



EUROPEAN CENTRAL BANK

EUROSYSTEM

# ECB Financial Stability Review

*May 2020 Edition*

---

**Paul Hiebert**

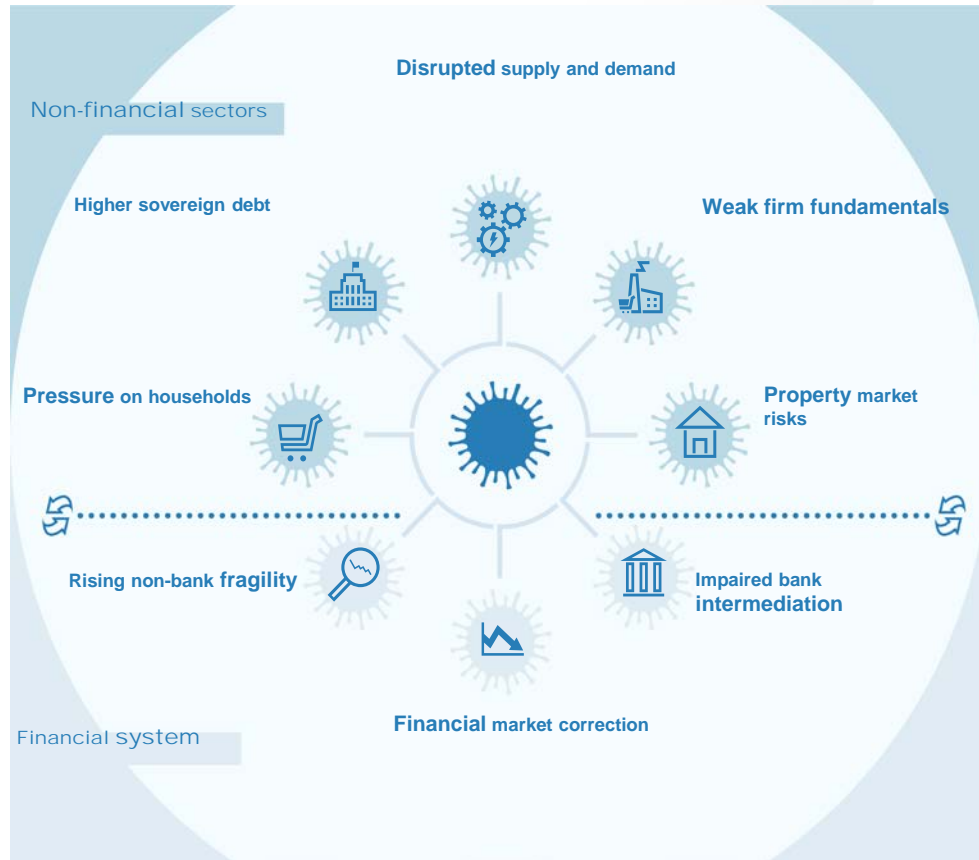
Directorate General Macroeprudential Policy and  
Financial Stability

Joint Vienna Institute Webinar  
4 June 2020

*The views expressed are those of the speakers and do not necessarily reflect the views of the ECB*



# Unparalleled disruption from pandemic, testing financial system resilience



- The coronavirus pandemic has affected virtually all aspects of economic activity
- It has been amplified by pre-existing financial vulnerabilities
- The financial system nonetheless proved broadly resilient (for now), partly reflecting the regulatory reforms of the past decade

# Risks then (November last year)...

## Signs of asset mispricing suggest potential for future corrections

- Very low yield environment
- Robust risk appetite
- Valuations contingent on low yields
- Safe-haven asset inflation

### Yield curve



75%

of significant banks have return on equity of below 8%

## Growing challenges from cyclical headwinds to bank profitability

- Eroding interest margins
- Slightly rising cost of credit risk
- High cost inefficiencies
- Plateauing capital positions

## Lingering private and public debt sustainability concerns

- Weaker growth prospects
- Releveraging of high-yield firms
- Rising property prices
- Low interest payment burdens

45%

of all rated market-based corporate debt is rated BBB

### Non-liquid assets



## Increased risk-taking by non-banks may pose risks to capital market financing




- Profitability and solvency challenges
- Higher credit and duration risk
- Pockets of illiquidity
- Growing real economy financing

## The financial stability environment remains challenging...

...but euro area banks are adequately capitalised, with a 14.2% CET1 ratio.

All euro area countries have activated macroprudential measures...

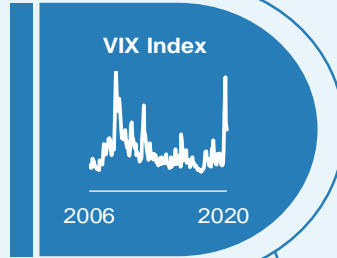
...even so, more active use of macroprudential policies could be appropriate to contain vulnerabilities.

-  Pronounced systemic vulnerability
-  Moderate systemic vulnerability
-  Potential systemic vulnerability

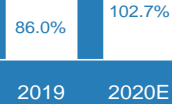
# ... and now

## Tighter financial conditions and fragile functioning in some markets

- Broad-based increase in risk premia
- Rising corporate downgrades
- Loss of market liquidity
- Growing rollover risks



## Public debt-to-GDP ratio

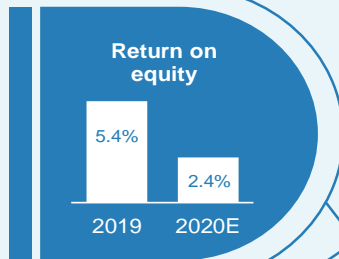


## Large increase in debt burden, especially public debt

- Significant lost output
- Rising borrowing costs
- Lower income and earnings
- Potential property market correction

## Weaker bank intermediation potential and profitability

- Increased loss-absorbing capacity
- Deteriorating asset quality
- Continued margin compression
- Historically low market valuations



## High-yield fund flows



## Vulnerable non-banks amplifying market movements

- High exposures to risky non-financials
- Sizeable valuation losses on portfolios
- Large outflows testing funds' liquidity
- Hit to insurers' solvency and profitability

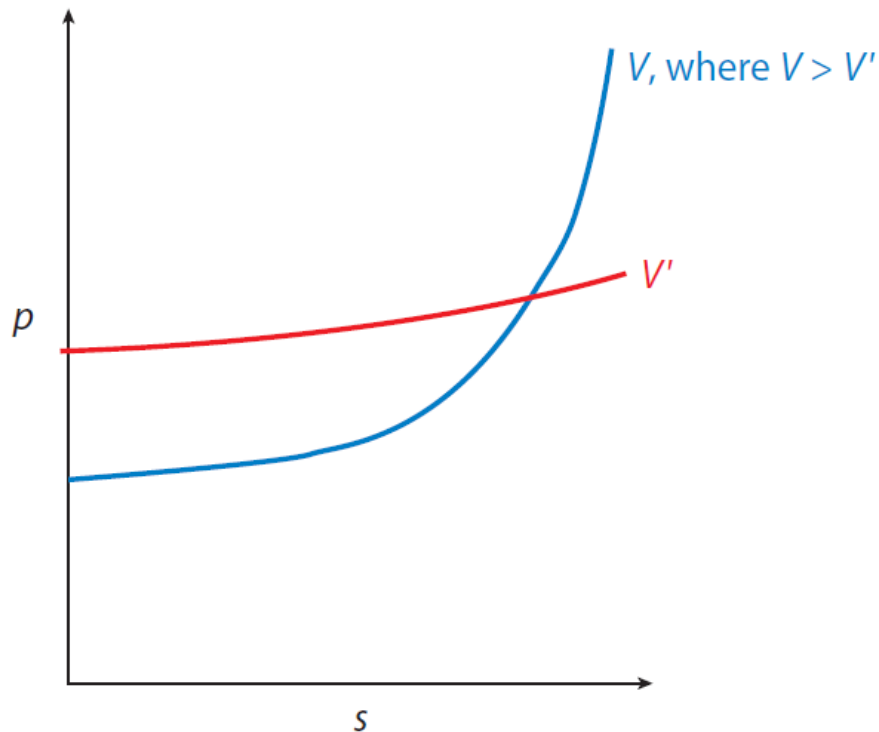
The euro area financial system has weathered the immediate stress, supported by monetary, fiscal and prudential policies.

