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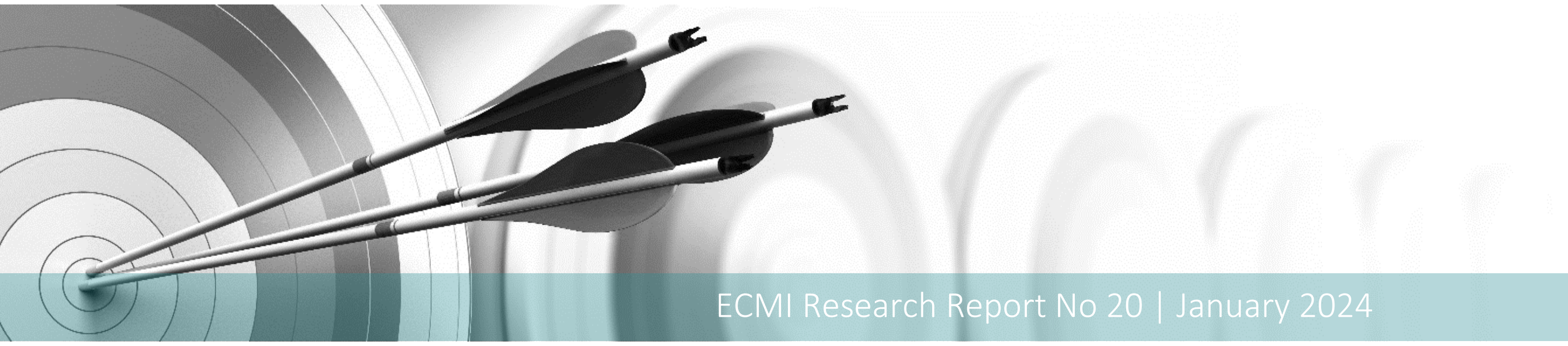

2023 ECMI Statistical Package: Key findings

Apostolos Thomadakis

Highlights

Equity market

- The market capitalisation of listed companies in the EU-27 decreased by 16 % in 2022.
- The capital raised through initial public offerings decreased fourfold in 2022 to EUR 14 billion.
- The number of listed exchange-traded funds (ETFs) in the EU-27 rose by 3 % to 9 541, but the total value of ETF trading declined marginally by 1 % to EUR 484 billion.

Debt securities

- The global amount of outstanding debt securities saw an increase in 2022, totalling EUR 117 trillion.
- Notional amounts of outstanding debt in the EU-27 fell in terms of value (-10 %) and GDP (standing at 133 % of GDP, down 28 percentage points).
- The issuance of securitised products fell 13 % to EUR 203 billion in the EU-27, while in the US it fell by 42 % to EUR 2 trillion.

Exchange-traded derivatives

- The trading of interest rate derivatives (IRDs) in Europe rose (23 %) to EUR 553 trillion in 2022.
- Global trading in commodity derivatives increased (15 %) to EUR 182 trillion, while the number of contracts agreed also rose by 8 % to 8.3 billion.

Over-the-counter derivatives

- The notional amount of over-the-counter traded derivatives increased by 9.6 % in 2022 and the gross market value by 77 %.
- Euro-denominated IRDs rose 26 % to EUR 142 trillion, representing 31 % of all contracts.
- At the end of 2022, 77 % of IRDs were cleared with central clearing counterparties, a decrease of two percentage points.

Investment funds

- The number of undertakings for collective investment in transferable securities (UCITS) funds increased by 2 % (+585 UCITS) to 29 642, while the number of non-UCITS funds remained almost stable at 27 521 (+10 non-UCITS).
- The net assets of UCITS funds totalled EUR 10 trillion (-13 %), while those of non-UCITS reached EUR 6 trillion (-11 %).
- Equity and bond funds represented 30 % and 21 % respectively of the total EU-27 investment fund market in terms of net assets.

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2023 ECMI Statistical Package: key findings

ECMI Research Report No 20 / January 2024

Apostolos Thomadakis*

This report provides an overview of the key findings of the European Capital Markets Institute (ECMI) Statistical Package 2023, a comprehensive and annually updated database on the dynamics of European and global capital markets (covering China, Japan, the US and other relevant markets). The key trends gleaned from the package on equity markets, debt securities, exchange-traded derivatives (ETDs), over-the-counter (OTC) derivatives and investment funds are outlined below. The statistical package covers the period up to 2022, which means that the continued impact of the Covid-19 pandemic and Russia's invasion to Ukraine, are reflected in the figures.

1. The equity market

In 2022, the global stock market faced a significant downturn both in market capitalisation and in value traded, ending a positive trend observed over the last three years. Although the pandemic had eased, it remained a global concern, as did the supply-chain issues that accompanied it. The war in Ukraine and sanctions against Russia then further aggravated the demand and supply bottlenecks and led to a sharp increase in energy prices, especially for many European countries. Moreover, the ensuing high inflation environment, alongside the tightening of monetary policies (including the raising of interest rates across most economies), dried up investment in the equity market.

In Europe, amid the energy crisis, rising inflation, and consequent fears about the outlook for economic growth, equity market capitalisation declined by 16 % to EUR 10 trillion in 2022 (see Figure 1, left-hand panel). While this trend was reflected in all countries, the largest decreases were observed in Sweden (-29 %), Latvia (-25 %), Poland (-20 %), Austria (-20 %) and Germany (-20 %). In contrast, gains were observed in Cyprus (+22 %), Greece (+5 %) and Portugal (+1 %). Like Europe, the US market contracted by 13 %, with capitalisation at EUR 38 trillion. The invasion of Ukraine amplified existing concerns over inflation, which reached a 40-year high in the US. This resulted in the Federal Reserve pursuing a series of interest rate increases to combat rising prices.

Turning to Asia, the capitalisation of the Chinese stock market declined as compared to 2021 (-9 % in 2022 to EUR 15 trillion). This was due to, among other factors, the spike in the number of Covid-19 cases to their highest level in more than two years, despite the government pursuing one of the world's strictest virus elimination policies. In Japan, as the JPY weakened against the USD for most of the year and the country experienced decades-high levels of inflation, market capitalisation declined by 8 %. On top of this, the pandemic's impact was still evident as some companies had to restrict their operations at various moments throughout 2022.

