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<tr>
<td>Financial innovation</td>
<td>38</td>
</tr>
</tbody>
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Market environment

### A.1 EU market price performance

<table>
<thead>
<tr>
<th></th>
<th>Equities</th>
<th>Corporates</th>
<th>Commodities</th>
<th>Sovereign bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-21</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Apr-22</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Aug-22</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>Dec-23</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
</tr>
</tbody>
</table>

Note: Return indices on EA equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities), 01/12/2021=100. Sources: Refinitiv Datastream, ESMA.

### A.2 EU market volatilities

<table>
<thead>
<tr>
<th></th>
<th>Equities</th>
<th>Corporates</th>
<th>Commodities</th>
<th>Sovereign bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Apr-22</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Aug-22</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Dec-23</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

Note: Annualised 40D volatility of return indices on EA equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities), in %. Sources: Refinitiv Datastream, ESMA.

### A.3 Economic policy uncertainty

<table>
<thead>
<tr>
<th></th>
<th>Europe</th>
<th>US</th>
<th>Global</th>
<th>STOXX (rhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Apr-22</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Aug-22</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Dec-23</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Note: Economic Policy Uncertainty Index (EPU), developed by Baker et al. (www.policyuncertainty.com), based on the frequency of articles in European newspapers that contain the following triple: "economic" or "economy", "uncertain" or "uncertainty" and one or more policy-relevant terms. Global aggregation based on PPP-adjusted GDP weights. Implied volatility of EURO STOXX 50 (VSTOXX), monthly average, on the right-hand side. Sources: Baker, Bloom, and Davis 2015; Refinitiv Datastream, ESMA.

### A.4 EU market confidence

<table>
<thead>
<tr>
<th></th>
<th>Auxiliary activities</th>
<th>Ins. and pension</th>
<th>Fin. intermediation</th>
<th>Overall fin. sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar-21</td>
<td>-20</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul-21</td>
<td>-10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nov-21</td>
<td>-10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mar-22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul-22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nov-22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mar-23</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: European Commission survey of EU27 financial services sector and subsectors (NACE Rev.2 64, 65, 66). Confidence indicators are averages of the net balance of responses to questions on development of the business situation over the past three months, evolution of demand over the past three months and expectation of demand over the next three months, in % of answers received. Fin.=financial, Ins.=insurance. Sources: European Commission, ESMA.

### A.5 EUR exchange rates

<table>
<thead>
<tr>
<th></th>
<th>USD</th>
<th>JPY</th>
<th>CHF</th>
<th>1Y-MA USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-21</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Apr-22</td>
<td>110</td>
<td>110</td>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>Aug-22</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Dec-23</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>130</td>
</tr>
</tbody>
</table>

Note: Spot exchange rates to EUR. Emerging is an average of spot exchange rates for CNY, BRL, RUB, INR, MXN, IDR and TRY weighted by GDP as of start date year. 01/10/2021=100. Increases in value represent an appreciation of EUR. 1Y-MA USD one-year moving average of the USD exchange rate. Sources: ECB, IMF, ESMA.

### A.6 ESMA composite indicator of systemic stress

<table>
<thead>
<tr>
<th></th>
<th>Equity market contribution</th>
<th>Bond market contribution</th>
<th>Money market contribution</th>
<th>ESMA CISS</th>
<th>Correlation contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-19</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Dec-20</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Dec-21</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Dec-22</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Dec-23</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Note: ESMA version of the ECB CISS indicator measuring systemic stress in securities markets. It focuses on three financial market segments: equity, bond and money markets, aggregated through standard portfolio theory. It is based on securities market indicators such as volatilities and risk spreads. Sources: ECB, ESMA.
Securities markets

Equity markets

A.7 Global equity price performance by region

A.8 EU equity price performance of national indices

A.9 EU equity price performance by sector

A.10 US and EU equity price-earnings ratios

A.11 EU implied equity volatility

A.12 EU implied equity volatility by option maturity

Note: Regional equity return indices, 01/12/2021=100. Sources: Refinitiv Datastream, ESMA.

Note: European equity return indices, 01/12/2021=100. Sources: Refinitiv Datastream, ESMA.

Note: STOXX Europe 600 sectoral return indices. 01/12/2021=100. Sources: Refinitiv Datastream, ESMA.

Note: Price-earning ratios based on average inflation-adjusted earnings from the previous 10 years (cyclically adjusted price-earning ratios). Averages computed from the most recent data point up to 10 years before. Sources: Refinitiv Datastream, ESMA.

Note: Implied volatility of EURO STOXX 50 (VSTOXX) and S&P 500 (VIX), in %. Sources: Refinitiv Datastream, ESMA.

Note: EURO STOXX 50 implied volatilities, measured as price indices, in %. Sources: Refinitiv Datastream, ESMA.
**Sovereign-bond markets**

### A.15 EU sovereign bond issuance and outstanding

<table>
<thead>
<tr>
<th>4Q18</th>
<th>4Q19</th>
<th>4Q20</th>
<th>4Q21</th>
<th>4Q22</th>
<th>4Q23</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>250</td>
</tr>
</tbody>
</table>

- Outstanding non-EA
- Outstanding EA
- Non-EA issuance (rhs)
- EA issuance (rhs)

**Note:** Sovereign bond gross issuance in the EEA30 (rhs), EUR bn, and outstanding amounts, EUR tn. Maturities < 12 months are excluded. Sources: Refinitiv EIKON, ESMA.

### A.16 EU sovereign bond issuance by credit rating

<table>
<thead>
<tr>
<th>4Q18</th>
<th>4Q19</th>
<th>4Q20</th>
<th>4Q21</th>
<th>4Q22</th>
<th>4Q23</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>AA</td>
<td>A+</td>
<td>A</td>
<td>AAA+ to AA-</td>
<td>Below AA-</td>
</tr>
</tbody>
</table>

**Note:** Sovereign bond gross issuance in the EEA30 by rating bucket, EUR bn. Avg. rating weighted average rating computed as a one-year moving average of ratings converted to a numerical scale (AAA=1, AA+=2, etc.) excluding non-rated bonds. Maturities < 12 months are excluded. Sources: Refinitiv EIKON, ESMA.

### A.17 EU sovereign bond rating distribution

- AAA
- AA
- A
- BBB
- BB and lower
- NR

**Note:** Outstanding amount of sovereign bonds in the EEA30 as of issuance date by rating category, in % of the total. Maturities < 12 months are excluded. Sources: Refinitiv EIKON, ESMA.