Increased resilience of euro area banks helps, including the €140 billion of capital relief action by authorities.

Legacy debt and the potential for financial fragmentation pose pronounced medium-term challenges to both economic recovery and financial stability.

# Recall: Relationship between vulnerability, shocks and risk

Stylised financial sector vulnerability to shocks and the pricing of risk.

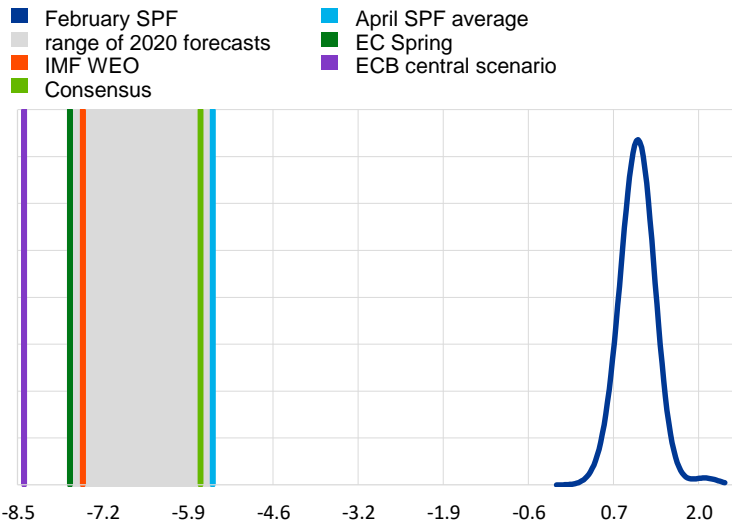


- Here,
  - $p$  denotes the price of **risk**,
  - $s$  the size of the **shock**, and
  - $V$  the **vulnerability** of the financial system.
- $V \square$  corresponds to a financial system with tighter regulation than  $V$ .

# Significant deterioration of the economic outlook

- Current GDP growth expectations for 2020 are outside the tail of February expectations and the timing and pattern of the recovery remains uncertain
- Substantial fiscal response including direct spending measures and loan guarantee schemes – in addition to automatic stabilisers. Bolstered by monetary policy, including asset purchases

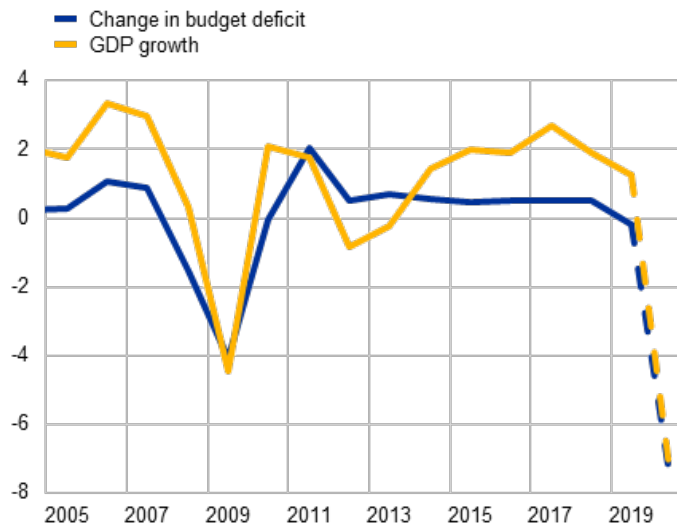
## Euro area real GDP growth forecasts 2020 year-on-year percentage change for the whole year



Sources: IMF, ECB, ECB calculations

Note: Normal Kernel density estimates of 66 and 69 point forecasts of professional forecasters.

## Forecast change in budget deficit and economic growth annual percentage change

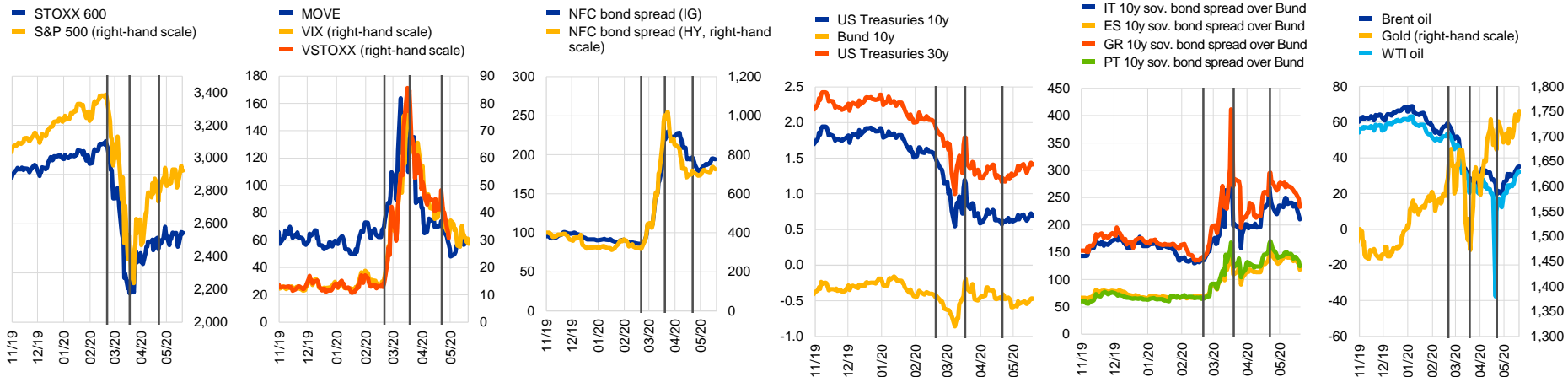


Sources: ECB and national governments

# Equity prices fell, spreads widened and volatility increased –likely amplified by record high valuations at the start of 2020

- Large and abrupt adjustment in markets from late February, reflecting a deterioration in economic outlook
- Subsequent stabilisation, and partial reversal, following a broad range of policy announcements

**Developments in major global financial asset markets** (first and second panel: index; third panel: basis points; fourth panel: percentages per annum; fifth panel: basis points; sixth panel: US dollars per barrel and US dollars per ounce)



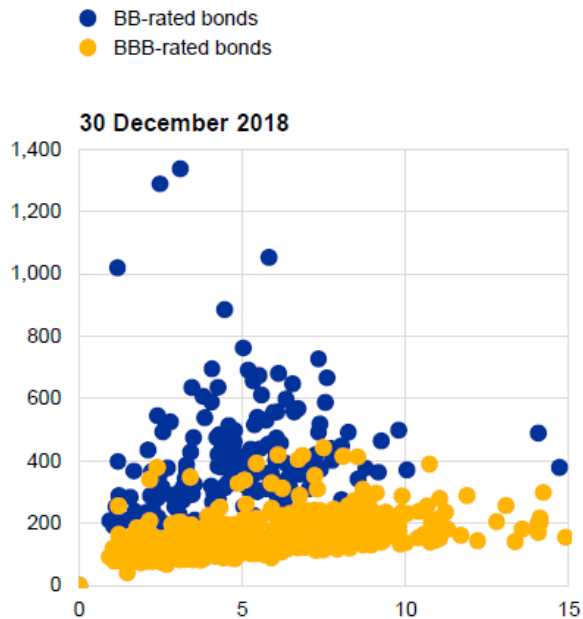
Sources: ECB, Thomson Reuters Eikon, BvD News, web searches for “credit lines” and ECB calculations.

Notes: Red vertical lines mark start of global market correction (20 February), ECB announcement of PEPP (18 March) and ECB decision to continue accepting downgraded bonds as collateral (22 April).

