Financial stability vulnerabilities remain elevated

<table>
<thead>
<tr>
<th>Vulnerabilities clustering in some countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>US yields rise and market exuberance extends</td>
</tr>
<tr>
<td>More optimism on banks, although with reservations on provisions</td>
</tr>
<tr>
<td>Climate-related transition and physical risks are material</td>
</tr>
</tbody>
</table>
Third wave delays the economic recovery, particularly for some sectors

- The third wave has delayed the euro area economic recovery, but vaccinations are now catching up
- Costs of lockdown, and policy support reliance, increasingly concentrated in some sectors/countries

Vaccination rates (first dose)
1 Dec. 2020-11 May 2021, percentage of population

2021 real GDP growth forecasts
May 2020-Apr. 2021, percentage change per annum

Euro area PMIs by sector
Jan. 2019-Apr. 2020; 50 = no change on previous month

Sources: ourworldindata.org and ECB calculations.
Sources: Consensus Economics and ECB calculations.
Sources: IHS Markit and ECB calculations.
Financial markets exhibit robust risk sentiment as US yields rise

- As US interest rates rose and global bond markets sold off, equity markets saw a renewed rally.
- Some market segments continue to show signs of elevated valuations and may be at risk of a correction.
- Further rise in risk-free interest rates risks tightening financial conditions.

10-year benchmark government bond yields
1 May 2020-11 May 2021, percentages

Global equity and bond market price developments
1 Jan. 2020-11 May 2021, indices

EURO STOXX forward price/earnings ratio
Jan. 2000-May 2021; density

Sources: Bloomberg Finance L.P., Reuters, ECB and ECB calculations.
Sources: Bloomberg Finance L.P.
Sources: Refinitiv and ECB calculations.
A further sharp and sustained rise in rates could prompt valuation adjustments

- Spillovers to euro area markets from a potential US monetary policy tightening shock could be substantial
- Ongoing search-for-yield has pushed corporate bond spreads to multi-year lows, susceptible to correction

**Effect of a US monetary policy tightening shock**
percentage changes (left panel), basis points (middle and right panel)

**Range of euro area non-financial investment grade corporate bond spreads**
Jan. 2015-May 2021; basis points

Sources: Refinitiv and ECB calculations

Sources: IHS Markit and ECB calculations.
Non-bank FIs have continued to increase duration, liquidity and credit risk

- Non-bank FIs have become more sensitive to a yield shock, given increased bond portfolio duration, and exposed to US markets
- Non-banks continue to have large exposures to corporates with weak fundamentals

**Duration of bond portfolios across financial institutions 2016-20, years**

<table>
<thead>
<tr>
<th>Year</th>
<th>PFs</th>
<th>ICs</th>
<th>Banks</th>
<th>IFs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 2016</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Q4 2019</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Q4 2020</td>
<td>9.0</td>
<td>9.0</td>
<td>9.0</td>
<td>9.0</td>
</tr>
</tbody>
</table>

**Total US and USD debt exposure of euro area investment funds Q4 2013-Q4 2020, € billions, percentages**

<table>
<thead>
<tr>
<th>Time</th>
<th>Financial debt</th>
<th>Government debt</th>
<th>NFC debt</th>
<th>US exposure</th>
<th>USD-denominated exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 2013</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Q4 2016</td>
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<td>5.5</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Q4 2019</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Q4 2020</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
</tr>
</tbody>
</table>

**Non-financial corporate bond holdings of euro area financial sectors Q4 2019, Q4 2020; € billion, percentages**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total corporate bond holdings</th>
<th>Percentage of vulnerable holdings (right-hand scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>30.0</td>
<td>5%</td>
</tr>
<tr>
<td>ICs</td>
<td>25.0</td>
<td>10%</td>
</tr>
<tr>
<td>PFs</td>
<td>20.0</td>
<td>20%</td>
</tr>
<tr>
<td>IFs</td>
<td>15.0</td>
<td>30%</td>
</tr>
</tbody>
</table>

Sources: ECB (SHSS) and ECB calculations.
Large corporate solvency challenges ahead

- Corporate insolvencies expected to rise amid uncertainty
- Reliance on debt has increased among a tail of already vulnerable firms amid growing roll-over risks
- Corporate stress may spill over to other parts of the economy

Sources: Allianz Euler Hermes and ECB calculations.

Development of corporate insolvencies during different crisis episodes

Indices

Sources: S&P Global Market Intelligence and ECB calculations.

Debt-to-equity ratios across euro area non-financial corporations

Q3 2018-Q4 2020, percentages

Sources: S&P Global Market Intelligence and ECB calculations.

Share of sectors in gross value added, employment and total loans

Q4 2020, percentages

Sources: Eurostat, ECB and ECB calculations.
Residential property markets remain robust, contrasting CRE

- Residential real estate remains strong, especially in some countries, supported by strong household income
- Commercial real estate has, however, come under severe pressure

Euro area residential and commercial property price developments
Q1 2004-Q4 2020; percentage change per annum

Change in overvaluation and price growth since the end of 2019
Q4 2019-Q3 2020; Q4 2019-Q4 2020; percentages

Sources: Jones Lang LaSalle, ECB and ECB calculations.