### A.18 Net EU sovereign bond issuance by country

<table>
<thead>
<tr>
<th>4YQ3</th>
<th>4YQ2</th>
<th>4YQ1</th>
<th>4YQ0</th>
<th>4YQ23</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
</tr>
</tbody>
</table>

**Note:** Quarterly net issuance of EEA30 sovereign debt by country, EUR bn. Net issuance calculated as the difference between new issuance over the quarter and outstanding debt maturing over the quarter. Highest and lowest quarterly net issuance in the past year are reported. EEA30 total on right-hand scale. All maturities are included. Sources: Refinitiv EIKON, ESMA.
A.19 EU and US 10Y sovereign yields

![Chart showing EU and US 10Y sovereign yields]

Note: Yields on 10Y sovereign bonds, selected countries, in %. 1Y-MA=one-year moving average of EA 10Y bond indices computed by Datastream.
Sources: Refinitiv Datastream, ESMA.

A.20 EU 10Y sovereign spreads

![Chart showing EU 10Y sovereign spreads]

Note: Selected 10Y EA sovereign bond risk premia (vs. DE Bunds), in %.
Sources: Refinitiv Datastream, ESMA.

A.21 EU sovereign yield correlation dispersion

![Chart showing EU sovereign yield correlation dispersion]

Note: Dispersion of correlations between 10Y DE Bunds and 15 other EU27 countries’ sovereign bond redemption yields over a 60-day rolling window.
Sources: Refinitiv Datastream, ESMA.

A.22 EU equity-sovereign bond returns correlation dispersion

![Chart showing EU equity-sovereign bond returns correlation dispersion]

Note: Dispersion of the correlation between daily returns of national equity indices and national sovereign debt return index, for 16 countries in the EU27, over a 60-day rolling window.
Sources: Refinitiv Datastream, ESMA.

A.23 EU 10Y sovereign bond volatility

![Chart showing EU 10Y sovereign bond volatility]

Note: Annualised 40-day volatility of 10Y sovereign bonds, selected countries, in %. 1Y-MA=one-year moving average of EA 10Y bond indices computed by Datastream.
Sources: Refinitiv Datastream, ESMA.

A.24 Global sovereign CDS spreads

![Chart showing Global sovereign CDS spreads]

Note: Datastream CDS sovereign indices (5 years, mid-spread), in bps.
Sources: Refinitiv Datastream, ESMA.
A.25
EU sovereign bid-ask spread

Note: Bid-ask spread as a monthly average of bid-ask spreads weighted by trading volumes for bonds both traded on one of 12 EU27 domestic markets (AT, BE, DE, ES, FI, FR, GR, IE, IT, NL, PT and SI) and Euro MTS, in EUR.
Sources: MTS, ESMA.

A.26
ESMA composite sovereign bond liquidity index

Note: Composite indicator of market liquidity in the sovereign bond market for the domestic and Euro MTS platforms, computed by applying the principal component methodology to four input liquidity measures (Arithmetic illiquidity coefficient, Bid-ask spread, Roll illiquidity measure and Turnover). The indicator range is between 0 (higher liquidity) and 1 (lower liquidity).
Sources: MTS, ESMA.

A.27
EU sovereign bond liquidity

Note: Liquidity measured as median across countries of the bid-ask yields difference for 10Y sovereign bonds, in %.
Sources: Refinitiv EIKON, ESMA.

A.28
EU sovereign bond liquidity dispersion

Note: Dispersion of liquidity measured as median across countries of the bid-ask yields difference for 10Y sovereign bonds, in %. Lower figures mean more liquidity and vice-versa. 22 EEA30 countries are included.
Sources: Refinitiv EIKON, ESMA.

A.29
EU sovereign bond futures liquidity

Note: One-month moving averages of the Hui-Heubel illiquidity indicator for selected 10Y sovereign bond futures, in %.
Sources: Refinitiv Datastream, ESMA.

A.30
EU sovereign bond redenomination risk

Note: Difference between 5Y CDS spreads under the 2014 ISDA definition (where debt redenomination is a credit event), and under the 2003 ISDA definition (where it is not), in bps.
Sources: Refinitiv Datastream, ESMA.
Corporate-bond markets

A.31 EU corporate yields by credit rating

- Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
- AAA BB BBB BB and lower NR

Note: ICE BofAML EA corporate bond redemption yields by rating, in %. 1Y-MA=one-year moving average of all indices. Sources: Refinitiv Datastream, ESMA.

A.32 EU corporate spreads by credit rating

- Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
- AAA BB BBB BB and lower NR

Note: ICE BofAML EA corporate bond option-adjusted spreads by rating, in bps. 1Y-MA=one-year moving average of all indices. Sources: Refinitiv Datastream, ESMA.

A.33 EU corporate rating distribution

- 4Q18 4Q19 4Q20 4Q21 4Q22 4Q23
- AAA AA A BBB BB and lower NR

Note: Outstanding amount of corporate bonds in the EEA30 as of issuance date by rating category, in % of the total. Maturities < 12 months are excluded. Sources: Refinitiv Eikon, ESMA.

A.34 EU corporate bid-ask spread and Amihud indicator

- Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
- Bid-ask 1Y-MA Amihud (rhs)

Note: Markit iBoxx EUR Corporate bond index bid-ask spread, in bps, computed as a one-month moving average of the constituents bid-ask spread. 1Y-MA=one-year moving average of the bid-ask spread. Amihud liquidity coefficient index between 0 and 1. Highest value indicates less liquidity. Sources: IHS Markit, ESMA.

A.35 EU corporate debt redemption profile by sector

- 4Q23 4Q24 4Q25 4Q26 4Q27 4Q28
- Non-financials Financials

Note: Quarterly redemptions over 5Y-horizon by EEA30 private financial and non-financial corporates, EUR bn. 1Y-change=difference between the sum of this year’s (four last quarters) and last year’s (8th to 5th last quarters) redemptions. Maturities < 12 months are excluded. Sources: Refinitiv Eikon, ESMA.

A.36 EU sovereign-corporate yield correlation

- Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
- Top 25% Core 50% Bottom 25% Median

Note: Dispersion of correlation between Barclays Aggregate for corporate and 10Y sovereign bond redemption yields for AT, BE, ES, FI, FR, IT and NL.
A.37 EU covered bond spreads

Credit quality

A.38 EU hybrid capital instruments issuance

A.39 Credit rating distribution of EU covered bonds

A.40 EU SFI rating changes

A.41 EU non-financial corporate rating changes

A.42 Size of EU credit rating changes

Note: iBoxx EUR covered bond option-adjusted spreads by rating, in bps. 1Y-MA=one-year moving average of all indices. Sources: Refinitiv Datastream, ESMA.

Note: Outstanding amount of covered bonds in the EEA30 as of issuance date by rating category, in % of the total. Maturities < 12 months are excluded. Sources: Refinitiv EIKON, ESMA.