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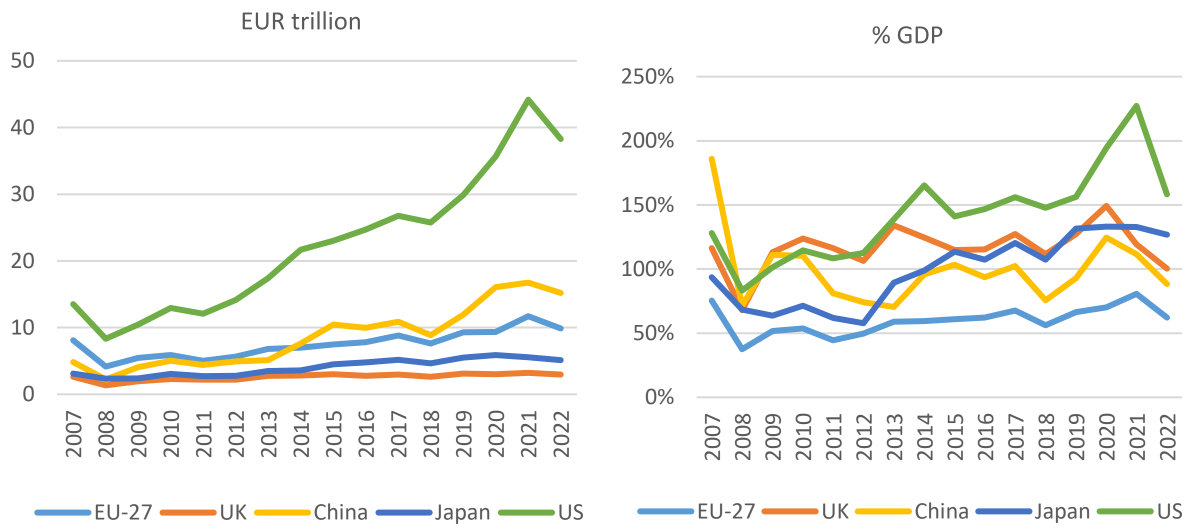
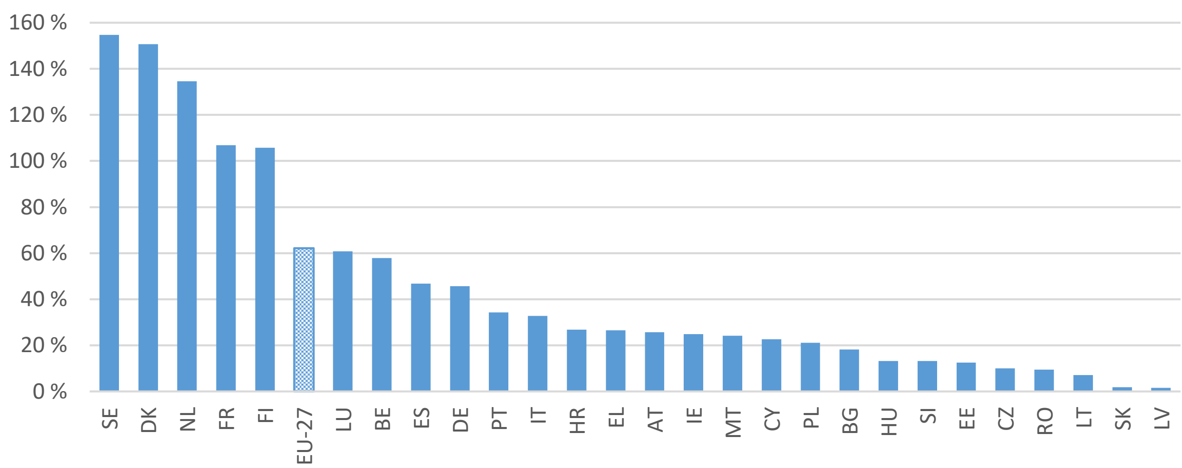
Figure 1. Domestic market capitalisation (2007-2022)



Notes: For the EU-27, the following stock exchanges are included: Athens, BME, Borsa Italiana, Bratislava, Bucharest, Budapest, Bulgaria, CEESEG – Prague, CEESEG – Vienna, Cyprus, Deutsche Börse AG, Euronext (Amsterdam, Brussels, Dublin, Paris and Lisbon), Ljubljana, Luxembourg, Malta, Nasdaq Nordics and Baltics (Copenhagen, Helsinki, Stockholm, Tallinn, Riga and Vilnius), Warsaw and Zagreb; for the UK, the London Stock Exchange; for the US, Nasdaq-US and NYSE; for China, Hong Kong Exchanges and Clearing, Shanghai and Shenzhen; and for Japan, the Japan Exchange Group.
Source: 2023 ECMI Statistical Package.

In relative terms, the EU-27's stock market capitalisation represented 62 % of GDP in 2022 (-18 percentage points compared with 2021). This was significantly lower than in China (88 %), the UK (100 %), Japan (127 %) and the US (158 %) (see Figure 1, right-hand panel). Among the European stock exchanges, market capitalisation ranged from 2 % of GDP in Latvia and Slovakia to 156 % of GDP in Sweden and 151 % in Denmark (see Figure 2). In particular, the three Nordic Member States, together with France and the Netherlands, had markedly higher market capitalisations well above the European average of 62 %. In contrast, the market capitalisation of stocks in other large European economies such as Germany, Italy and Spain were below the EU average.

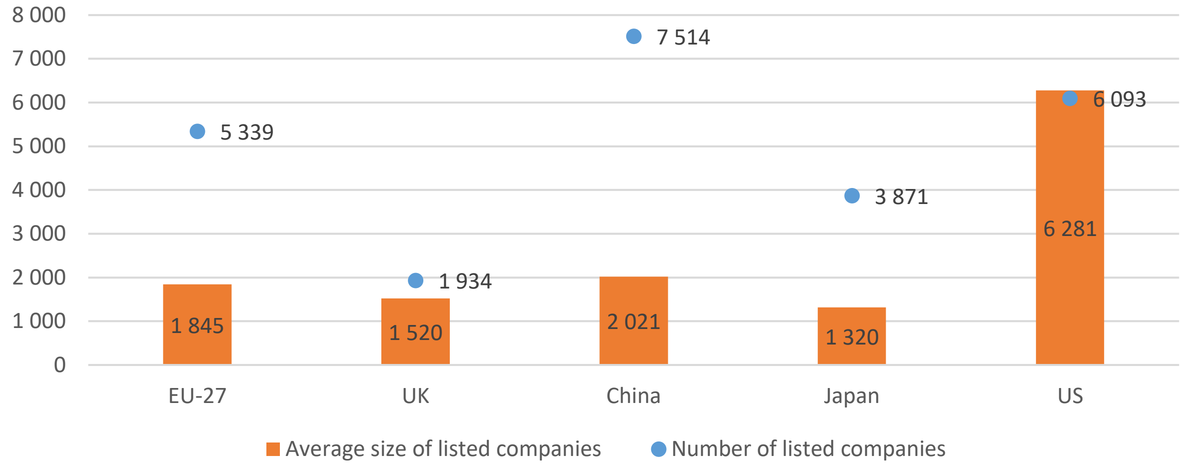
Figure 2. European stock market capitalisation (% of GDP, end-2022)



Source: 2023 ECMI Statistical Package.

The number of listed companies in Europe declined in 2022 by 5 % (or -276 companies), in the UK by 3 % (or -64 companies) and in the US by 2 % (or -110 companies), while it increased in China (+5% or +327 companies) and Japan (+1 % or +47 companies). Considering the EUR 10 trillion market capitalisation of the 5 339 companies listed in the EU-27, the average market capitalisation was less than EUR 2 billion per listed company (see Figure 3). This is significantly lower than the average market capitalisation of a US company (EUR 6 billion).