# Downgrade risks (particularly near the investment grade “cliff”) then...

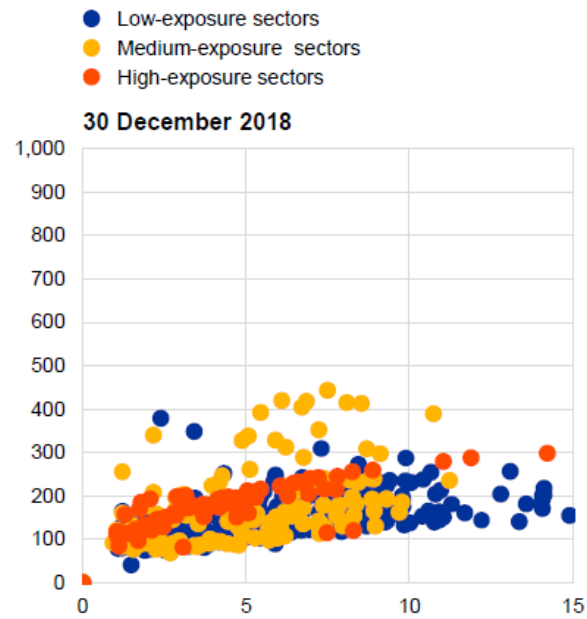
## BBB and BB-rated NFC bond spreads

(x-axis: years to maturity; y-axis: basis points)



## BBB-rated NFC bond spreads by sector

(x-axis: years to maturity; y-axis: basis points)



Source: IHS Markit.

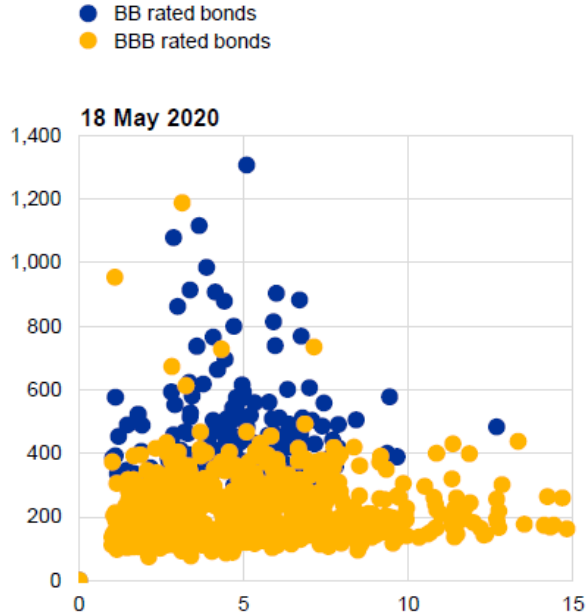
Notes: The charts show option-adjusted spreads (OAS) on the y-axis. High-exposure sectors are: automobiles and parts; consumer services; travel and leisure. Medium-exposure sectors are: basic materials; basic resources; chemicals; consumer goods; energy; general industrials; industrial goods and services; media; oil and gas; retail; personal and household goods. Low-exposure sectors are: construction and materials; food and beverage; health care; technology; telecommunications; utilities.



# ... and downgrade risks (particularly near the investment grade “cliff”) now

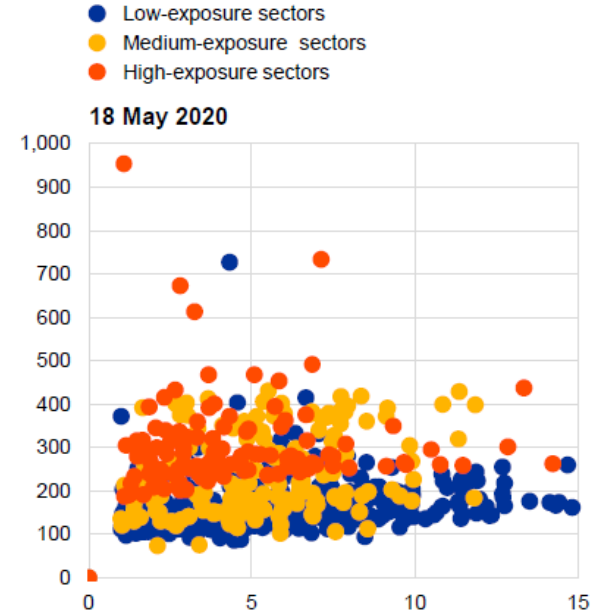
## BBB and BB-rated NFC bond spreads

(x-axis: years to maturity; y-axis: basis points)



## BBB-rated NFC bond spreads by sector

(x-axis: years to maturity; y-axis: basis points)



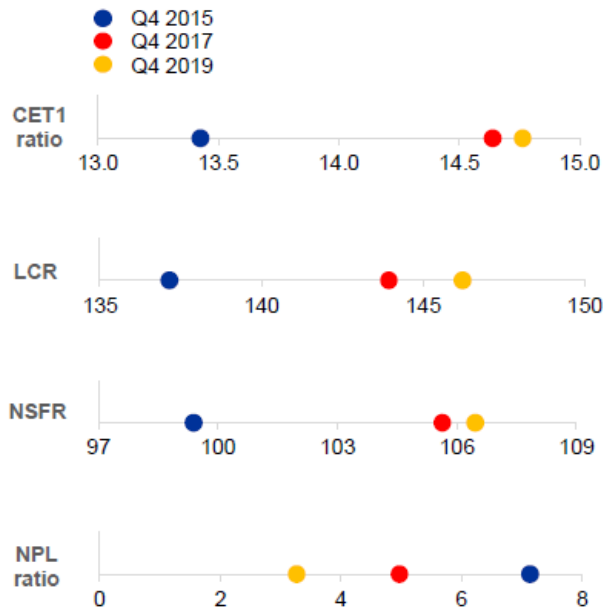
Source: IHS Markit.

Notes: The charts show option-adjusted spreads (OAS) on the y-axis. High-exposure sectors are: automobiles and parts; consumer services; travel and leisure. Medium-exposure sectors are: basic materials; basic resources; chemicals; consumer goods; energy; general industrials; industrial goods and services; media; oil and gas; retail; personal and household goods. Low-exposure sectors are: construction and materials; food and beverage; health care; technology; telecommunications; utilities.

# Banking sector resilience

## Bank regulatory ratios

(percentages)



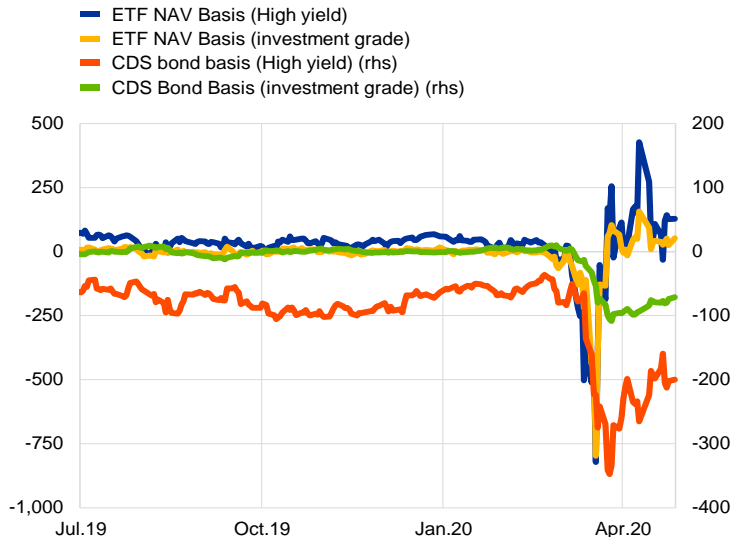
- Stronger
  - *Common Equity Tier 1*
  - *liquidity coverage*
  - *net stable funding*
  - *non-performing loan ratios*

Sources: ECB supervisory statistics, Bloomberg Finance L.P. and ECB calculations.