Note: Aggregate number of notch changes on securitised assets issued in the EEA with long-term ratings, for upgrades and downgrades. Sources: RADAR, ESMA.

Note: Number of upgrades minus downgrades of non-financial corporate issuers for ES, GR, IE, IT and PT, in % of outstanding ratings. Ratings from Fitch Ratings, Moody’s and S&P’s. Sources: RADAR, ESMA.

Note: Average change in notches for long-term EEA ratings for issuers and instruments (excl. ICAP and CERVED). Sources: RADAR, ESMA.
A.43 EU credit ratings drift by asset class

Note: 3-month moving average of net changes in EEA outstanding ratings from all credit rating agencies, excluding CERVEN and ICAP, by asset class, computed as the percentage of upgrades minus the percentage of downgrades. Fin - Financials, Ins - Insurance, NFC - non-financials. Sources: RADAR, ESMA.

A.44 EU credit ratings volatility by asset class

Note: 3-month moving average of net changes in EEA outstanding ratings from all credit rating agencies, excluding CERVEN and ICAP, by asset class, computed as the percentage of upgrades minus the percentage of downgrades. Fin - Financials, Ins - Insurance, NFC - non-financials. Sources: RADAR, ESMA.

A.45 EU corporate issuer downgrades

Note: Number of EEA corporate issuers with at least one bond downgraded, and ratio of downgraded corporate issues over upgrades and downgrades (3 week moving average). Issuers with same reported parent treated as one issuer. Sources: RADAR, ESMA.

A.46 EU credit rating outlook by rating category

Note: Distribution of outlooks for EEA corporate non financial instruments (ISINs) with outlook rated by the Big 5 (Fitch, Moody's, S&P, Scope and DBRS) by category value over the total ratings per category value. Cutoff date 31/12/2023. Sources: RADAR, ESMA.

Securities lending

A.47 EU securities lending market value by asset type

Note: value on loan of securities issued in the EEA by asset class, in EUR bn. Sources: FIS Astec, Quandl, ESMA.

A.48 EU securities utilisation rate

Note: Utilisation rate of securities issued in the EEA, by asset class. Utilisation rate in percent: the ratio of the market value of securities lent over the market value of securities available for lending. Sources: FIS Astec, Quandl, ESMA.
Short selling

A.51 Dispersion of net short positions in EU shares

Note: Dispersion of net short selling positions by country in the EEA30 as percentage of market value of those positions relative to each country’s blue-chip index market value. The 0.1% threshold entered into force on 31 January 2022 for all EU countries. NO, IS and LI continue to use the 0.2% threshold until the CDR 2022/27 is incorporated in their national legislation. Partially or fully missing data for several countries.
Sources: NCAs, Refinitiv Datastream, ESMA.

A.53 Net short positions in industrial shares and equity prices

Note: Market value of net short selling positions in EA industrial shares as percentage of market value of EA industrial sectoral index, 01/03/2021=100. The 0.1% threshold entered into force on 31 January 2022 for all EU countries. NO, IS and LI continue to use the 0.2% threshold until the CDR 2022/27 is incorporated in their national legislation. Partially or fully missing data for several countries.
Sources: NCAs, Refinitiv Datastream, ESMA.

A.50 Global sovereign bond utilisation rate by region

Note: Utilisation rate of sovereign bonds issued in EEA countries, in the US and in the UK. Utilisation rate in percent: the ratio of the market value of securities lent over the market value of securities available for lending.
Sources: FIS Astec, Quandl, ESMA.
Money markets

A.55
Euro area interest rates

Note: EA money market interest rates, in %.
Sources: Refinitiv Datastream, ESMA.

A.56
Euribor rates by maturity

Note: Euribor interest rates by maturity, in %.
Sources: Refinitiv Datastream, ESMA.

A.57
Interbank rate spreads to overnight index swap

Note: Spreads between 3M interbank interest rates and 3M overnight index swaps, in bps.
Sources: Refinitiv Datastream, ESMA.

A.58
Interbank overnight activity

Note: 1M-MA of daily lending volumes on Euro short-term rate (€STR), EUR bn, and Sterling Overnight Index Average (SONIA), GBP bn.
Sources: ECB, Refinitiv EIKON, ESMA.

Commodities

A.59
Dutch Natural Gas Futures open interest

Note: Open interests on Dutch Natural Gas Futures by commercial, financials traders (funds and other financial institutions) and investment firms, in mn. Spikes might reflect data quality issues.
Sources: ESMA Weekly Commodity Derivatives Positions Reporting, ESMA.

A.60
Dutch Natural Gas Futures net positions

Note: Net number of positions (long minus short) on Dutch Natural Gas Future held by commercial traders and financials traders (funds and other financial institutions) in mn.
Sources: ESMA Weekly Commodity Derivatives Positions Reporting, ESMA.
A.61
Commodity derivatives realised volatility

Note: Annualised 40 day volatility of S&P GSCI commodity indices and Brent price, in %. 1Y-MA=one-year moving average computed using S&P GSCI. Sources: Refinitiv Datastream, ESMA.
### Asset management

#### Fund industry

**A.62 EU fund performance**

![Graph of EU fund performance](image)

- Alternatives
- Equity
- Commodity
- Real Estate
- Mixed Assets

Note: EU27 domiciled investment funds' annual average monthly returns, in %.
Sources: Thomson Reuters Lipper, ESMA.

**A.63 Volatility of EU fund returns**

![Graph of EU fund volatility](image)

Note: Annualised 40D historical return volatility of EU27 domiciled mutual funds, in %.
Sources: Thomson Reuters Lipper, ESMA.

**A.64 EU fund assets by market segment**

![Graph of EU fund assets by market segment](image)

- Alternative
- Bond
- Equity
- Commodity
- Mixed
- Other
- Real Estate

Note: AuM of EA funds by fund type, EUR tn.
Sources: ECB, ESMA.

**A.65 EU fund NAV by legal form**

![Graph of EU fund NAV by legal form](image)

Note: NAV of EEA30 funds, EUR tn.
Sources: EFAMA, ESMA.

**A.66 EU fund NAV by market segment**

![Graph of EU fund NAV by market segment](image)

Note: NAV of EA investment funds by fund type, EUR tn.
Sources: ECB, ESMA.

**A.67 EU fund leverage by market segment**

![Graph of EU fund leverage by market segment](image)

Note: Leverage of EA investment funds by fund type computed as the AuM/NAV ratio.
Sources: ECB, ESMA.
EU fund flows by fund type

A.68

EU fund flows by regional investment focus

A.69

EU bond fund flows by regional investment focus

A.70

EU equity fund flows by regional investment focus

A.71

Net flows in EU bond funds

A.72

Net asset valuation of EU funds

A.73

Note: EU27-domiciled funds’ quarterly flows, in % of NAV.