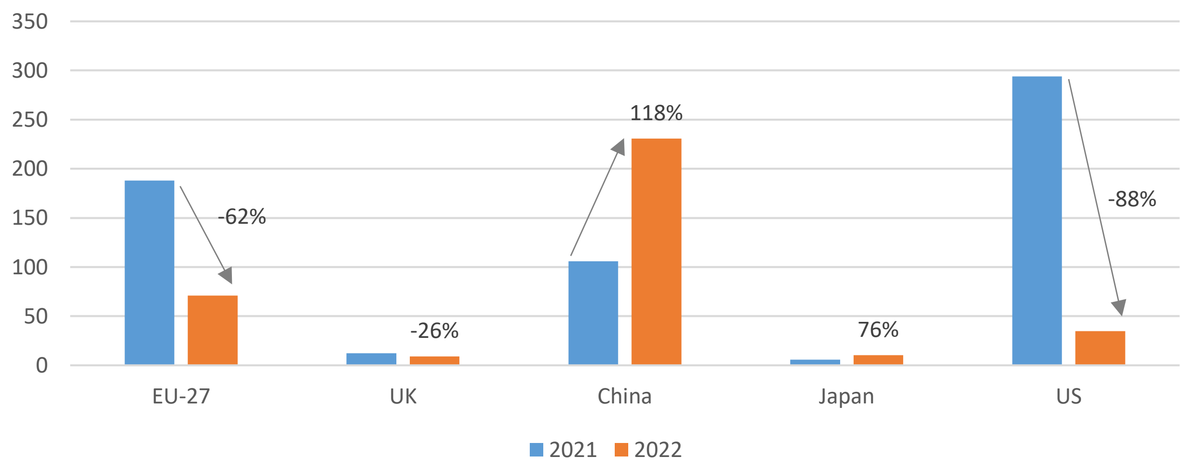
Figure 3. Average capitalisation (EUR million) and number (thousands) of listed companies (end-2022)



Source: 2023 ECMI Statistical Package.

Capital raised by newly and already listed EU-27 companies amounted to EUR 71 billion, 62 % less than the year before (see Figure 4). Most of the new capital (80 % or EUR 57 billion) went to already listed companies and the remainder to newly listed companies through initial public offerings (IPOs) (20 % or EUR 14 billion). The US also experienced strong double-digit losses in investment flows, falling by EUR 259 billion (88 %). In contrast, investment flows in Asian markets increased significantly. This was due to sizable IPOs of domestic new economy companies, as well as the home market listings of mega companies formerly listed on overseas exchanges.

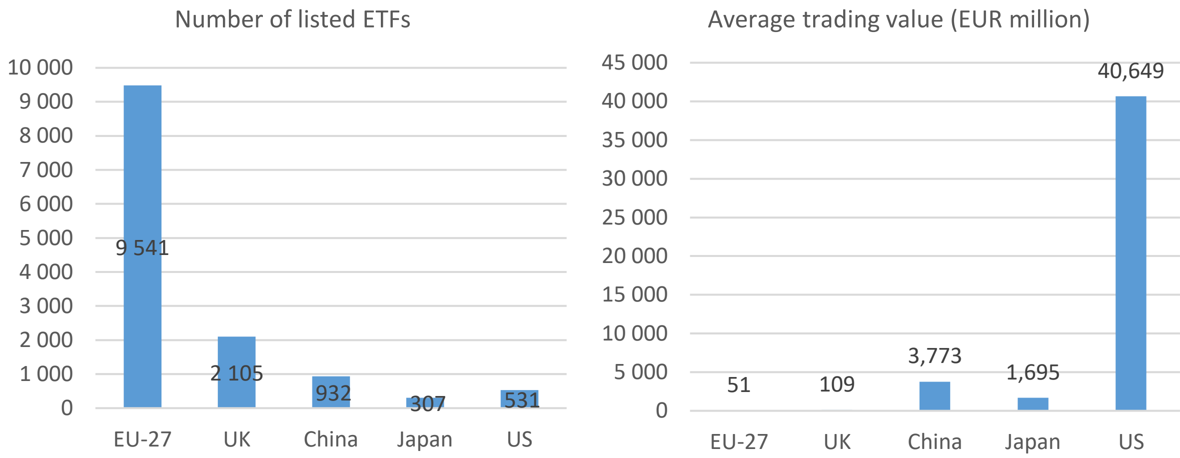
Figure 4. Capital raised by newly and already listed companies (EUR billion, 2021-2022)



Source: 2023 ECMI Statistical Package.

Focusing on the exchange-traded fund (ETF) market, the number of listed ETFs in the EU-27 increased by 3 % in 2022, reaching an all-time high of 9 541[1] (see Figure 5, left-hand panel). All regions recorded a peak, with the UK up by 46 %, China by 22 %, the US by 21 %[2] and Japan by 11 %. The total traded value of ETFs declined only in the EU-27 (-1 %) but all other regions saw growth – China (+138 %), the US (+53 %), the UK (+43 %), and Japan (+7 %). Consequently, the average turnover of an ETF in the EU-27 was only EUR 51 million (EUR 53 million in 2021), compared to almost EUR 4 billion in China and EUR 41 billion in the US (see Figure 5, right-hand panel).

Figure 5. Number of listed ETFs and average trading value of listed ETFs (EUR million, end-2022)



Note: Figures for the US refer only to those ETFs listed at Nasdaq-US. NYSE data are not available by WFE.
Source: 2023 ECMI Statistical Package.

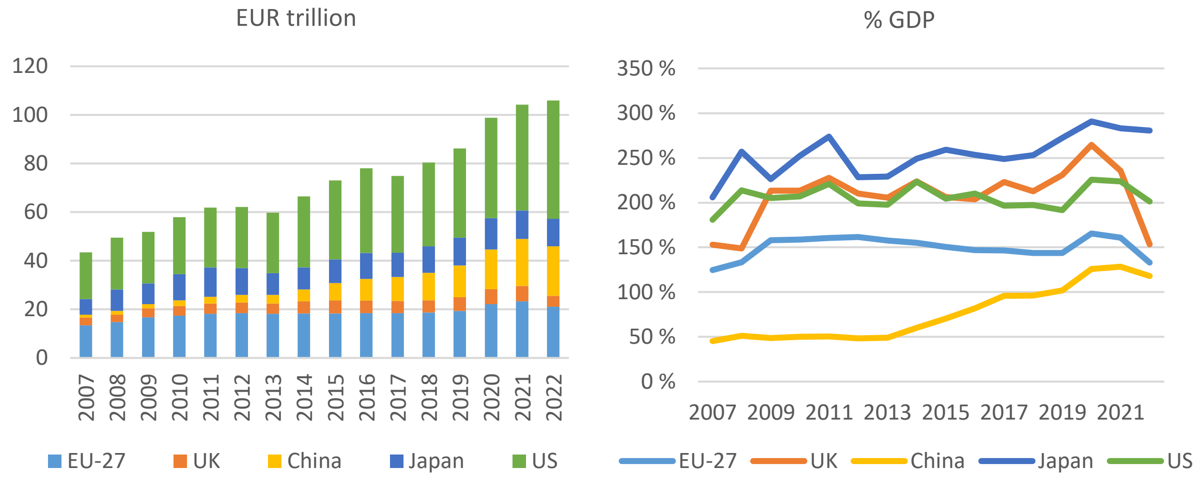
2. Debt securities

Debt levels around the world have been on the rise over the last few years. Moreover, the trend has accelerated due to cascading public health and geopolitical challenges. Consequently, global debt has increased at an annual average growth rate that is outpacing global GDP.

In particular, the total outstanding amount of debt securities in the economies covered here reached an all-time high of EUR 106 trillion (+2 %) (see, Figure 6 left-hand panel). The largest increase was observed in the US (+12 %), followed by China (+5%). In contrast, the aggregate size of debt securities declined in the UK (-29 %), the EU (-10 %) and Japan (-4 %). In relative terms, and for the second consecutive year, global public and private debt dropped 12 percentage points to 123 % of GDP. The debt-to-GDP ratio decreased across all the major economies of our sample, albeit with a varying magnitude across them (see Figure 6, right-hand panel). In the UK debt fell from 235 % of GDP in 2021 to 153 % of GDP in 2022, followed by the EU (-28 percentage points) and then the US (-22 percentage points).