# Sell-off amplified by illiquid markets and pro-cyclical investment strategies

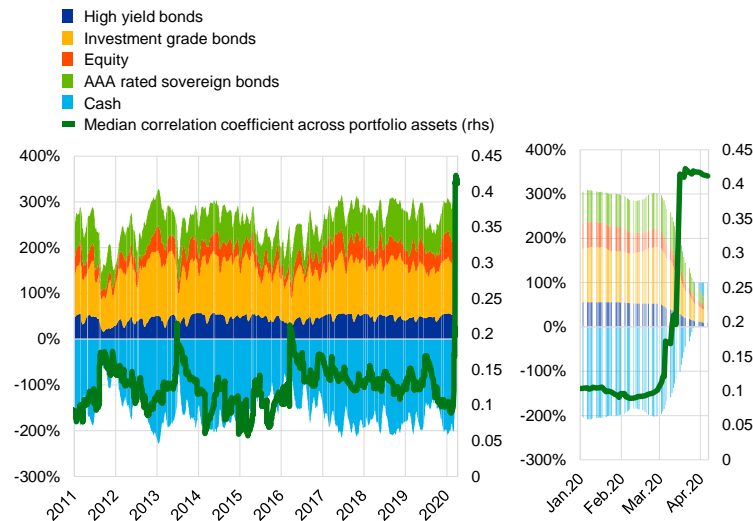
- Market liquidity – including presence of normal arbitragers – fell significantly during the adjustment
- Record high cross asset correlations and diminishing diversification benefits led to a record sell-off in leveraged investment strategies, such as risk parity

## Deviation from no-arbitrage relationships in corporate bond, CDS and ETF markets basis points



Sources: IHS Markit, Bloomberg.

## Portfolio weights (lhs) and cross asset correlation (rhs) in risk parity portfolio percent and correlation coefficient

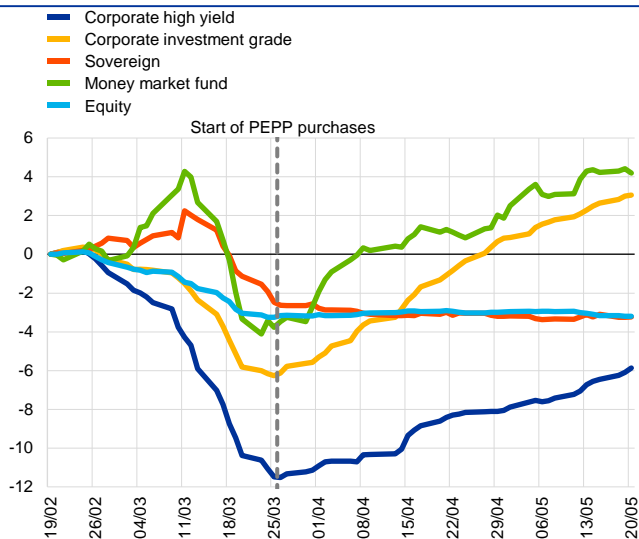


Sources: ECB (EMIR)

# Large-scale investment fund outflows in early March tested resilience of funds

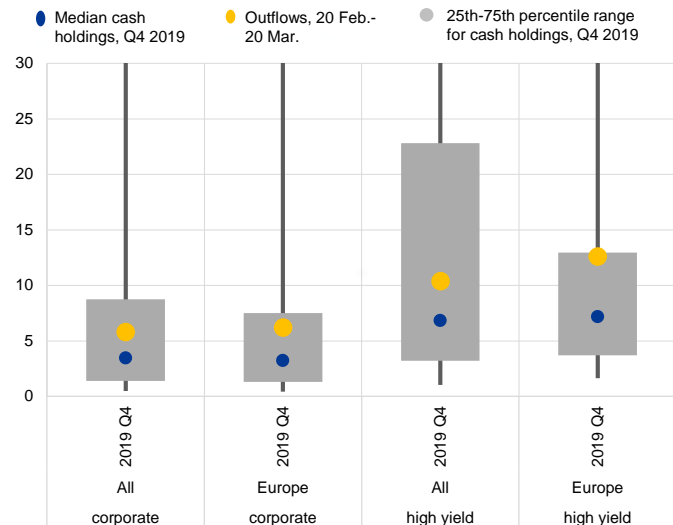
- High-yield funds saw largest outflows, but even money market funds and sovereign funds experienced outflows, as cash needs of investors rose
- Low liquid asset holdings reduced capacity of funds to manage the outflows and led to forced asset sales

## Cumulative flows of euro area-domiciled funds percentage of assets under management



Sources: Dealogic, iBoxx, EPFR and ECB calculations.  
 Note: PEPP: pandemic emergency purchase programme.

## Outflows and liquid asset holdings of euro area bond funds by asset class percentage of total assets

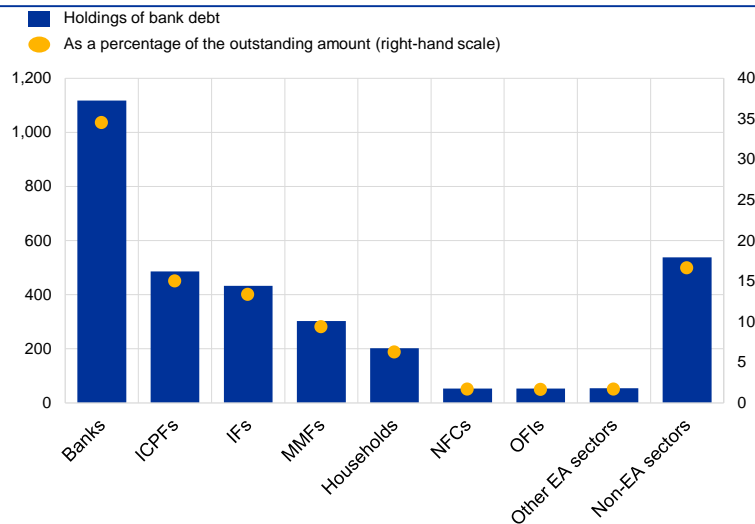


Sources: Refinitiv, EPFR and ECB calculations.

# Bank and non-bank interconnections amplifying financial contagion

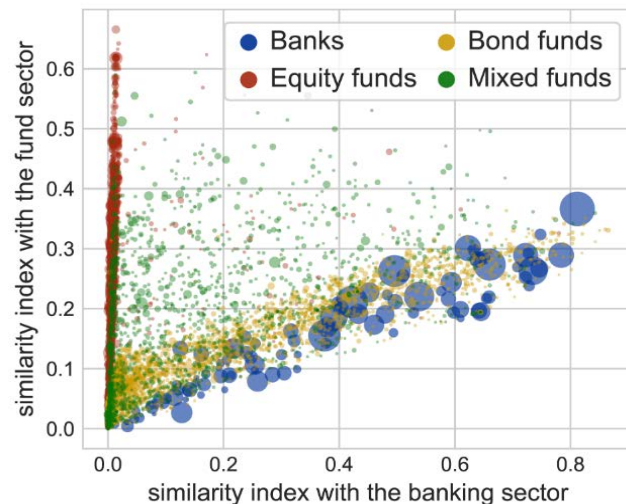
- Recent events have highlighted some key bank/non-bank interlinkages and feedback mechanisms- e.g. forced asset sales and impact on short-term funding
- Stems from the sizeable direct exposures, ownerships links and common exposures

## Holdings of euro area bank debt by sector Q4 2019, €billions and percentage change of outstanding



Sources: ECB (large exposure data and Securities Holdings Statistics) and ECB calculations.

