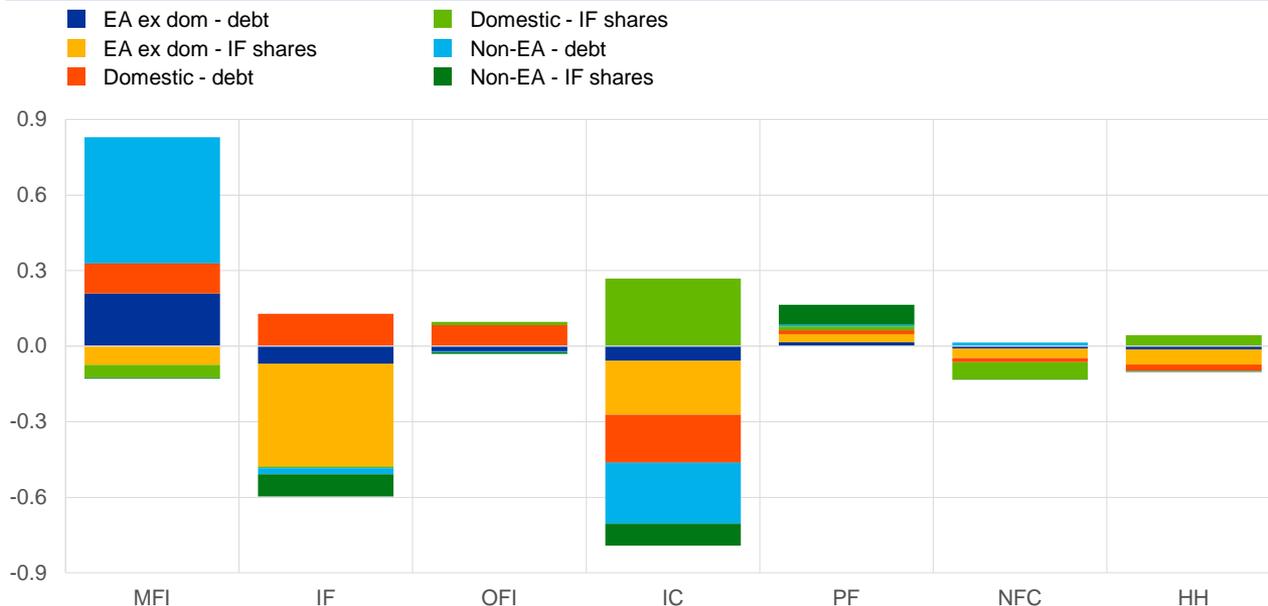


Sources: EPFR and ECB staff calculations.

Notes: Country flows are flows of global investment funds to securities issued in the following euro area countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal and Spain. Fund flows are investor flows to investment funds located in Europe except the United Kingdom. The latest observations are for the week ending on 17 June.

Portfolio flows by sector in Q1 2020 – less vulnerable countries

(quarterly flows in % of euro area GDP)

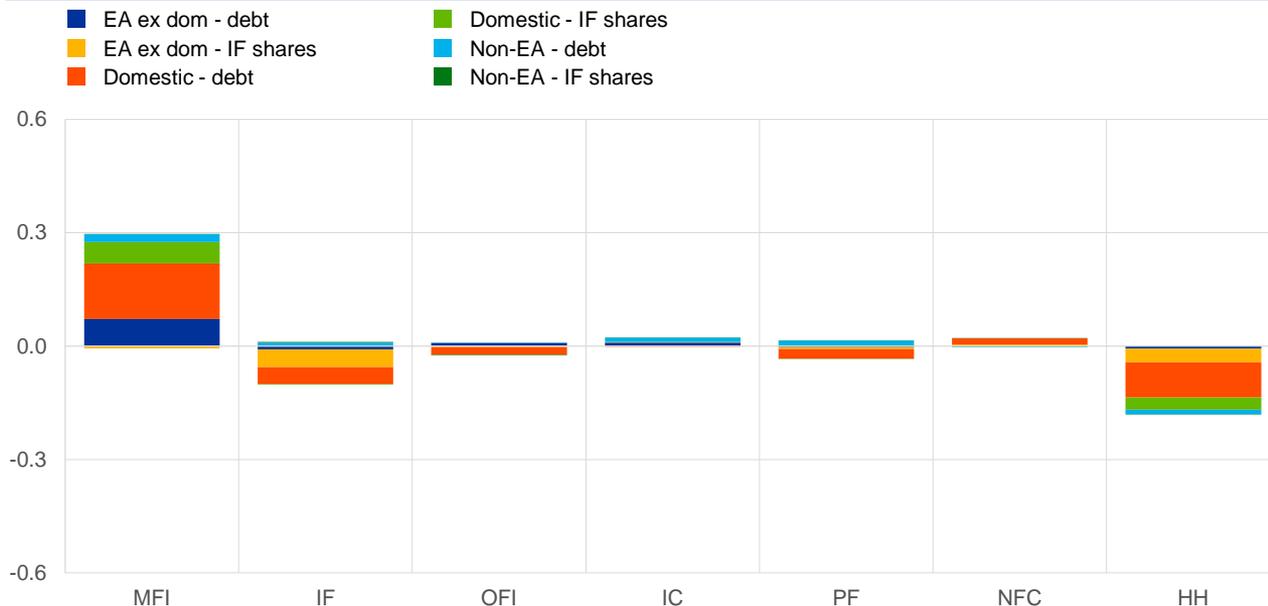


Sources: ECB securities holdings statistics and Eurostat.