[1] Around 84 % of European ETFs are concentrated in four exchanges (Börse Stuttgart, Deutsche Börse, Euronext Milan and Euronext Paris).
[2] It only includes Nasdaq-US and excludes NYSE data which is not available by WFE.

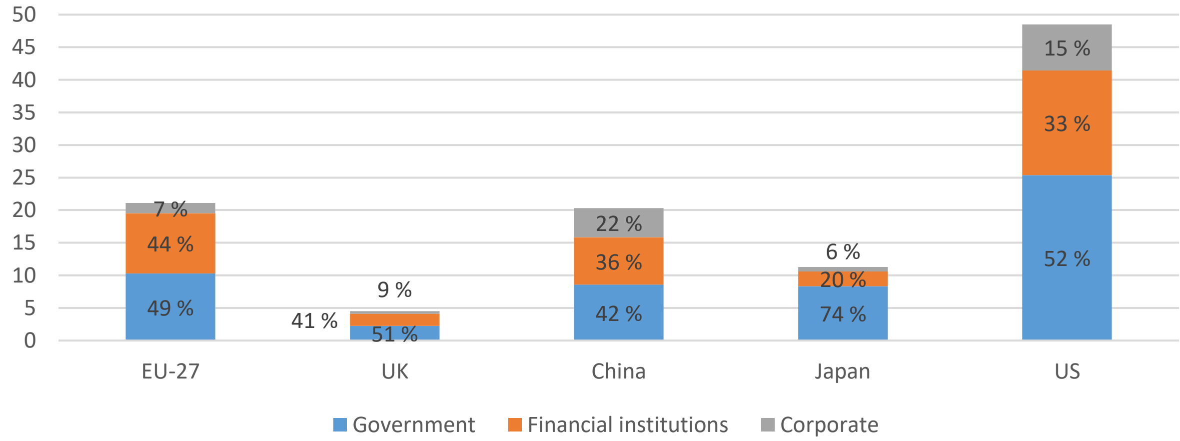
Figure 6. Total amount of outstanding debt securities (2007-2022)



Source: 2023 ECMI Statistical Package.

In the EU-27, the total outstanding amount of debt securities stood at EUR 21 trillion (-10 % to 2021). Debt securities issued by governments and financial institutions were respectively responsible for 49 % and 44 % of the total outstanding, while corporate debt securities represented only 7 % (see Figure 7). The total amount of debt securities in the EU-27 was more than half the size of that in the US (EUR 49 trillion or +12 % to 2021).

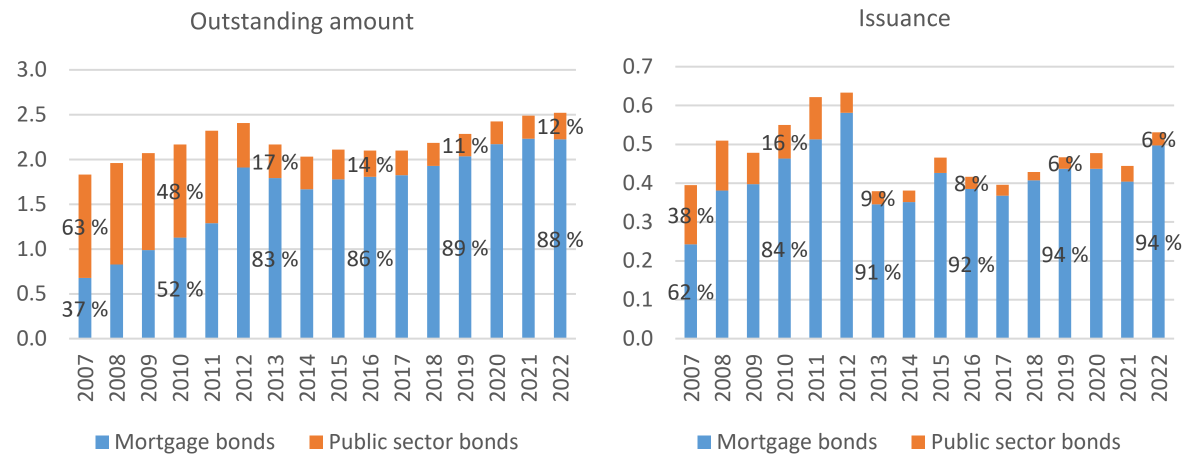
Figure 7. Total amount of outstanding of debt securities (EUR trillion, end-2022)



Source: 2023 ECMI Statistical Package.

Turning to the covered bond market, the outstanding amount increased marginally in 2022 to EUR 2.5 trillion (see Figure 8, left-hand side). Most of these bonds were covered by residential and commercial mortgages (88 %). Covered bonds with a total value of EUR 531 billion were issued during the year, an increase by 20 % compared to 2021 (see Figure 8, right-hand side). The largest issuing country was Denmark (EUR 152 billion), followed by Germany (EUR 82 billion) and France (EUR 58 billion). These three countries collectively accounted for more than half (55 %) of the total issuance in the EU.

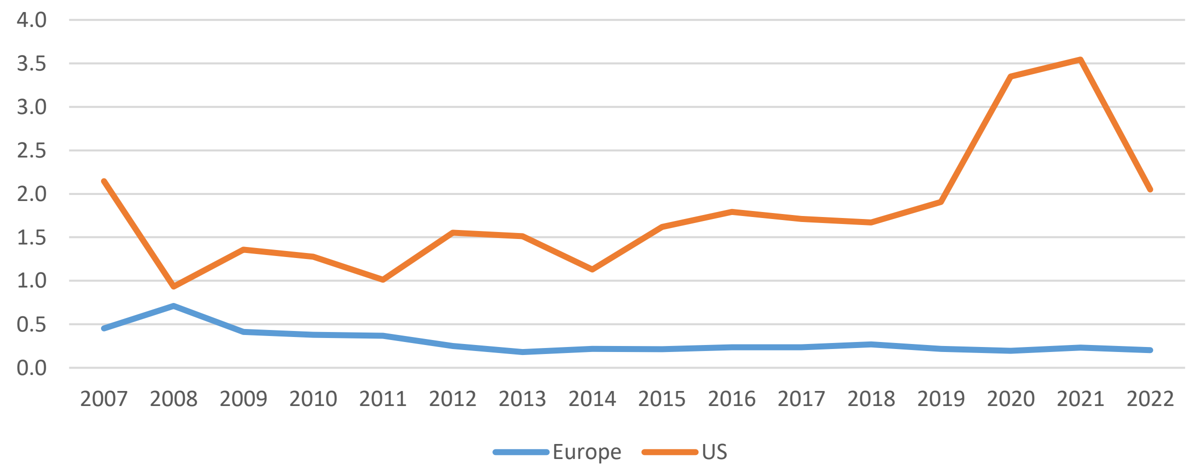
Figure 8. Covered bonds outstanding amount and issuance in selected EU countries (EUR trillion, 2007-2022)



Note: The countries included are AT, CY, CZ, DE, DK, EL, ES, FI, FR, HU, IE, IT, LU, LV, NL, PL, PT, SE and SK.
Source: 2023 ECMI Statistical Package.