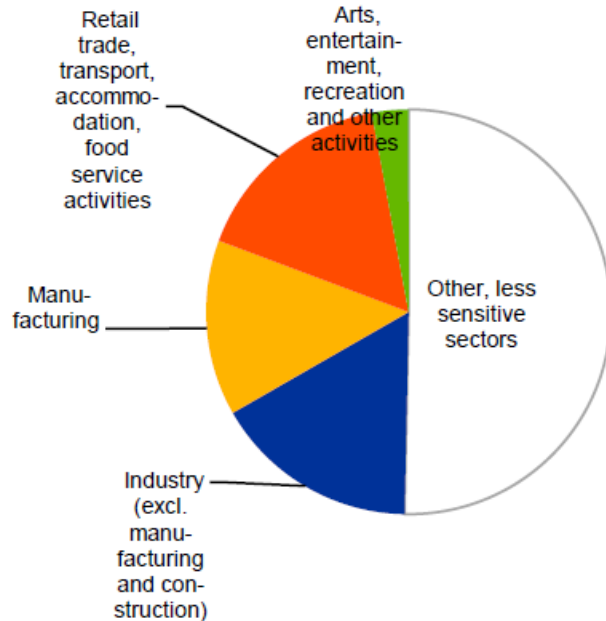
## Common holdings of euro area banks and investment funds Q2 2019, similarity index



Sources: Refinitiv, ECB Securities Holdings Statistics and ECB calculations

# Sensitive sectors and unemployment

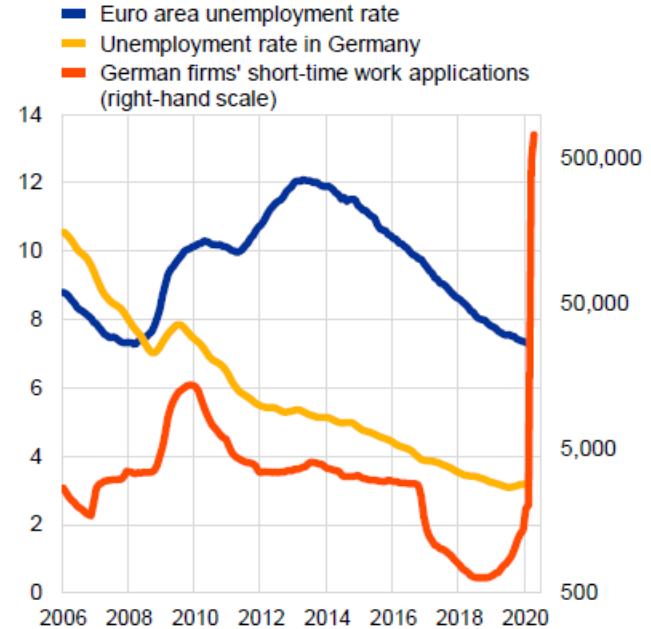
## Sensitive sectors almost half of gross value added percentages



Sources: Eurostat, German Federal Employment Agency and ECB calculations.

Notes: Left panel: "other, less sensitive sectors" comprises agriculture, construction, information and communication, financial and insurance activities, real estate activities, professional, scientific, administrative and technical activities and public administration. Right panel: number of firms that have issued applications for short-time work.

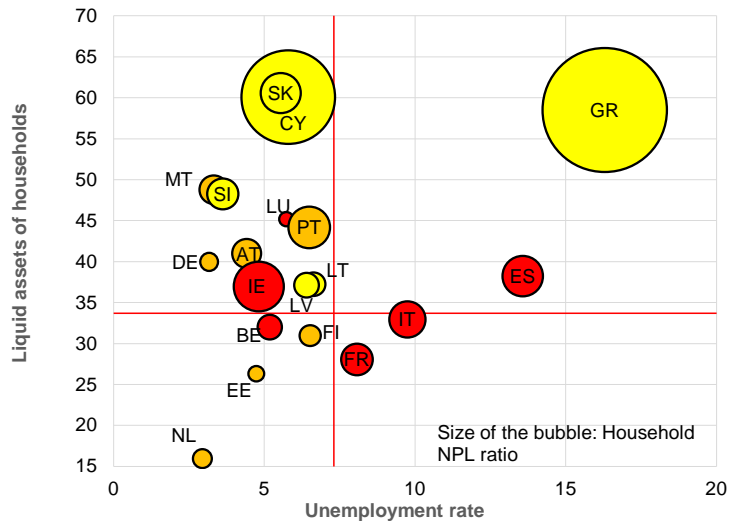
## Unemployment and short-time work applications percentages, number of firms (log scale)



# Households face lower income, higher debt and property market corrections

- Pressure on households could be highest in countries with already high unemployment and low savings
- Property markets are likely to weaken, notably in markets which had seen sustained robust expansion, and weakening lending standards in recent years

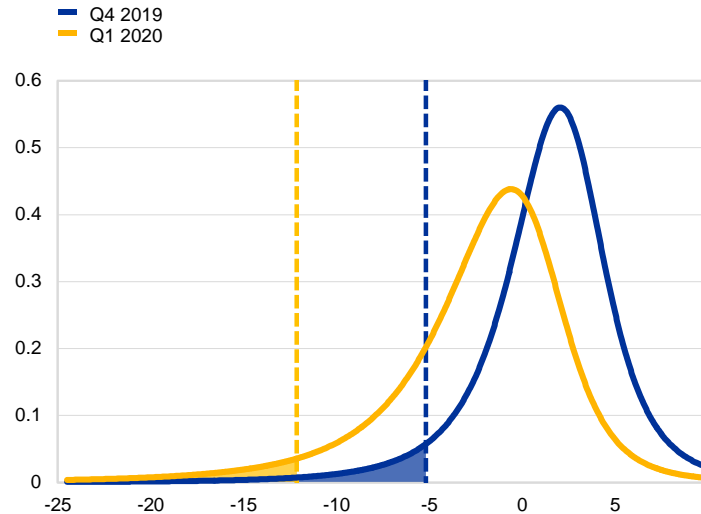
## Unemployment rates, and households' liquid assets and NPL ratios across the euro area Feb. 2020, Q4 2019, percentages



Source: Johns Hopkins University, ECB and ECB calculations.

Notes: Bubble colours reflect the number of confirmed coronavirus cases as a share of total population. Red: upper tercile, orange: middle tercile and yellow lower tercile

## Predictive density of one-year ahead annual real house price growth for the euro area probability density

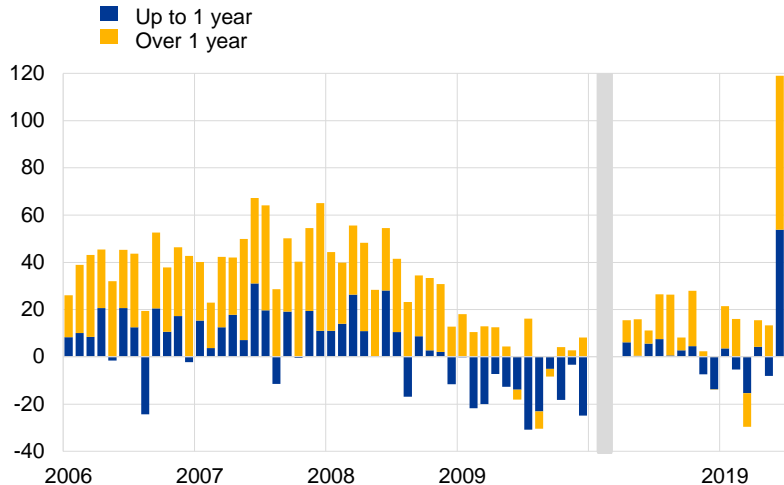


Sources: ECB and ECB calculations.

# Corporate cash-flow challenges are leading to downgrades

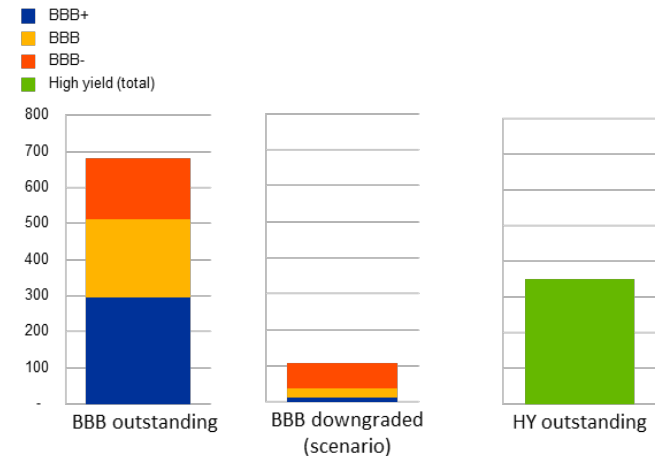
- Collapse in corporate cash flows prompted sizeable credit provision in March, half of it short term
- When combined with existing high leverage of some corporates, downgrades – especially from BBB to high yield – are expected to increase. A wave of “fallen angels” could flood the high-yield bond market

## Developments in short-term bank loans in March 2020 monthly flows, €billions



Sources: ECB and ECB calculations.