Sources: Refinitiv Lipper, ESMA.

Note: EU27 bond and equity fund net flows (BF and EF) by regional investment focus, in % of NAV.

Sources: Refinitiv Lipper, ESMA.

Note: EU27 bond fund monthly flows by regional investment focus, in % of NAV.

Sources: Refinitiv Lipper, ESMA.

Note: EU27 Equity fund monthly flows by regional investment focus, in % of NAV.

Sources: Refinitiv Lipper, ESMA.

Note: Two-month cumulative net flows for EU27 bond funds, EUR bn. Funds investing in corporate and government bonds that qualify for another category are only reported once e.g. funds investing in emerging government bonds reported as Emerging; funds investing in HY corporate bonds reported as HY).

Sources: Refinitiv Lipper, ESMA.
A.74
Liquidity risk profile of EU bond funds

A.75
Cash held by EU corporate bond funds

A.76
Credit quality of EU bond funds’ assets

A.77
Maturity of EU bond funds’ assets

Money market funds

A.78
EU MMF performance

A.79
MMF flows by domicile

Note:
Quarterly effective average maturity of EU27 fund assets, in years;
ESMA liquidity ratio (rhs, in reverse order).
Sources: Refinitiv Lipper, ESMA.

Note:
Median and difference between the 1st and 3rd quartiles of the value of cash held by EU27 corporate bond funds, in % of portfolio holdings. Short positions can have a negative value.
Sources: Refinitiv Lipper, ESMA.

Note:
Quarterly average credit quality (S&P ratings; 1 = AAA; 4 = BBB; 10 = D) for EU27-domiciled funds.
Sources: Refinitiv Lipper, ESMA.

Note:
Weighted average effective maturity of EU bond funds’ assets, data in years.
Sources: Thomson Reuters Lipper, ESMA.

Note:
Monthly net flows for MMFs by domicile, in % of NAV.
Sources: Refinitiv Lipper, ESMA.
**A.80 EU MMF flows by geographical focus**

Note: EU27 MMF monthly net flows by geographical focus, in % of NAV of the geographical area.
Sources: Refinitiv Lipper, ESMA.

**A.81 EU MMF assets and leverage**

Note: NAV and AuM of EA MMFs, EUR tn. Leverage computed as the AuM/NAV ratio. 5Y-MA=five-year moving average of the leverage ratio.
Sources: ECB, ESMA.

**A.82 EU MMF maturity**

Note: Weighted average maturity (WAM) and weighted average life (WAL) of Europe-domiciled MMFs, in days. Aggregation carried out by weighting individual MMFs’ WAM and WAL by AuM.
Sources: Fitch Ratings, ESMA.

**A.83 EU MMF liquidity**

Note: Daily and weekly liquidity includes all assets maturing overnight and shares by AAA MMFs, securities issued by highly rated sovereigns with a maturity of less than one year, in % of total assets. Aggregation carried out using individual Europe-domiciled MMF data weighted by AuM.

**Alternative funds**

**A.84 EU hedge fund returns**

Note: EU27-domiciled alternative fund monthly returns, in %. The graph shows the returns’ median, the difference between the returns corresponding to the 2nd and 98th percentiles and the difference between the returns corresponding to the 1st and 3rd quartiles.
Sources: Refinitiv Lipper, ESMA.

**A.85 EU alternative fund performance by strategy**

Note: Growth of EU27 alternative fund performance indices by strategy: hedge fund index (HF), arbitrage (Arb), commodity trading advisor (CTA), distressed debt, event driven, fixed income (FI), long/short equity (LS), macro, multi-strategy, relative value (RV), in %.
Sources: Eurekahedge, ESMA.
A.86 EU alternative fund flows by domicile

Note: Alternative mutual fund monthly net flows by domicile, in % of NAV. Data on alternative mutual funds represent only a subset of the entire alternative fund industry. Sources: Refinitiv Lipper, ESMA.

A.87 EU alternative fund assets and leverage

Note: NAV and AuM of EU alternative funds. EUR bn. Leverage computed as the AuM/NAV ratio. 1Y-MA=one-year moving average for the leverage ratio. Sources: ECB, ESMA.

A.88 Alternative fund flows by geographical focus

Note: Alternative mutual funds’ monthly net flows by geographical focus, in % of NAV of the geographical area. Data on alternative mutual funds represents

A.89 Direct and indirect EU property fund flows

Note: Two-month cumulative flows for direct and indirect EU27-domiciled property funds. Indirect property funds invest in securities of real estate companies, including Real Estate Investment Trusts (REITs), in EUR bn. Sources: Morningstar, ESMA.
Exchange-traded funds

A.90 EU ETF returns

8
6
4
2
0
-2
-4
Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
2nd/98th perc. Weighted average Median

Note: EU27-domiciled ETFs’ average yearly returns by month, asset-weighted, in %. The graph shows the median and average asset-weighted returns and the difference between the returns corresponding to the 98th and the 2nd percentile (light blue corridor).
Sources: Refinitiv Lipper, ESMA.

A.91 EU ETF returns volatility

20
16
12
8
4
Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23

Note: Annualised 40-day historical return volatility of EU27-domiciled ETF, in %.
Sources: Refinitiv Lipper, ESMA.

A.92 EU ETF and NAV by domicile

3,500
3,000
2,500
2,000
1,500
1,000
500
0
Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
EU27 ETF NAV (rhs) US ETF NAV (rhs)

Note: NAV, EUR tn, and number of ETFs by domicile.
Sources: Refinitiv Lipper, ESMA.

A.93 EU ETF NAV by asset type

1,500
1,250
1,000
750
500
250
0
Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
Alternative Bond Commodity Equity

Note: NAV of EU27 ETFs by asset type, EUR bn.
Sources: Refinitiv Lipper, ESMA.

A.94 EU ETF tracking error

1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
ETF MF index trackers Non-UCITS MF index trackers UCITS

Note: Tracking error defined as standard deviation of mutual fund excess returns compared with benchmark. The graph shows the tracking error for EU27 ETFs and mutual funds both UCITS and non-UCITS. Yearly standard deviation reported on monthly frequency. End-of-month data.
Sources: Refinitiv Lipper, ESMA.