Regarding securitisation, a total of EUR 203 billion's worth of securitised instruments was issued in the EU, 13 % less than a year earlier (see Figure 9). However, the contrast with the US is striking. Although US issuance declined to EUR 2 trillion (-42 %), it is still ten times the size of the European market.

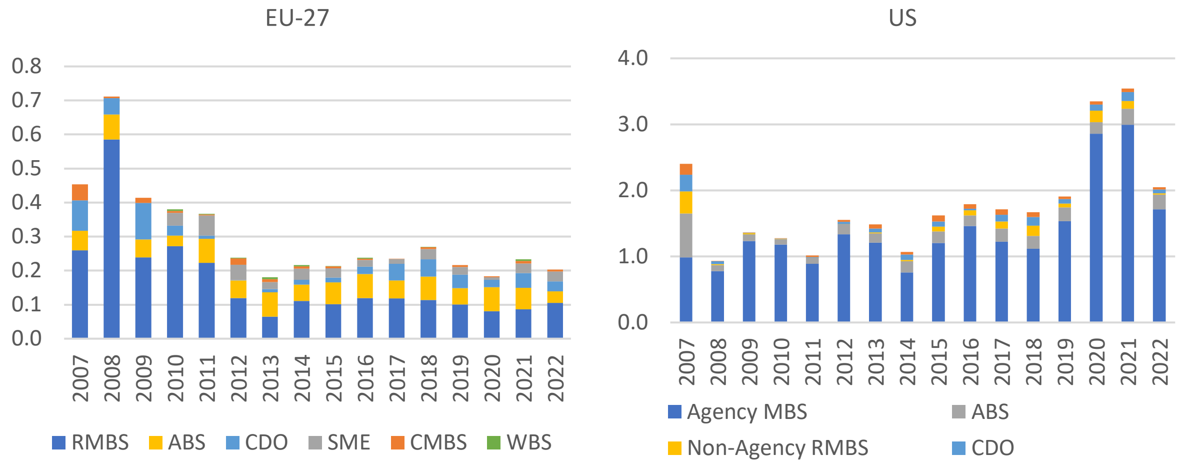
Figure 9. Securitisation issuance (EUR trillion, 2007-2022)



Note: European volumes include transactions from all countries on the European continent, including Russia, Iceland, Turkey and Kazakhstan.
Source: 2023 ECMI Statistical Package.

Regarding the asset mix, EU-27 issuance is mainly related to repackaging residential mortgages and other loans/securities, with the repackaging of loans to small and medium-sized enterprises (SMEs) being rather limited (see Figure 10, left-hand panel). In 2022, the securitisation of residential mortgage-backed securities (RMBS) represented almost half (52 %) of the total EU-27 issuance, while asset-backed securities (ABS, 17 %) and collateralised debt obligations (CDOs, 15 %) also represented a substantial part of the market. Turning to the US, mortgage-backed securities accounted for most securitisations (84 %) (see Figure 10, right-hand panel).

Figure 10. Securitisation by collateral in the EU-27 and the US (EUR trillion, 2007-2022)

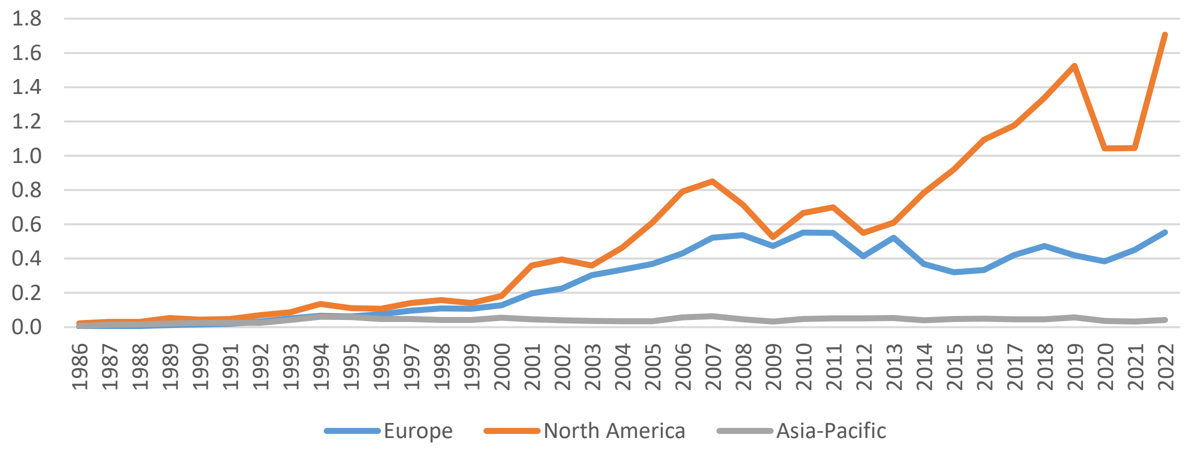


Notes: Asset-backed securities (ABS), collateralised debt obligations/collateralised loan obligations (CDO/CLO), commercial mortgage-backed securities (CMBS), residential mortgage-backed securities (RMBS), whole business securitisation/public finance initiatives (WBS/PFI). In the US, agency mortgage-backed securities are defined as securities issued by Fannie Mae, Freddie Mac and Ginnie Mae. This category includes agency CMBS and RMBS.
Source: 2023 ECMI Statistical Package.

3. The exchange-traded derivatives market

Investors continued their reliance on ETD markets from 2021 into 2022. Compared with the previous year, volumes went up by 42 % in 2022, reaching a record high of 59 billion contracts. This trend was observed across almost all asset classes (e.g. currency, equity, interest rate and commodity), contract types (i.e. options and futures) and regions. The annual turnover of IR ETDs mildly increased to EUR 2.3 trillion (+51 %) compared with 2021 (see Figure 11). All regions experienced an increase – North America by 63 %, Asia-Pacific by 28 %, and Europe by 23 %.

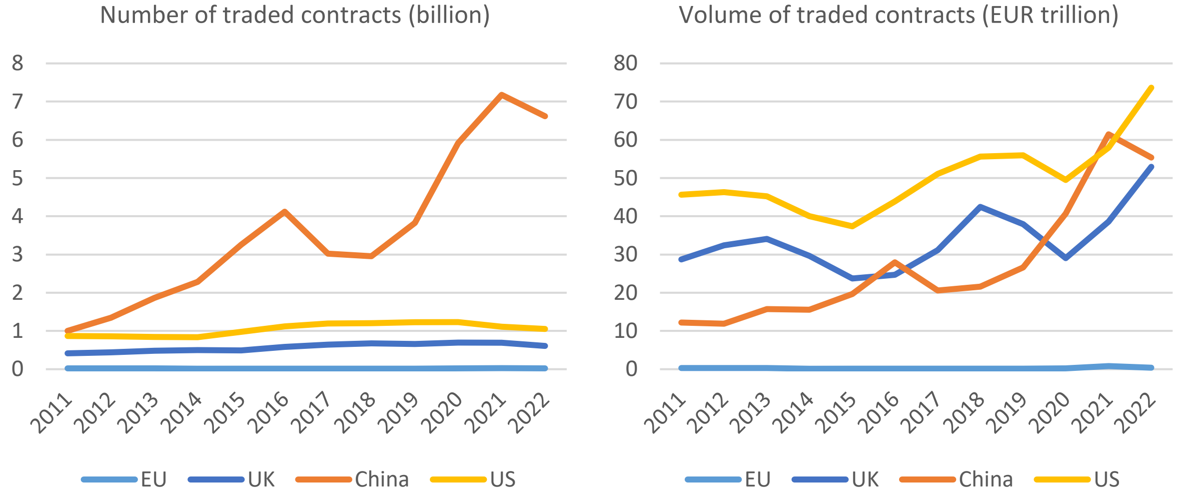
Figure 11. Turnover of interest rate ETDs by location of exchange (EUR trillion, 2000-2022)