## BBB-rated bonds outstanding (left panel), downgraded in a 2008/09-like scenario (middle panel) and high-yield bonds outstanding (right panel) €billions



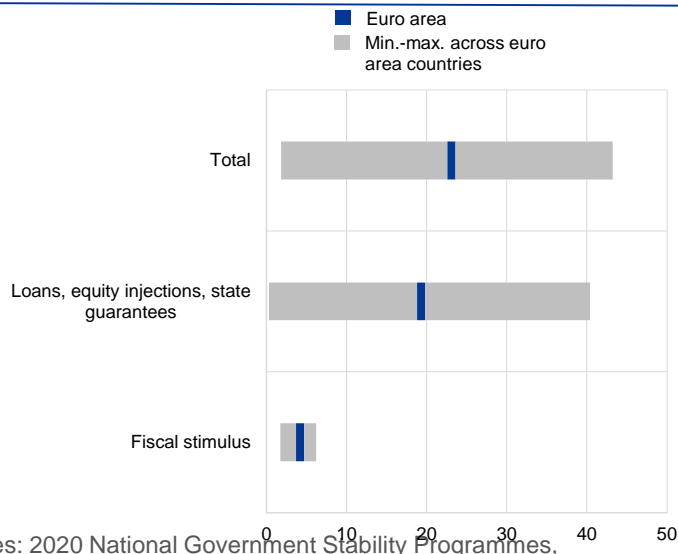
Sources: Dealogic, ECB and Standard & Poor's.



# Fiscal relief attenuates near-term impact, but increases future debt challenges

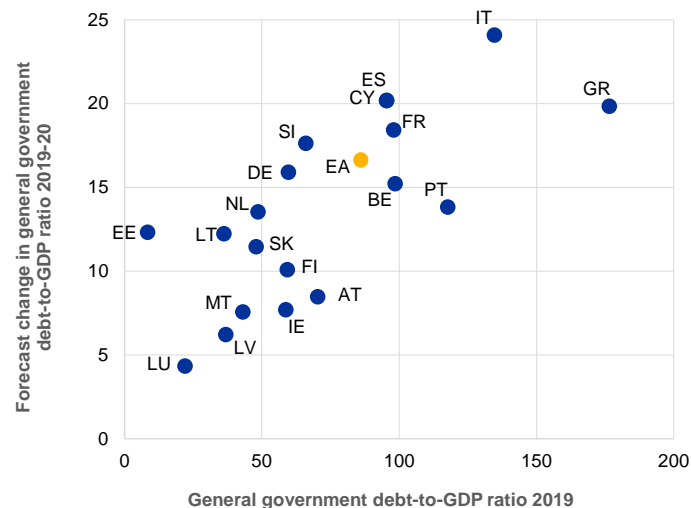
- Governments have offered large-scale fiscal relief that should support recovery – both through current spending and contingent guarantee schemes
- This implies a large increase in near-term financing needs, and an accompanying increase in debt levels, particularly in countries that had limited fiscal space

## Discretionary measures and guarantees of euro area governments percentage of GDP



Sources: 2020 National Government Stability Programmes, ECB and ECB calculations.

## Sovereign indebtedness in the euro area and expected changes in 2020 percentage of GDP and percentage points

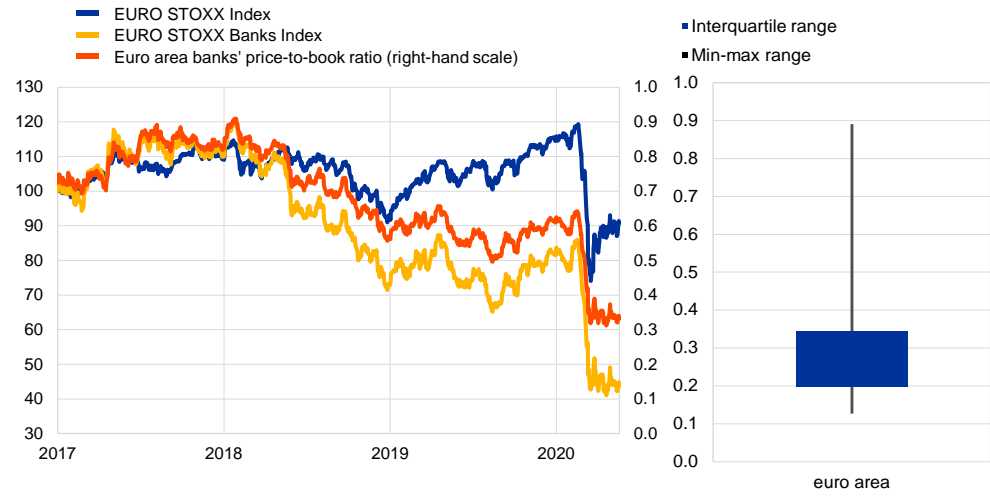


Sources: European Commission (AMECO) and ECB calculations.

# Bank stock valuations fell more than the market, despite strong capital positions

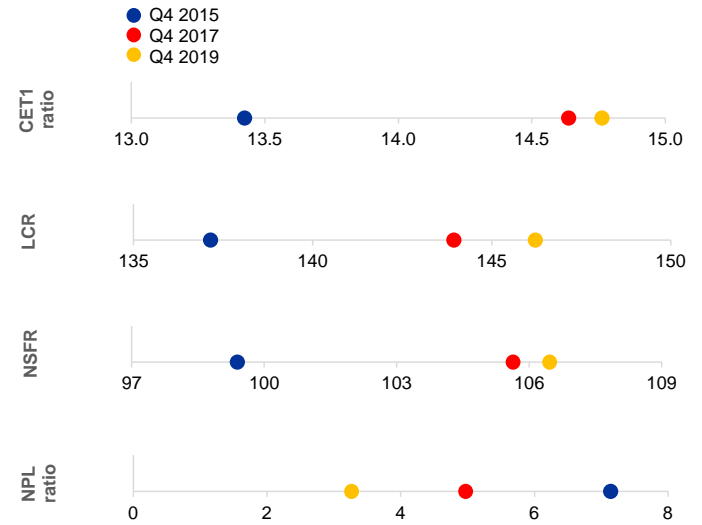
- Bank stocks underperformed the wider market during the sell-off; price-to-book ratios for euro area globally systemically important banks fell close to 0.3 amid a high degree of heterogeneity across individual banks
- Euro area banks entered this episode with much stronger capital and liquidity positions than in 2008

**EURO STOXX and EURO STOXX Banks Indices, as well as euro area banks' price-to-book ratios and their distribution index: 1 Jan. 2017 = 100, percentages**



Source: Bloomberg.

**Euro area banks' Common Equity Tier 1, liquidity coverage, net stable funding and non-performing loan ratios percentages**

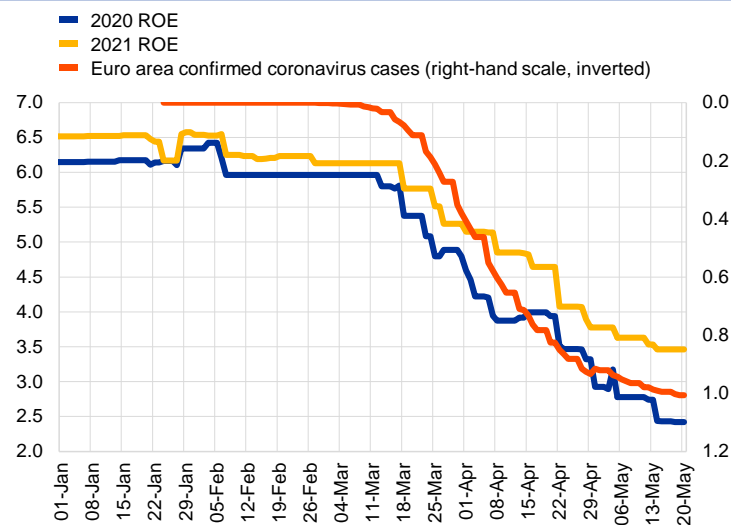


Sources: ECB supervisory statistics and ECB calculations.