A.95 EU and US ETF flows by domicile

2.0
1.5
1.0
0.5
0.0
-0.5
Dec-21 Apr-22 Aug-22 Dec-22 Apr-23 Aug-23 Dec-23
EU27 US

Note: ETF net flows by domicile, in % of NAV.
Sources: Refinitiv Lipper, ESMA.
A.96
Assets of leveraged EU ETFs

Note: Total assets of leveraged long and leveraged short ETFs with primary listings in Europe, in EUR bn and total number of products (rhs), in thousand. Sources: ETFGI, ESMA

A.97
Average beta values for EU ETFs

Note: Leveraged ETFs are self-reported. The annual average monthly beta is measured as the volatility of a fund return in comparison to its benchmark. An unleveraged ETF replicating its benchmark will typically have a beta close to 1.0.
Sources: Refinitiv Lipper, ESMA.

A.98
Assets of EU ETFs by replication method

Note: Total assets of physical and synthetic ETFs with primary listings in Europe, in EUR bn and total number of products (rhs). Sources: ETFGI, ESMA

A.99
Flows into EU ETFs by replication method

Note: Net flows of physical and synthetic ETFs with primary listings in Europe, in EUR bn. Sources: ETFGI, ESMA.
Consumers

Investment resources available to households

A.100 EU household disposable income growth

A.101 EU household saving and investment rates

Note: Annualised growth rate of household gross disposable income adjusted for changes in pension entitlements for EU27 countries, in %. SY-MA=five-year moving average of the growth rate.
Sources: Eurostat, ESMA.

A.102 EU investor sentiment

A.103 EU household asset growth

Note: Sentix Sentiment Indicators for the EA retail and institutional investors on a ten-year horizon. The zero benchmark is a risk-neutral position.
Sources: Refinitiv Datastream, ESMA.

Asset allocation by retail investors

A.104 EU household growth rates in financial assets

A.105 EU household financial assets by class

Note: Quarterly asset growth rates of financial assets held by EU27 households, in %. SY-MA=five-year moving average of the growth rates.
Sources: ECB, ESMA.

Note: Financial assets of EU27 households, EUR tn, and share of securities investments (debt securities, equities and IF shares) in total, in %. IF shares=investment fund shares. Other financial assets=insurance technical reserves, financial derivatives, loans granted and other accounts receivable.
Sources: ECB, ESMA.
A.106
Share of securities investments in EU household assets

Note: Share of debt securities, equities and IF shares into the financial assets of EU27 households, in %. IF shares=investment fund shares.
Sources: ECB, ESMA.

A.107
EU household net financial asset flows

Note: Net acquisition of financial assets and net incurrence of liabilities for EA households as a share of their gross disposable income adjusted for changes in pension entitlements, based on a one-year rolling period; in %. IF shares=investment fund shares. Other financial assets=insurance technical reserves, financial derivatives, loans granted and other accounts receivable. Net financial flows=net household lending (positive values) or borrowing (negative values) is from sectoral financial accounts. Liabilities multiplied by -1 to present as outflows.
Sources: ECB, ESMA.

A.108
UCITS net flows by asset class for retail investors

Note: EU27 UCITS annual net flows, retail investors only, at quarterly frequency by asset class, EUR bn.
Sources: Refinitiv Lipper, ESMA.

A.109
Equity UCITS market size by management type

Note: EU27 equity UCITS market size, retail and institutional investors, by management type. All observations for which information on fund value, performance, net flows, subscription and redemption fees are available, in EUR tn. Share of passive and ETFs, in %.
Sources: Refinitiv Lipper, ESMA.

A.110
Equity UCITS net flows by management type

Note: EU27 equity UCITS annual net flows from retail and institutional investors at quarterly frequency by management type, EUR bn.
Sources: Refinitiv Lipper, ESMA.

A.111
Bond UCITS market size by management type

Note: EU27 bond UCITS market size, retail and institutional investors, by management type. All observations for which information on fund value, performance, net flows, subscription and redemption fees are available, in EUR tn. Share of passive and ETFs, in %.
Sources: Refinitiv Lipper, ESMA.
**Costs and performance**

**A.114 EU household portfolio returns**

Note: One-year moving average of the monthly gross nominal and real returns of a stylised EU household portfolio, in %. Asset weights, computed using National Financial Accounts by Institutional Sectors, are 36% for collective investment schemes, 39% for deposits, 22% for shares and 3% for debt securities. Costs, fees and other charges incurred for buying, holding or selling these instruments are not taken into account.

Sources: Refinitiv Datastream, Refinitiv Lipper, ECB, Eurostat, ESMA.

**A.115 EU fund synthetic risk and reward indicator**

Note: The calculated Synthetic Risk and Reward Indicator (SSRI) is based on ESMA SRRI guidelines. It is computed via a simple 5-year annualised volatility measure which is then translated into categories 1-7 (with 7 representing higher levels of volatility).

Sources: Refinitiv Lipper, ESMA.

**A.116 UCITS retail investor dispersion of net performance**

Note: Dispersion of EU27 UCITS net performances, retail investors only, adjusted for total expense ratio and load fees, in %. Distribution represents selected EU27 markets.

Sources: Refinitiv Lipper, ESMA.

**A.117 UCITS retail investors net performance by asset class**

Note: Evolution of net annual performance (net of ongoing costs (TER), subscription and redemption fees) of EU27 UCITS, retail investors only, by asset class, in %.

Sources: Refinitiv Lipper, ESMA.
Equity UCITS total costs by management type

Note: Evolution of total costs (ongoing costs (TER), subscription and redemption fees) of EU27 equity UCITS, retail and institutional investors, by management type, in bps.
Sources: Refinitiv Lipper, ESMA.

Equity UCITS net performance by management type

Note: Evolution of net annual performance (net of ongoing costs (TER), subscription and redemption fees) of EU27 equity UCITS, retail and institutional investors, by management type, in %.
Sources: Refinitiv Lipper, ESMA.

Bond UCITS total costs by management type

Note: Evolution of total costs (ongoing costs (TER), subscription and redemption fees) of EU27 bond UCITS, retail and institutional investors, by management type, in bps.
Sources: Refinitiv Lipper, ESMA.

Bond UCITS net performance by management type

Note: Evolution of net annual performance (net of ongoing costs (TER), subscription and redemption fees) of EU27 bond UCITS, retail and institutional investors, by management type, in %.
Sources: Refinitiv Lipper, ESMA.
Complaints

A.122 EU complaints

Note: Number of complaints recorded by quarterly-reporting NCAs (n=13) via given reporting channels. 'NCA'=Reports lodged directly by consumers with NCAs. 'Firms'=Complaints recorded by NCAs via firms. 'Average total'=Average total number from 2Q21 to 3Q23.
Sources: ESMA complaints database.