Notes: Data refer to total annual turnover of futures and options. Europe includes the following exchanges: Eurex, ICE Futures Europe, LSE CurveGlobal, NYSE Liffe London, Optionsmarknaden Stockholm AB, Warsaw Stock Exchanges. North America includes the following exchanges: Chicago Board of Trade, Chicago Mercantile Exchange, ERIS Exchange, Mercado Mexicano de Derivados, Montreal Exchange. Asia-Pacific includes the following exchanges: Bombay Stock Exchange, China Financial Futures Exchange, Hong Kong Exchanges and Clearing, Korea Exchange, National Stock Exchange of India, Osaka Exchange, Singapore Exchange Derivatives Trading, Sydney Futures Exchange, Tokyo International Finance Futures Exchange.
Source: 2023 ECMI Statistical Package.

Shifting the analysis to exchange-traded commodity derivatives (one of the oldest derivative classes), in 2022 the number of traded contracts decreased 8 % to 8.3 billion (see Figure 12, left-hand panel). Most of these contracts (80 %) were traded in China, followed by the US (13 %) and the UK (7 %). Despite the decrease of traded contracts, the trading volume of ETD commodities increased by 15 % to EUR 182 trillion in 2022, reflectingly growth in the UK and China by 37 % and 27 % respectively (see Figure 12, right-hand panel). The most actively traded contracts with commodities as the underlying asset were futures, which accounted for 94 % of the traded volume.

Figure 12. Number and traded value of commodity-ETD contracts by location of exchange (2011-2022)



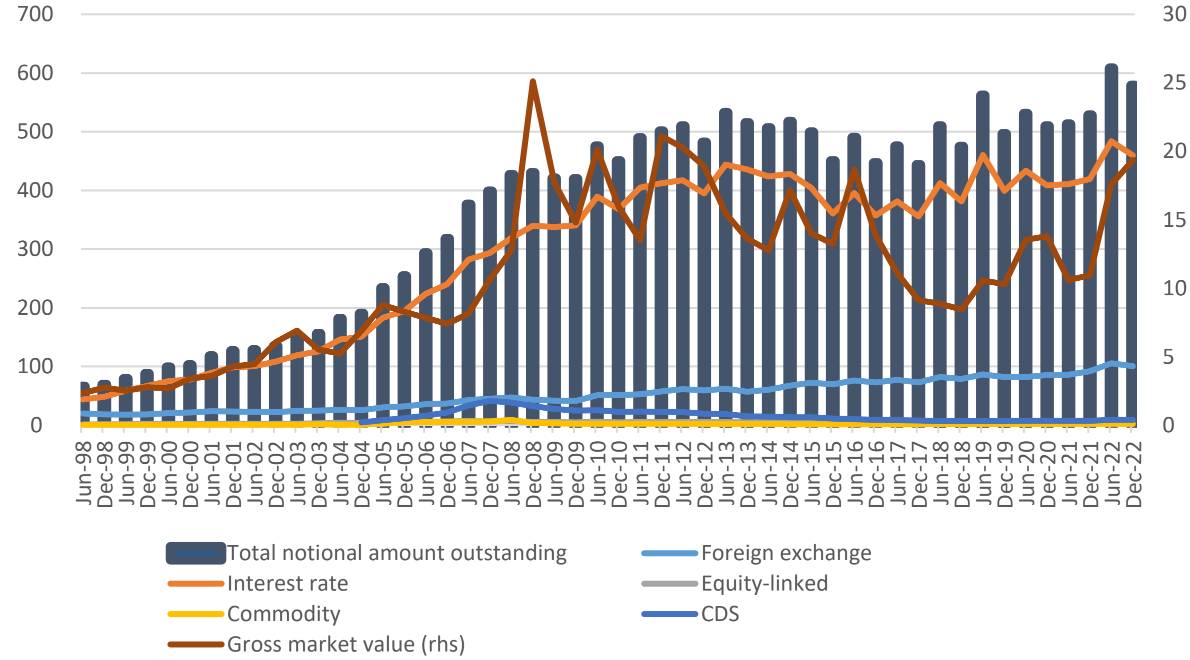
Notes: Data refer to total annual turnover of futures and options. Europe includes the following exchanges: Borsa Italiana, Eurex, Euronext and Budapest SE. The UK includes: ICE Futures Europe, London Metal Exchange and London SE Group. China includes the following exchanges: Dalian Commodity Exchange, Hong Kong Exchanges, Shanghai Futures Exchange and Zhengzhou Commodity Exchange. The US includes the following exchanges: CME Group and ICE Futures US.
Source: 2023 ECMI Statistical Package.

4. The over-the-counter derivatives market

In 2022, the OTC derivatives market expanded by 10 % to EUR 578 trillion in the notional amount outstanding (see Figure 13)[3]. Interest rate derivatives (IRDs) dominated the market (79 %), followed by currency products (17 %) and to a lesser extent by credit default swaps (CDS) and equity-linked derivatives (at about 1 % each). The gross market value of these derivative contracts – which provides a measure of the amounts at risk – increased (+77 %) to EUR 19 trillion year over year. This growth was driven by higher IRD market value due to interest rate increases for key currencies in 2022. As a result, the gross market value represented 3.1 % of the notional amount (2.1 % in 2021).

[3] Notional amount outstanding refers to the notional value of all derivative contracts concluded but not yet settled.

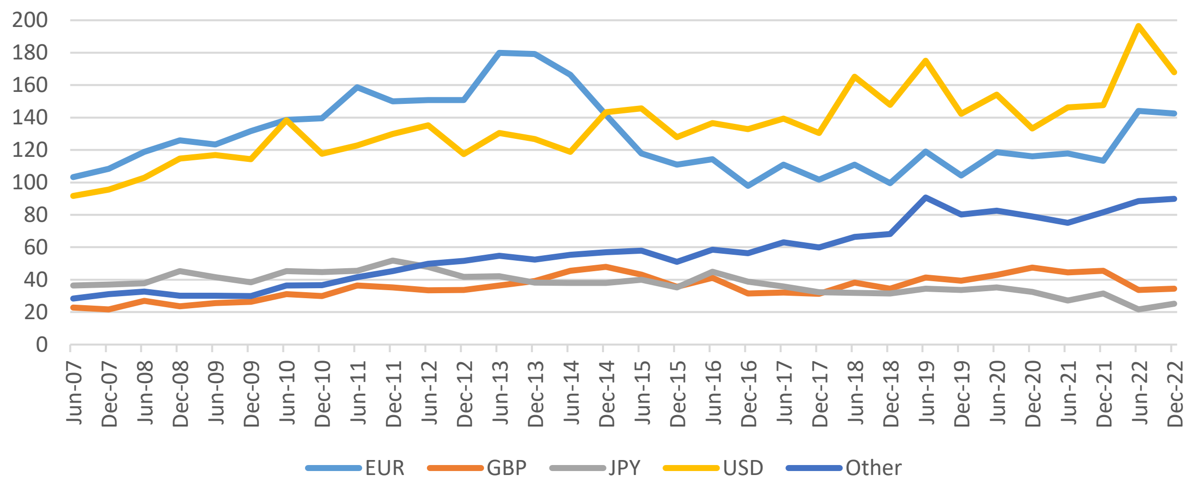
Figure 13. Notional amount outstanding of the global OTC derivatives market (EUR trillion, 1998-2022)



Notes: The notional amount of outstanding OTC derivative contracts determines contractual payments and is an indicator of activity in OTC derivatives markets. The gross market value represents the maximum loss that market participants would incur if all counterparties failed to meet their contractual payments and the contracts could be replaced at current market prices. The values are presented for June and December.
Source: 2023ECMI Statistical Package.