# Euro area banks' profitability outlook has deteriorated

- Analysts' expectations of euro area banks' return on equity (ROE) have been lowered even further, not just for 2020 but also for 2021
- This reflects a combination of current pressures on loan losses and trading revenues, as well as weaker prospects for future loan growth and margins
- This adds to the need for structural change in the euro area banking sector

## Evolution of ROE forecasts for listed banks for 2020 and 2021 and confirmed coronavirus cases in the euro area percentages and millions of confirmed cases

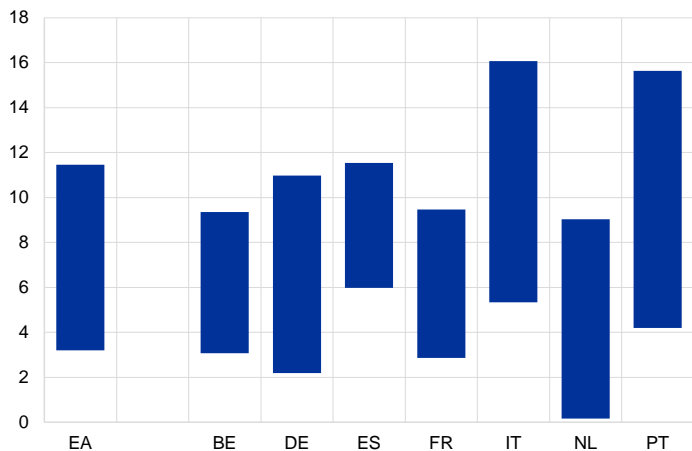


Sources: Bloomberg and ECB calculations.

# Banks' expected to face significant losses on their corporate loan books

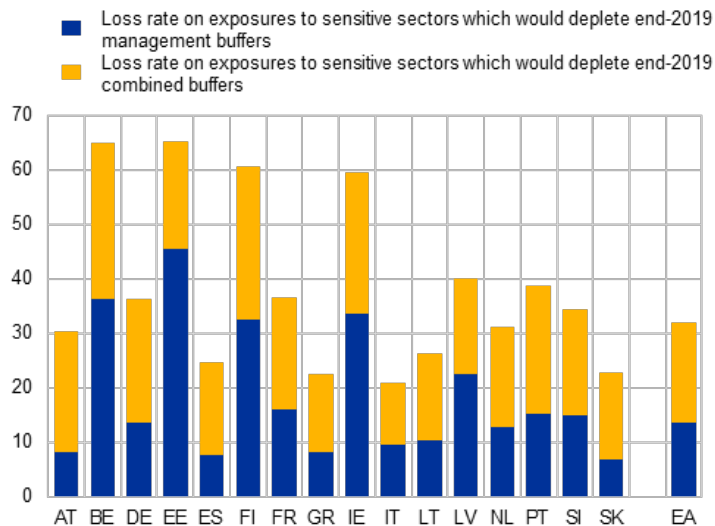
- Many euro area NFCs had low cash buffers and sizeable debt servicing needs, and, even with fiscal relief, some are likely to face challenges in making loan payments
- Euro area banking sector generally has sufficient capital to absorb multifold increases in loss rates, but some banking systems are more vulnerable

**Euro area banks' loan losses as a consequence of NFC cash-flow disruptions – before policy measures**  
percentage of total loans to NFCs



Sources: ECB supervisory statistics, Orbis Europe and ECB calculations.

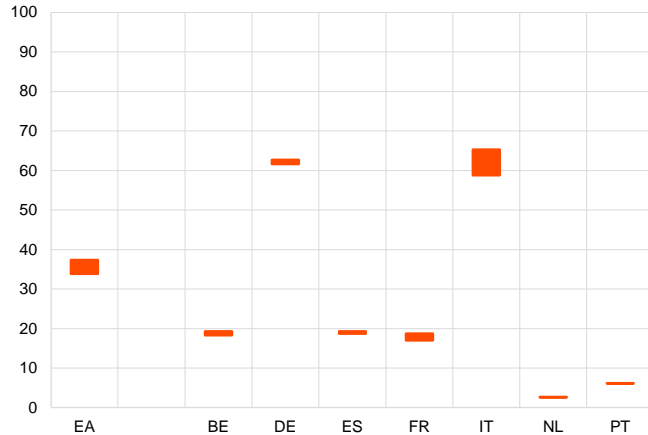
**Capacity to absorb losses on exposures to sectors most sensitive to coronavirus disruptions**  
percentage



Sources: ECB supervisory statistics and ECB calculations.

# Loan guarantee schemes transfer some risk to governments

**Potential share of bank losses transferred to governments assuming full take-up of guarantees** range for alternative scenarios, percentage of total estimated losses



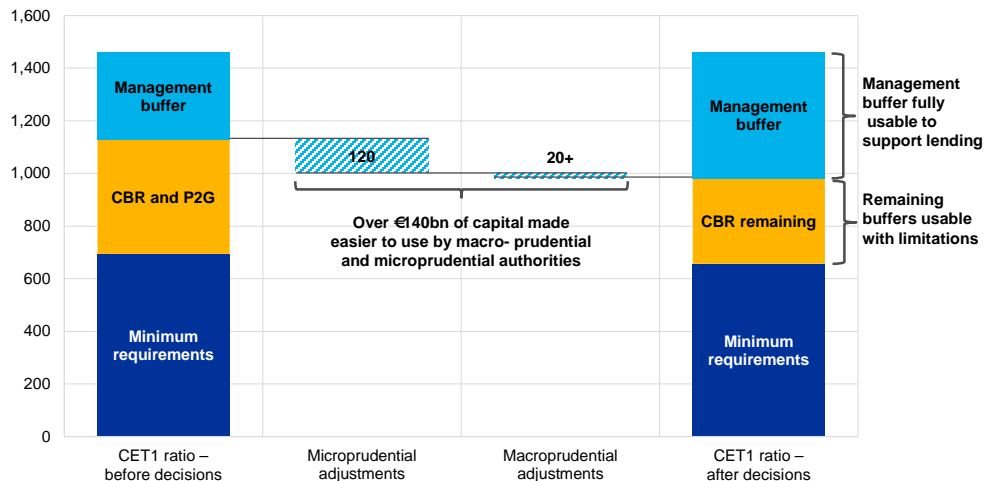
Sources: ECB, national authorities and ECB calculations based on Orbis.

- Government loan guarantee schemes are a key part of the fiscal support measures
- If fully deployed, they could transfer over 30% of losses that materialise to governments
- The success of the schemes hinges on their take-up and the ability of borrowers to access loans quickly

# Prudential measures help banks to support the real economy

## CET1 capital and capital buffers in the euro area

€ billion, Q4 2019



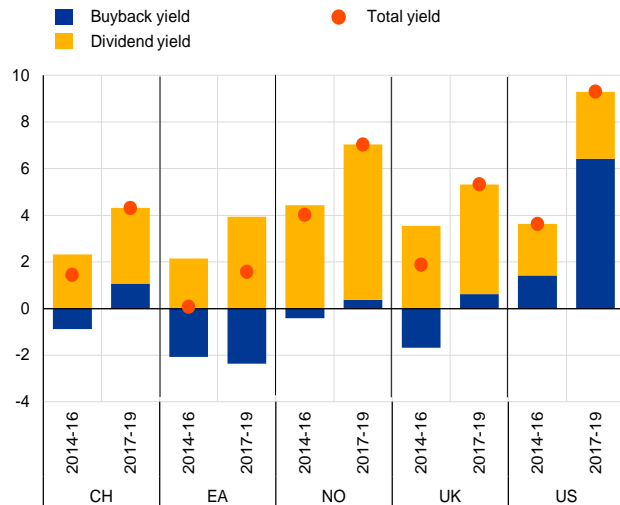
- Prudential authorities acted to free over €140bn of bank capital, suspend dividend pay-outs and enhance flexibility in accounting rules and NPL recognition
- Overall impact is potentially large, especially if stigma around using buffers is avoided.