Notes: "Less vulnerable" countries are Austria, Belgium, Finland, France, Germany and the Netherlands. Data for Q1 2020 are preliminary and do not include Italian insurance companies. HH refers to households; IC refers to insurance corporations; IF refers to investment funds; MFI refers to monetary financial institutions; OFI refers to other financial institutions; PF refers to pension funds. "Domestic" are flows where the holder country is the same as the issuer country; "EA ex dom" are euro area flows excluding domestic flows; "Non-EA" are non-euro area flows.

Portfolio flows by sector in Q1 2020 – more vulnerable countries

(quarterly flows in % of euro area GDP)

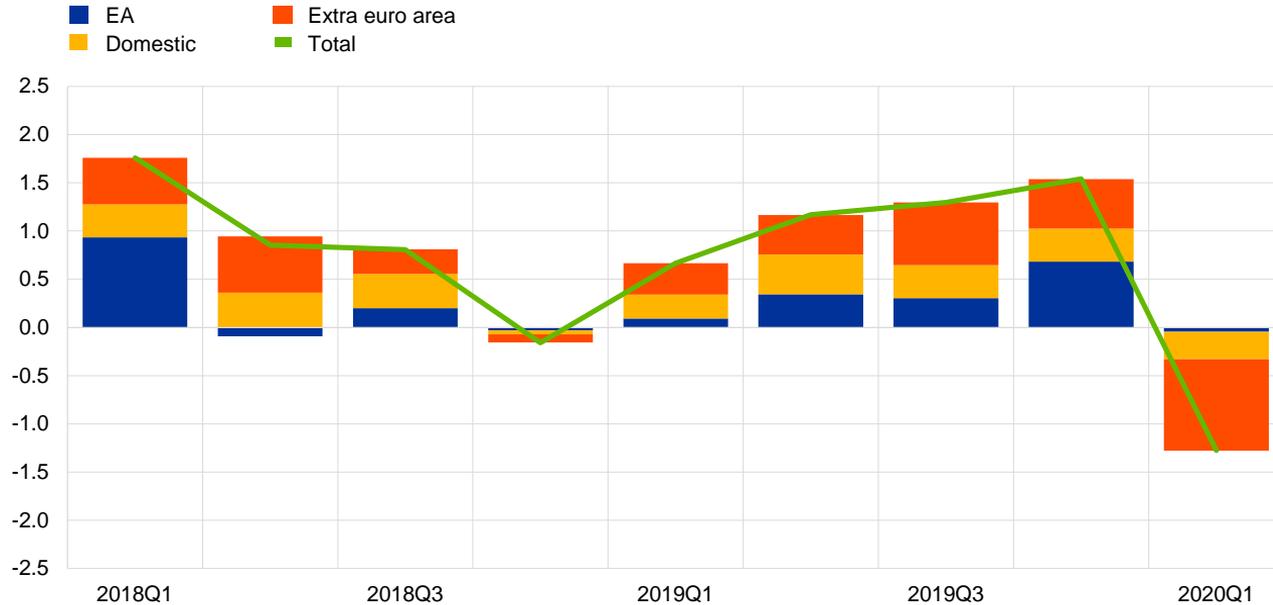


Sources: ECB securities holdings statistics and Eurostat.

Notes: "More vulnerable" countries are Italy, Greece, Portugal and Spain. Data for Q1 2020 are preliminary and do not include Italian insurance companies. HH refers to households; IC refers to insurance corporations; IF refers to investment funds; MFI refers to monetary financial institutions; OFI refers to other financial institutions; PF refers to pension funds. "Domestic" are flows where the holder country is the same as the issuer country; "EA ex dom" are euro area flows excluding domestic flows; "Non-EA" are non-euro area flows.

Euro area investment fund flows – liabilities

(quarterly flows in % of euro area GDP)



Sources: ECB investment fund statistics and Eurostat.

Notes: Assets are euro area investment fund bond and equity flows. Liabilities are flows to investment fund shares issued by euro area investment funds. "Domestic" are flows where the holder country is the same as the issuer country; "EA ex dom" are euro area flows excluding domestic flows; "Non-EA" are non-euro area flows. The latest observations are for Q1 2020.

Conclusions

- Evidence shows that liquidity provision and the PEPP have contributed to market stabilisation (alongside the general monetary stance of the ECB)
- Essential role for national and EU fiscal responses
- Counterfactual: amplification of pandemic shock – deeper and more protracted recession; financial instability; risks to price stability
- Extent and duration of pandemic shock still quite uncertain: PEPP in place until at least June 2021