A.123 EU complaints by type of firm involved

Note: Share of complaints for quarterly-reporting NCAs (n=13) received direct from consumers and via firms by type of firm involved, excluding complaints without firm type recorded. % ‘Total with firm type reported’=Number of complaints via these reporting channels excluding those with no firm type recorded. ‘MiFID IF’=MiFID investment firm, ‘UCITS Manco’=UCITS management company. ‘Art3-exempt firm’=Firm exempt under MiFID Article 3.
Sources: ESMA complaints database.

A.124 EU complaints by underlying cause

Note: Share of complaints for quarterly-reporting NCAs (n=13) received direct from consumers and via firms by underlying cause, excluding complaints with no cause recorded. % ‘Unauth. bus.’=Unauthorised business, ‘Withdrawals’=Withdrawal, ‘General admin’=General administrative, ‘Info quality’=Quality or lack of information. ‘Total with cause reported’=Number of complaints via these reporting channels categorised by one of the listed causes.
Sources: ESMA complaints database.

A.125 EU complaints by type of financial instrument

Note: Share of complaints from quarterly-reporting NCAs (n=13) received direct from consumers and via firms by type of financial instrument, where none of the instruments listed was reported. ‘Total with instrument cited’=Number of complaints via these reporting channels excluding those with instrument type not reported or reported as ‘other’ or ‘N/A’. ‘Total complaints’=Number of complaints via these reporting channels whether or not further categorisation possible. ‘CFDs’=Contracts for Differences.
Sources: ESMA complaints database.

A.126 EU complaints by MiFID II service category

Note: Share of complaints for quarterly-reporting NCAs (n=13) received direct from consumers and via firms recorded as associated with a given MiFID service, excluding complaints with no such category recorded, all reporting channels. % ‘Total with MiFID service reported’=Total complaints received via these reporting channels recorded as associated with a MiFID service.
Sources: ESMA complaints database.
Infrastructures and services

Trading venues and MiFID entities

A.127 EU equity trading by trading type

Note: Type of equity trading in the EEA as a percentage of total equity turnover. Total equity trading turnover in EUR trillion (rhs). Last available data point is November 2023. Sources: FIRDS, FITRS, ESMA.

A.128 EU trading turnover by type of assets

Note: Monthly turnover on EEA30 trading venues by type of assets, in EUR bn. Data for Aquis Exchange, CBOE Europe Equities, Equiduct, London Stock Exchange and Turquoise are not reported for bonds, ETFs and UCITS. Sources: FESE, ESMA.

A.129 EU equity market concentration

Note: Concentration of national value of equity trading by national indices computed as a 1M-MA of the Herfindahl-Hirschmann Index, in %. Cboe indices included are AT 20, BE 20, DE 30, DK 25, ES 35, FI 25, FR 40, IE 20, IT 40, NL 25, PT 20 and SE 30. Sources: Cboe, ESMA.

A.130 Cyberattacks on financial sector entities


Central counterparties

A.131 Initial margins held at EU and UK CCPs

Note: Initial margin required as well as additional margin posted by EU and UK CCPs, in EUR bn. Sources: Clarus Financial Technology, CPMI-IOSCO PQD, ESMA.

A.132 Margin breaches at selected EU CCPs

Note: Average and maximum margin breach size over the past 12 month at selected EU CCPs, as a percentage of the total margin held, as of 30 December 2022. (Data for Athen Clearing, BME Clearing, CC&G and Euro CCP not reported). Sources: Clarus Financial Technology, PQD, ESMA.
A.133
Initial margins held at EU CCPs by asset class

Note: Outstanding amounts of initial margin required and excess collateral received by EU27 CCPs for derivatives. in EUR bn.
Sources: TRs, ESMA.

A.134
Initial margins held at EU and UK CCPs by account

Note: Total initial margin required, split by house accounts (participants positions on their own account), client gross (when initial margin for the positions of indirect participants must be provided for each indirect participant’s own position) and client net (when positions are netted within a group of clients). As of 31st December 2022. Data for CCG, BMEC, OMI and ATHEX from 30th September 2022.
Sources: Clarus Financial Technology, CPMI-IOSCO PQD, ESMA.

A.135
IRD clearing volumes by CCP

Note: Quarterly notional volumes cleared for OTC and ETD IRDs in EUR, USD, JPY or GBP. Market shares by CCP in % of total quarterly volumes cleared for these products. Total volumes in EUR tn.
Sources: Clarus Financial Technology, ESMA.

A.136
Credit derivatives clearing volumes by CCP

Note: Quarterly notional volumes cleared for CDS, CDX and CDX futures & swaptions in EUR, USD, JPY or GBP. Market shares by CCP in % of total quarterly volumes cleared for these products. Total volumes in EUR tn.
Sources: Clarus Financial Technology, ESMA.

A.137
EU IRD trading volumes

Note: Monthly trading volumes for EU27-currency-denominated IRD products. Products include IRS, basis swaps, FRA, inflation swaps, OIS. 40-day moving average notional. USD in. ISDA SwapsInfo data are based on publicly available data from DTCC Trade Repository LLC and Bloomberg Swap Data Repository.
Sources: ISDA SwapsInfo, ESMA.

A.138
EU CDS index trading volumes

Note: Monthly trading volumes for the main EUR CDS indices including iTraxx Europe, iTraxx Europe Senior Financials, 40-day moving average notional. USD in. ISDA SwapsInfo data are based on publicly available data from DTCC Trade Repository LLC and Bloomberg Swap Data Repository.
Central securities depositories

A.139 Settlement activity in EU CSDs by asset class

Note: Value of settlement instructions at EEA level, in EUR tn. One-week moving averages. Extreme values removed.
Sources: ESMA.

A.140 Settlement fails in EU CSDs by asset class

Note: Settlement fails as a % of total value of settlement instructions at EEA level. One-week moving averages. Extreme values removed.
Sources: ESMA.

A.141 Number of settlement instructions in EU CSDs

2,000

Note: Volume of settlement instructions at EEA level, in thousands. One-week moving averages. Extreme values removed.
Sources: ESMA.

A.142 Number of failed settlement instructions in EU CSDs

40

Note: Settlement fails as a % of total volume of settlement instructions at EEA level. One-week moving averages. Extreme values removed.
Sources: ESMA.

Credit rating agencies

A.143 Outstanding EU credit ratings issued by Big 3 CRAs

Note: Evolution of the number of outstanding EEA issuer and instrument ratings by debt category, indexed 1Q16=100. S&P, Moody’s and Fitch. NFC- non financial, Fin - financial, Ins - insurance, Intl - international, Reg - regional. Supranational sovereigns omitted due to very small population.
Sources: RADAR, ESMA.