Sources: COREP, notifications of NDAs and websites of National Authorities.

# Dividend restrictions have accompanied capital easing measures

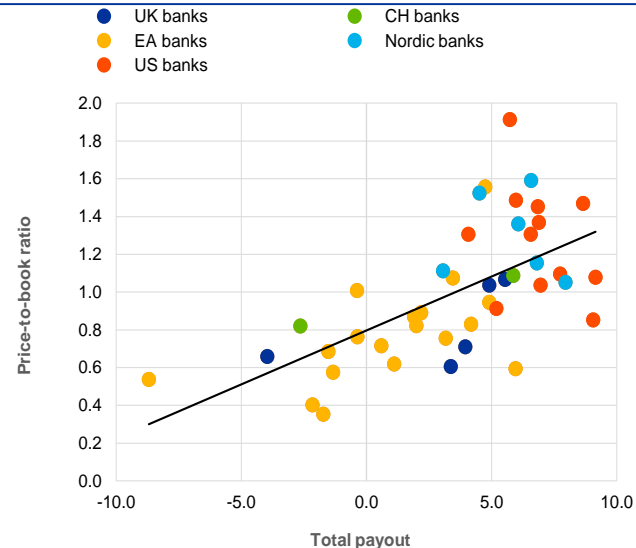
- Dividend restrictions help preserve capital at a time of great uncertainty – so far ~€27bn

## Global banks' buyback and dividend yields percentages



Sources: SNL Financial and ECB calculations.

## Average price-to-book ratios and total shareholder payouts in the period 2015-19 ratio and percentage of market capitalisation



Sources: SNL Financial and ECB calculations.

# Using flexibility in the bank regulatory framework to avoid pro-cyclicality

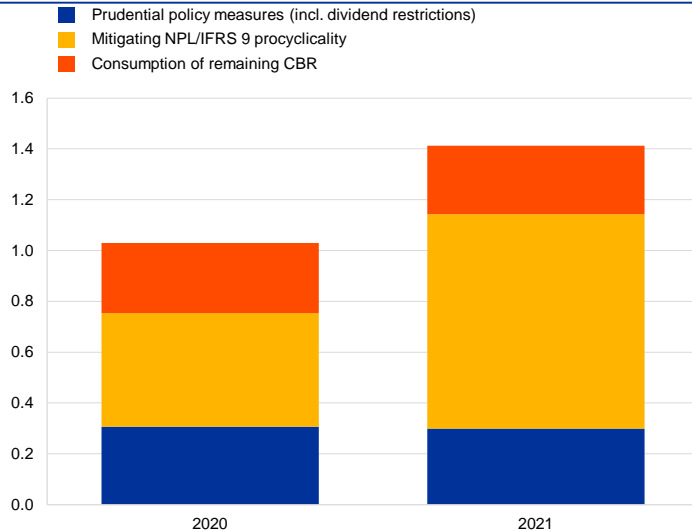
- Implementation of the Basel III standards has been deferred to provide additional operational capacity for banks and supervisors
  - Standards for revised risk, leverage ratio buffer and Pillar 3 disclosures deferred by one year to 1 January 2023
  - Transitional arrangements for the output floor have also been extended by one year to 1 January 2028
  - Full and consistent implementation of all Basel III standards based on the revised timeline remains necessary
- The BCBS and supervisory authorities also acted to mitigate unintended consequences of the accounting framework on banks' capital position
  - Under the IFRS9 Expected Credit Loss (ECL) approach, system wide increase in credit risk can prompt a large increase in loan loss provisions and weigh on capital across banks
  - BCBS decided to adjust, on a temporary basis, how additional provisions would flow through to capital
  - Corresponding legislative proposal on CRR/CRD review published by the European Commission
- If the pandemic leads to a deterioration of bank asset quality, more decisive action to address NPLs
  - Asset separation measures, such as centralised asset management companies (AMCs), may help NPL work-outs



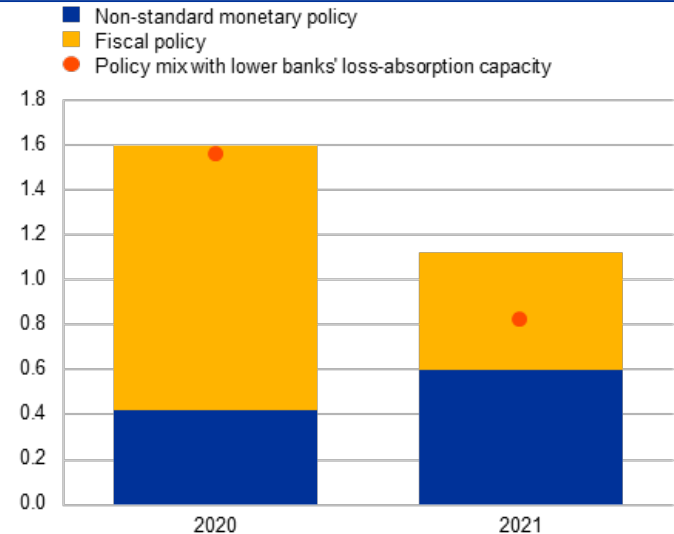
# Fiscal and monetary measures provide economic relief that also supports financial stability – but are supported by prudential policy measures

- Simulations suggest that the prudential actions could support real GDP over a two-year horizon, depending on use of remaining buffers
- Prudential measures also found to increase the impact of a fiscal measures and central bank asset purchases notably in 2021

## Model-projected real GDP growth percentage point deviation from baseline



## Model-projected real GDP growth percentage point deviation from baseline



Sources: DKR model, ECB and ECB calculations

# Emerging gaps and areas for future policy work

- **Macroprudential tools for non-banks:** although monetary policy could respond to market stress, events highlight that an effective macroprudential framework for non-banks is lacking
  - Investment funds – ex ante tools to effectively mitigate the build-up of liquidity risks during periods of exuberance.
  - Investment funds – ex post tools: additional supervisory powers – including at European level – are needed to ensure a timely and consistent use of liquidity management tools by asset managers in periods of distress
  - Insurance companies: need to strengthen the Solvency II framework for insurance companies, to facilitate the build up of capital buffers in good times (ESRB report) and strengthen liquidity risk frameworks
- Continuing progress towards completing **banking and capital markets union** in Europe remains a priority, as integrated and resilient European markets could help the recovery
  - Third pillar of the banking union, European deposit insurance scheme (EDIS), needed to ensure a uniform level of depositor protection and confidence to avoid fragmentation
  - Moving towards a stronger role for European wide supervision of capital markets would enhance cross-border risk monitoring and coordinated actions across Europe

Non-financial sectors

## Disrupted supply and demand

- Supply chain impacts
- Reduced trade flows
- Deteriorating sentiment

## Higher sovereign debt

- Increased funding costs
- Fiscal stimulus measures
- Contingent liabilities up

## Weak firm fundamentals

- Cash-flow problems
- Debt servicing difficulties
- Rising corporate defaults

## Pressure on households

- Rising unemployment
- Reduced spending
- Precautionary saving

## Property market risks

- Lower housing demand
- Impaired construction
- Exit of foreign investors

## Rising non-bank fragility

- Large fund redemptions
- Depleted liquidity buffers
- Hit to insurers' profits

## Impaired bank intermediation

- Rising funding costs
- Lower lending capacity
- Worsening asset quality

## Financial market correction

- Abrupt repricing of risk
- Downgrades fueling sell-off
- High volatility and correlation

Financial system