Sources: ECB and ECB calculations.
Selected fiscal vulnerability indicators during different crisis episodes, z-scores

- The continued need for policy support may add to medium-term sovereign debt sustainability concerns
- Governments have taken advantage of benign conditions to extend debt maturity and benefit from low yields
- Policy exit may be more challenging in countries with stronger policy reliance

Sources: Eurostat, ECB and ECB calculations.
Improved market sentiment vis-à-vis euro area banks despite poor profitability

- Euro area bank stock prices have recovered from low levels, but market analyst ROE forecasts are unchanged
- Loan losses provisions have been the factor weighing on recent profits, heavily concentrated in some countries

Euro area bank stock prices, analysts’ ROE expectations and inflation expectations
2 Jan. 2020-11 May 2021, percentages, index

- Improved market sentiment vis-à-vis euro area banks despite poor profitability

Euro area banks’ ROE and factors contributing to its change
Q4 2019, Q4 2020, percentage points

- Sources: Bloomberg Finance L.P. and ECB calculations.

Banks’ ROE across countries
Q4 2020, percentages

- Sources: ECB supervisory data and ECB calculations.
Outlook depends on evolution of loan losses and avoiding a lending contraction

- Forward-looking indicators suggest loan losses beginning to materialise, focussed on stage 2
- Recent tightening of lending standards and uncertain demand may weigh on future loan income

**Net inflows into Stage 2 and 3 assets**
Q1 2019-Q4 2020, percentage of total loans

**Changes in bank lending standards for corporate and mortgage loans**
Net percentages of banks reporting

**Annual changes in net interest income and contributing factors**
Percentage changes; ppt contributions

Sources: ECB supervisory data and ECB calculations.
Growing balance sheet vulnerabilities in non-financial sectors
Further weakening of bank profitability amid high credit risk exposure
Further increasing duration, liquidity and credit risks of non-banks

TARGETED POLICIES SHOULD CONTINUE TO SUPPORT THE RECOVERY AMID PANDEMIC RELATED UNCERTAINTY AND THE POTENTIAL FOR CREDIT RISK MATERIALISATION

Targeted and tailored economic policies to support viable borrowers
Improve credit risk management and use of capital buffers
Effective NPL solutions
Macroprudential approach for non-banks and other regulatory actions
Sharply higher rates may reveal risk asset vulnerabilities
- Pressure on risk compensation
- Increased equity market leverage
- Elevated bond market duration risk
- Tight credit market pricing

Weaker bank profitability amid high credit risk exposure
- Deterioration in asset quality
- Continued margin decline
- Lower corporate loan demand
- Stable funding conditions

Growing balance sheet challenges in the non-financial sector
- Rising sectoral risk concentration
- Growing corporate solvency issues
- Risk of property market correction
- Materialisation of contingent liabilities

Further increases in credit, liquidity and duration risks for non-banks
- Rotation from bond to equity funds
- Rising global rates could trigger outflows
- Low liquidity buffers could lead to asset sales
- Positive capitalisation effects for insurers

The outlook continues to be dominated by the pandemic, with the risks being concentrated in some sectors and countries with pre-existing vulnerabilities.

Well-targeted policy measures are still warranted to support the economy, while the use of available capital buffers, enhanced credit risk management and effective NPL solutions can protect the recovery and medium term growth.
Climate-related risks to financial stability are material

- New data collections and methodologies reinforce previous findings of potential systemic relevance of climate-related financial stability risks
- Physical risks appear to be somewhat concentrated in some sectors, geographical regions and individual banks

Corporate exposure to physical risk drivers

Firm max. risk level

Share of EA banks’ credit exposures to firms by firm physical risk level

Percentages

Sources: Four Twenty Seven, ECB AnaCredit and ECB calculations.
Rapidly expanding green financial markets

- Instruments of sustainable finance growing strongly and investors in ESG and green funds appear less sensitive to past negative performance
- But the risk of greenwashing remains high due to the lack of consistent disclosures, taxonomy alignment and consistent standards for green bonds and ESG investment funds.

Market growth in ‘green’ financial instruments (in EUR billion)

Flow sensitivities to past negative returns of green, ESG and non-ESG corporate bond and equity funds

Sources: Artemis, Bloomberg Finance L.P., EMIR data, EPFR Global, Lipper and ECB calculations.
Corporate zombification: risks in the euro area

- Ahead of the pandemic the estimated share of zombie firms in the euro area was modest and declining, but still above the levels of the early 2000s
- Estimates for euro area companies suggest that zombie firms may have temporarily benefited from loan schemes and accommodative credit conditions – but likely only to a modest degree.

Share of zombie and quasi-zombie firms in the euro area
2004-19, percentages

Eligible versus non-eligible firms
2019, ratios, log-log axis

Sources: Bureau van Dijk – Orbis and ECB calculations.
Corporate zombification: risks in the euro area

- In an environment of highly accommodative credit conditions, zombie firms are also likely to benefit from accommodative bank lending rates and limited differentiation in market pricing.
- Tackling the risk of zombification more fundamentally requires the consideration of suggested reforms to insolvency frameworks, and better infrastructure for banks to manage non-performing loans.

NPLs and forborne loans for zombie and non-zombie firms
Q4 2018-Q4 2020, percentages

Sources: Bureau van Dijk – Orbis, ECB AnaCredit data and ECB calculations
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Bank assets quality concerns

Herd immunity

NPL's

START

FINISH

Weak near-term growth outlook

Third Wave

Insolvency

Transport

Movie

Growing debt burden

Risk of higher interest rates

Strong fiscal and monetary policy support

DEBT

GOV

Illustrated by Inka Cordero Garcia, DG MF