A.144 Share of outstanding EU credit ratings: Big 3 CRAs vs. rest

Note: Share of outstanding ratings of EEA issuers and instruments from Big 3 CRAs (S&P, Moody’s and Fitch) and ratings from all other CRAs in %.
Sources: RADAR, ESMA.
A.145 EU SFI ratings issued by collateral type

Note: Number of rated EEA structured finance instruments by asset class. ABS=Asset-backed securities (r.h.axis); CDO=Collateralised debt obligations; CMBS=Commercial mortgage-backed securities; OTH=Other; RMBS=Residential mortgage-backed securities. Asset backed commercial paper omitted due to very small sample size.
Sources: RADAR, ESMA.

A.146 EU SFI ratings outstanding by collateral type

Note: Outstanding ratings of EEA structured finance instruments by asset class, in % of total. ABS=Asset-backed securities; CDO=Collateralised debt obligations; CMBS=Commercial mortgage-backed securities; OTH=other; RMBS=Residential mortgage-backed securities. Asset backed commercial paper omitted due to very small sample size.
Sources: RADAR, ESMA.

A.147 Changes in outstanding EU SFI ratings

Note: Number of withdrawn and new ratings for structured finance instruments, EEA ratings.
Sources: RADAR, ESMA.

A.148 Changes in outstanding EU covered bond ratings

Note: Number of withdrawn and new ratings for covered bond ratings, EEA ratings.
Sources: RADAR, ESMA.
**Financial benchmarks**

**A.149**  
IRDs linked to new RFRs

**A.150**  
IRDs linked to Euribor and Libor

**A.151**  
€STR rate

**A.152**  
€STR volumes

Note: €STR rates at 25th, 50th and 75th percentile of volume, in %.  
Sources: ECB, ESMA.

Note: Gross notional amount of IRD outstanding referencing new benchmarks, EUR tn.  
Sources: TRs, ESMA.

Note: €STR monthly number of transactions, in thousand, and monthly volumes, EUR tn, before trimming.  
Sources: ECB, ESMA.
Market based finance

Capital markets financing

A.153
Total EA market financing

Note: Liabilities of EA non-financial corporations (NFC), by debt type as a share of total liabilities. Others include: financial derivatives and employee stock options; insurance, pensions and standardised guarantee schemes; trade credits and advances of NFC; other accounts receivable/payable. Mkt. financing (rhs) = annual growth rate in debt securities, equity and investment fund (IF) shares, in %. Sources: ECB, ESMA.

A.155
EEA equity issuance by sector

Note: Equity gross issuance in the EEA30 by sector, EUR bn. Financials includes banking & investment services, insurance, investment trusts and real estate.
Sources: Refinitiv EIKON, ESMA.

A.157
Corporate bond issuance by maturity buckets

Note: Monthly share of corporate bond issuance by maturity bucket, in % (rhs) and average maturity at issuance (AWM), in years (rhs). Sources: Refinitiv Eikon, ESMA.

A.158
Corporate bond issuance by rating class

Note: Corporate bond gross issuance in the EEA30 by rating bucket, EUR bn. Avg. rating/weighted average rating computed as a one-year moving average of ratings converted to a numerical scale (AAA=1, AA++=2, etc.) excluding non-rated bonds. Maturities < 12 months are excluded. Sources: Refinitiv EIKON, ESMA.
**A.159**
Short-term EEA corporate debt issuance by sector

Note: Short-term corporate debt gross issuance in the EEA by sector, EUR bn. Maturities < 12 months are excluded.

**A.160**
EEA corporate bond issuance by sector

Note: Corporate bond gross issuance in the EEA by sector, EUR bn. Avg. rating-weighted average rating computed as a one-year moving average of ratings converted into a numerical scale (AAA=1, AA+=2, etc.). Maturities < 12 months are excluded.
Sources: Refinitiv EIKON, ESMA.

**A.161**
EU securitised products issuance and outstanding

Note: Retained and placed securitised products gross issuance in Europe, EUR bn, and outstanding amounts (rhs), EUR tn. Data includes ABS, CDO, MBS, SME, WBS.
Sources: AFME, ESMA.

**A.162**
EEA covered bond issuance and outstanding

Note: Covered bond gross issuance in the EEA by sector, EUR bn, and outstanding amounts (rhs), EUR tn. Maturities < 12 months are excluded.
Sources: Refinitiv EIKON, ESMA.

**A.163**
EA non-bank wholesale funding

Note: Amount of wholesale funding provided by EA non-banks, EUR tn, and growth rate (rhs), in %. Securitised assets are net of retained securitisations. Resident OFI reflects the difference between the total financial sector and the known sub-sectors within the statistical financial accounts (i.e. assets from banking sector, insurances, pension funds, financial vehicle corporations, investment funds and money market funds).
Sources: ECB, ESMA.
Market-based credit intermediation

A.164 EU sovereign repo market specialness

Note: Median, 75th and 90th percentile of weekly specialness, measured as the difference between general collateral and special collateral repo rates on government bonds in nine EUR repo markets (AT, BE, DE, ES, FI, FR, IT, NL and PT).
Sources: CME Group Benchmark Administration Limited, ESMA.

A.165 EU sovereign repo market turnover

Note: Repo transaction volumes executed through CCPs in nine sovereign EUR repo markets (AT, BE, DE, ES, FI, FR, IT, NL and PT), EUR bn.
Sources: CME Group Benchmark Administration Limited, ESMA.

A.166 Total assets of EU MMFs and other financial institutions

Note: Total assets for EA MMFs and other financial institutions (OFI): investment funds (IF), financial vehicle corporations (FVC), Other OFI estimated with ECB Quarterly Sector Accounts, in EUR tn. Expressed in % of bank assets on rhs.
Sources: ECB, ESMA.

A.167 EU financial market interconnectedness

Note: EA loan and debt securities vis-à-vis MFI counterparts, as a share of total assets, investment funds and MMFs, in %.
Total funds includes: bond funds, equity funds, mixed funds, real estate funds, hedge funds, MMFs and other non-MMF investment funds.
Sources: ECB, ESMA.

A.168 Credit terms in EU SFT and OTC derivatives

Note: Weighted average of responses to the question: "Over the past three months, how have terms offered as reflected across the entire spectrum of EUR-denominated instruments in securities financing and OTC derivatives transaction types changed?" 1=tightened considerably, 2=tightened somewhat, 3=remained basically unchanged, 4=eased somewhat, and 5=eased considerably.
Sources: ECB, ESMA.

A.169 EU securities financing conditions

Note: Weighted average of responses to the question: "Over the past three months, how has demand for funding/how have liquidity and functioning for all EUR-denominated collateral types changed?" 1=increased/deteriorated considerably, 2=increased/deteriorated somewhat, 3=remained basically unchanged, 4=increased/improved somewhat, and 5=increased/improved considerably.
Sources: ECB, ESMA.
Sustainable finance

ESG investing

A.170 Global ESG leaders index performance

Note: MSCI ESG leaders total return indices, denominated in USD, indexed with 01/12/2021=100.
Sources: Refinitiv Datastream, ESMA.