Looking at the currency composition of IRDs, the notional amounts outstanding of euro-denominated contracts increased by +26 % to EUR 142 trillion in 2022 (see Figure 14). Euro-denominated transactions comprised 31 % of total IRD notional outstanding at the end of 2022 compared to 27 % the year before. However, the USD remains the most preferred currency for IRDs, with dollar-denominated contracts representing 37 % of all contracts at the end of 2022. On the other hand, IRD contracts denominated in British pounds and Japanese yen recorded a decline of 24 % and 20 %, representing 7 % and 5 % of the total IRD notional amounts outstanding.

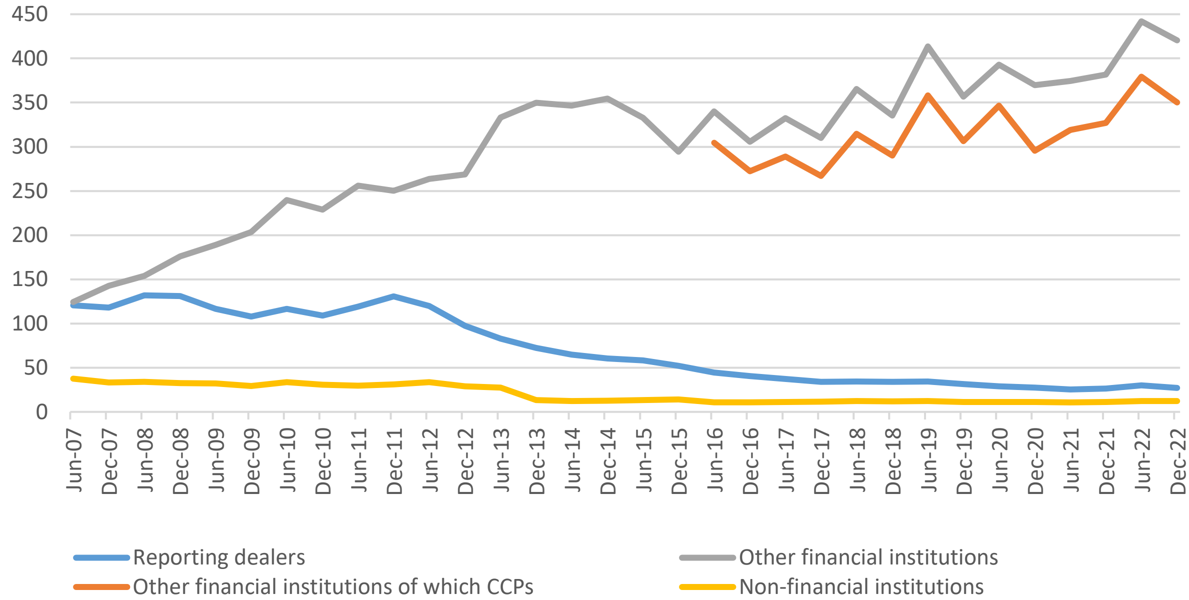
Figure 14. Notional amount outstanding of OTC IRDs by currency (EUR trillion, 2007-2022)



Note: 'Other' refers to contracts denominated in currencies other than EUR, GBP, JPY and USD.
Source: 2023 ECMI Statistical Package.

The central clearing rates of IRDs remained stable in 2022. In particular, the share of notional amounts of IRD contracts cleared by central counterparties (CCPs) stood at EUR 350 trillion or 76 % of total IRD notional amounts outstanding (see Figure 15). By contrast, clearing rates for CDS dropped slightly to 62 %.

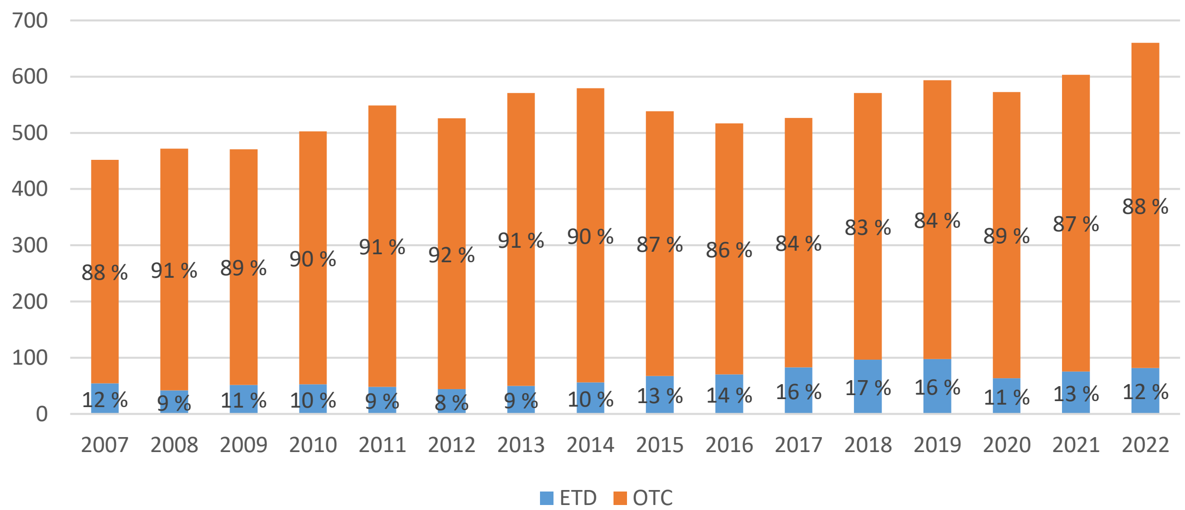
Figure 15. Notional amount outstanding of OTC IRDs by sector of counterparty (EUR trillion, 2007-2022)



Notes: For the first time, in June 2016, BIS captured comprehensive data on positions with CCPs. Whereas in previous years details about financial counterparties were collected only for CDS, at the end of June 2016, CCPs were separately identified for all types of OTC derivatives. Previously, CCPs were grouped indistinguishably with all financial institutions other than dealers.
Source: 2023 ECMI Statistical Package.

In comparison with ETD contracts, OTC contracts accounted for 88 % of the notional amount in December 2022, while the remaining 12 % were in ETDs (see Figure 16).