A.172 EU ESG fund assets

Note: AuM of EU-domiciled ESG funds by type of fund, EUR bn, and share of ESG fund AuM in total fund AuM (rhs), in %.
Sources: Morningstar, Refinitiv Lipper, ESMA.

A.174 EU ESG equity fund returns

Note: ESG and non-ESG equity funds’ annual average monthly returns, asset weighted, in %.
Sources: Morningstar, Refinitiv Lipper, ESMA.

A.171 EU ESG indices annual returns

Note: Annual returns of the STOXX ESG Leaders 50 index (best-in-class strategy) and STOXX Europe Sustainability ex Alcohol, Gambling, Tobacco, Armaments & Firearms, and Adult Entertainment (AGTAFA, positive screening and exclusion-based strategy) measured as relative difference to the STOXX Europe 600, in percentage points
Sources: Refinitiv Datastream, ESMA.

A.173 EU fund flows by SFDR disclosure regime

Note: Cumulative net flows into EU-domiciled funds (excluding MMFs) by SFDR fund type since SFDR started to apply, EUR bn
Sources: Morningstar, ESMA.

A.175 EU ESG ETF assets

Note: AuM of EU-domiciled ESG ETFs by type of fund, EUR bn, and share of ESG ETF AuM in total ETF AuM (rhs), in %.
Sources: Morningstar, Refinitiv Lipper, ESMA.
Sustainable debt

A.176 EU ESG bonds outstanding

Note: Total amount of ESG bonds outstanding issued by EEA30-domiciled issuers, EUR bn.
Sources: Refinitiv EIKON, ESMA.

A.177 EU green bond quarterly issuance

Note: Green bond gross issuance in the EEA30 by sector, EUR bn.
Sources: Refinitiv EIKON, ESMA.

A.178 Labelled EU ESG bond issuance

Note: ESG bonds gross issuance in the EEA30, EUR bn per ESG bond category. Green bonds means aligned with CBI and/or ICMA principles, social, sustainability and sustainability-linked bonds means aligned with ICMA principles. Non-aligned ESG bonds means all ESG bonds not aligned with either the ICMA or the CBI principles.

A.179 EU social bond issuance by project type

Note: Social bond gross issuance in the EEA30 by project type, in %, as a share of total social bond gross issuance (rhs), in EUR bn.
Sources: Refinitiv EIKON, ESMA.

A.180 EU corporate green bond liquidity

Note: One-month moving average of the bid-ask spread of green and conventional bonds from green bond issuers included in the Markit iBoxx EUR Corporate bond index, in bps.
Sources: IHS Markit, ESMA.

A.181 EU sovereign green bond liquidity

Note: Bid-ask spread of green and conventional bonds from government, supranational and agency green bond issuers, as a monthly average of bid-ask spreads weighted by trading volumes across 13 EU27 domestic markets (AT, BE, DE, ES, FI, FR, GR, IE, IT, NL, PT and SI) and Euro MTS, in EUR.
Sources: MTS, ESMA.
**Carbon markets**

A.182 EU emission allowance prices

Note: Daily settlement price of European Emission Allowances (EUA) on European Energy Exchange spot market, in EUR/tCO2.
Sources: Refinitiv Datastream, ESMA.

A.183 EU emission allowance returns volatility

Note: Rolling 5-day standard deviation of daily changes in EU emission allowance spot prices, in %.
Sources: Refinitiv Datastream, ESMA.

A.184 Share of hedging positions in EUA futures by non-financials

Note: Share of hedging and non-hedging positions of non-financial corporations, in %.
Sources: ESMA commodity derivatives weekly position reporting.

A.185 Number of positions in EUA derivatives held by funds

Note: Weekly number of long and short (non-hedging) positions in EU emission allowance derivative contracts held by investment funds, four-week moving averages.
Sources: ESMA.

A.186 Number of EU-listed firms disclosing Scope 1 emissions

Note: Number of EEA-domiciled firms listed in the EU disclosing Scope 1 (direct) greenhouse gas emissions, by market capitalisation and emissions year. SMEs=below 200mn; Medium-large=from 200mn to 2bn; Large=from 2bn to 20bn; Very large=above 20bn.
Sources: Refinitiv EIKON, FIRDS, ESMA.

A.187 Share of EU-listed firms disclosing GHG emissions target

Note: Share of ESA-domiciled firms listed in the EU disclosing a greenhouse gas emission reduction target, by market capitalisation. SMEs=below 200mn; Medium-large=from 200mn to 2bn; Large=from 2bn to 20bn; Very large=above 20bn.
Sources: Refinitiv EIKON, FIRDS, ESMA.
Financial innovation

A.188
Crypto asset market capitalisation

Note: Market capitalisation of Bitcoin, Ethereum, Tether and other crypto-assets, in EUR bn.
Sources: CoinMarketCap, ESMA.

A.189
Crypto asset prices

Note: Prices of selected crypto-assets, EUR thousand.
Sources: Refinitiv Datastream, ESMA.

A.190
Crypto asset price volatilities

Note: Annualised 30-day historical volatility of EURO STOXX 50, and USD-denominated returns for Bitcoin, Ethereum and gold, in %.
Sources: Refinitiv Datastream, ESMA.

A.191
Crypto asset trading volumes

Note: Trading volumes of Bitcoin, Ethereum, Tether and other crypto-assets, in EUR tn.
Sources: CoinMarketCap, ESMA.

A.192
Stablecoin market capitalisation

Note: Market capitalisation of Binance USD, Tether, USD Coin and other stablecoins, in EUR bn.
Sources: CoinMarketCap, ESMA.

A.193
Stablecoin trading volumes

Note: Trading volumes of Binance USD, Tether, USD Coin and other stablecoins, in EUR tn.
Sources: CoinMarketCap, ESMA.
### A.194 Bitcoin futures market

![Graph showing Bitcoin futures market](image)

**Note:** Total open interest in Bitcoin futures, in thousand of contracts, and change in monthly average total open interest, in %. Sources: Refinitiv Datastream, ESMA.

### A.195 Crypto asset consensus mechanisms

![Graph showing crypto asset consensus mechanisms](image)

**Note:** Market capitalisation of crypto-assets by consensus mechanism, as % of the total. PoW=Proof-of-Work. PoS=Proof-of-Stake. Stablecoins only include Binance USD, Tether and USD Coin. Sources: CoinMarketCap, ESMA.