Figure 16. Notional amount outstanding of ETD and OTC derivatives (EUR trillion, 2007-2022)

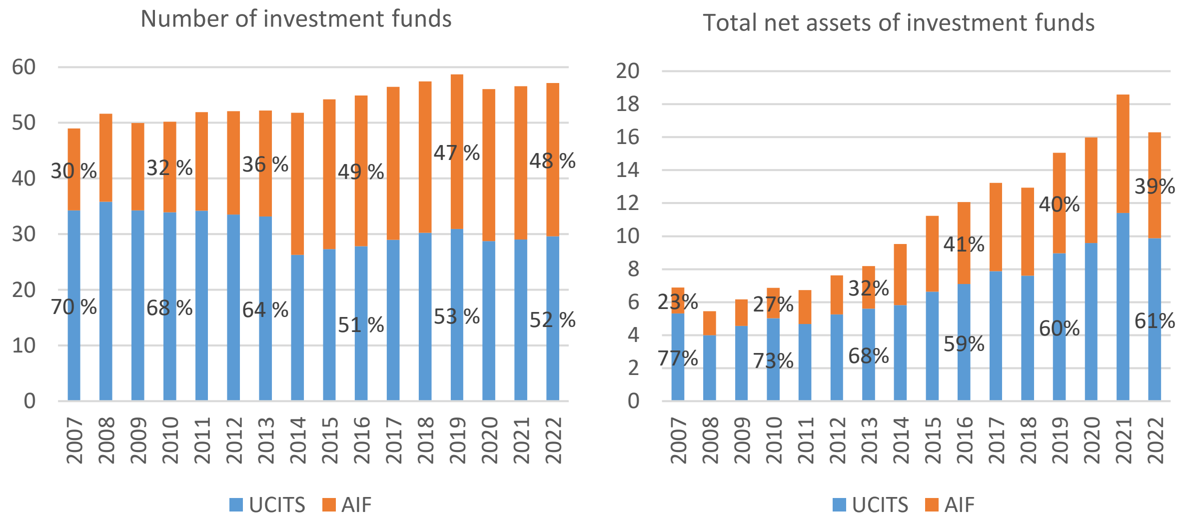


Source: 2023 ECMI Statistical Package.

5. Investment funds

In 2022, the EU investment fund industry was impacted by both geopolitical (i.e. the outbreak of the war in Ukraine) and macroeconomic (i.e. the sharp rise in inflation and interest rates) developments. Although the number of investment funds remained stable at 57 014 (see Figure 17, left-hand panel), total net assets declined by 12 % to EUR 16 trillion (see Figure 17, right-hand panel). The net assets of undertakings for collective investment in transferable securities (UCITS) closed the year at EUR 10 trillion (-13 %), while those for alternative investment funds (AIFs) closed at EUR 6 trillion (-11 %). In relative terms, the net assets of investment fund managers went down from 128 % of GDP in 2021 to 103 % of GDP in 2022.

Figure 17. Number and total net assets of EU-27 investment funds (EUR trillion, 2007-2022)



Note: Data refer to the EU-27.
Source: 2023 ECMI Statistical Package.

Most of the funds (73 %) and net assets (82 %) were domiciled in France, Germany, Ireland and Luxembourg (see Table 1). The net assets of UCITS declined in almost all countries, with Romania (-34 %), Poland (-25 %), Croatia (-24 %), Hungary (-19 %) and Sweden (-19 %) experiencing the largest drop in 2022. The only countries that saw assets under the management of UCITS funds increasing were the Netherlands (+48 %), Czech Republic (+16 %) and Grece (+1 %). In the AIF market, the most pronounced decrease was observed in Belgium (-80 %), followed by Denmark (-31 %) and the Netherlands (-29 %).

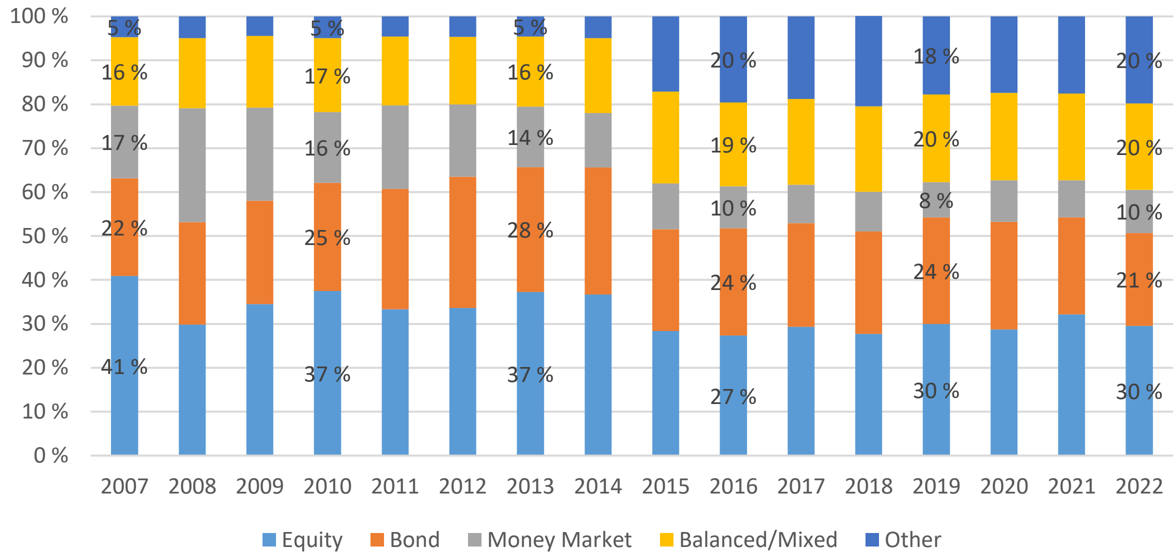
Table 1. Investment fund industry by country of domicile (EUR billion, end-2022)

	# Total	# of UCITS	# of AIFs	Net assets (EUR billion)	% Δ in 2022[a)]
Luxembourg	14 322	10 130	4 192	5 028	- 14 %
France	10 977	3 075	7 922	2 096	- 6 %
Ireland	8 689	5 324	3 365	3 656	- 10 %
Germany	7 438	2 606	4 832	2 591	- 11 %
Spain	3 060	2 657	403	323	- 7 %
Other	12 657	5 850	6 807	2 608	- 18 %
EU-27	57 163	29 642	27 521	16 302	- 12 %
UK	3 331	2 271	1 060	1 758	- 18 %

Notes: The countries are presented in terms of net assets (UCITS and AIF). [a)] End-2022 compared with end-2021.
Source: 2023 ECMI Statistical Package.

Regarding the different types of investment funds, the assets of equity (30 %) and bond funds (21 %) represented the largest shares of net assets at the end of 2022 (see Figure 18). Money market funds (10 %) and the asset share of balanced/mixed funds (20 %) also represented a substantial part of the assets' net value. The remaining funds consisted of real estate and infrastructure, hedge funds, structured products and private equity funds (20 %).

Figure 18. Share of net assets of investment funds by type, in the EU-27 (% of total assets 2007-2022)



Source: 2023 ECMI Statistical Package.

Annex

Methodology and data sources for the 2023 ECMI Statistical Package

The ECMI Statistical Package retrieves, compiles and analyses data from publicly available sources and reports as follows:

- Section 1 – WFE, FESE and individual trading venues;
- Section 2 – BIS, ECB, ECBC, AFME, WFE, FESE and individual trading venues;
- Section 3 – BIS, WFE, FESE and individual trading venues;
- Section 4 – BIS and WFE;
- Section 5 – EFAMA, OECD, Pensions Europe and Insurance Europe; and
- Sections 6 to 8 – Eurostat, IMF and World Bank.

For more information and to obtain the full ECMI Statistical Package 2022, please visit:

https://www.ecmi.eu/statistical-packages

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