Finance for Europe

Capital Markets Union

Key Performance Indicators – Sixth Edition

European Capital Markets: scaling up capital markets

November 2023

In conjunction with:

Disclaimer

November 2023

Contents

Acknowledgements

The content of this report has greatly benefitted from discussions with the following organisations. The institutions support the objective of developing capital markets in Europe while having individual views on particular aspects of certain issues.

Foreword

It is with great pleasure that I introduce the sixth edition of AFME's annual "Capital Markets Union: Key Performance Indicators" report.

The objective of this report remains to serve as a tool to navigate the landscape of the European Union's capital markets by shedding light on both the promising areas of growth and the enduring challenges that confront the development of Europe's capital markets. Indeed, this year's report shows a mixed picture, revealing no discernible medium-term advancement in the CMU metrics that our key performance indicators cover.

This edition also coincides with the 30th anniversary of the Single Market, offering another lens by which to assess the progress made in advancing the development of the EU's capital markets over the past three decades. Unfortunately, the data points are disappointing, showing minimal change in the development of the EU's capital markets on a global scale.

In April 2023, EU leaders committed to finalising negotiations on any remaining CMU issues before the next EU elections and the European Commission has now formally delivered all the planned legislative and non-legislative measures outlined in its second CMU Action Plan of 2020. This demonstrates the dedication of the EU Institutions to developing the EU's capital market capacity.

However, certain goals, such as rebalancing the EU's funding sources toward market-based financing, channelling individual savings into productive investments, and integrating national capital markets to create a unified EU market have not yet materialised, as indicated by the findings in this report. Several reasons contribute to this: policymakers at both domestic and EU levels have understandably prioritised crisis response measures due to successive external shocks. Furthermore, many of the CMU measures, even if finalised or nearing completion, will take several years to fully implement and see the true impact.

At this stage in the policy cycle, it is challenging to undertake a meaningful and comprehensive assessment of what has been achieved, and what remains to be done, via EU legislative measures to develop the EU's capital market. It is nevertheless already clear that the financing structure of the EU economy will need to adapt, and at pace, if it is to support the EU's significant transformative investment needs, including the fast-approaching climate goals of 2030, as well as its demographic and competitiveness challenges.

As we approach the upcoming hiatus in the EU policymaking programme, it will be an important period allowing for the identification of policy actions that can deliver the required transformational results. In this vein, the initiative of the Eurogroup President to launch a strategic discussion within the Eurogroup, which will set out recommendations for the next Commission on the development of the EU's capital markets, is highly anticipated by the market participants contributing to this report.

To conclude, I would like to express my appreciation to our contributors: the Alternative Credit Council, Business Angels Europe, Climate Bonds Initiative, EBAN, EuropeanIssuers, EUROCROWD, EFAMA, European Investors, FESE, InvestEurope and PensionsEurope. Together, we remain committed to advancing capital markets in the EU.

Adam Farkas
Chief Executive
Association for Financial Markets in Europe

"The financing structure of the EU economy will need to adapt, and at pace, if it is to support the EU's significant transformative investment needs"

Executive summary

This report is the sixth edition of AFME's annual Capital Markets Union: Key Performance Indicators report, which tracks the development of the EU capital markets ecosystem.

The purpose of the report is to assess the EU's progress in improving and expanding its capital markets against the most important indicators of progress, as well to provide an industry perspective on some of the enablers for growth and ongoing barriers to integration and development.

We group our nine indicators into four areas which seek to measure the various features needed to develop an efficient, deep, and interconnected capital market, namely:

1. Access to capital

2. Availability of pools of capital for investment

3. Transition to sustainable finance and digitalisation

4. Efficiency of capital markets ecosystem and integration

In addition to the nine indicators, the report includes analytical comment boxes discussing the following important market developments in the EU:

- The rapid developments in generative artificial intelligence technology
- The European Commission's Retail Investment Strategy
- The implementation of the EU crowdfunding regulation
- Non-banks' presence in the securitisation market
- Progress on the pan-European personal pension, or PEPP
- Further developing sustainable finance
- Capital markets strategic policy debate: Top-down or bottom up approach

The last section of the report reflects on the end of the policymaking cycle and offers commentary focused on the remaining open initiatives of the present CMU agenda.

This year's report also coincides with the 30th anniversary of the Single Market. This offers an opportunity to review longer-term progress made towards the goals of developing the EU's capital markets.

"The 30th anniversary of the Single Market offers an opportunity to review longer-term progress made towards the goals of developing the EU's capital markets"

This year's indicators paint a mixed picture with no visible medium-term progress on CMU

When we look at the numbers from last year, there are some slight improvements in some areas, mostly attributed to cyclical factors as 2022 was a particularly turbulent year for markets.

Unfortunately, when we take a longer view and consider the medium-term trends, it is clear that the EU has not made significant progress at improving its capital markets depth, particularly in terms of global competitiveness. As can be seen in Table 1 (see page 8), which compares the 3-year average of our indicators (2021-23) against 2018, access to market-based finance for corporates has deteriorated, the amount of loans transformed into capital markets vehicles like securitisation has significantly declined, intra-EU integration has slightly deteriorated, while the amount of household assets in capital markets instruments has not shown any major progress.

This calls for a closer look at the strategies being employed at EU level to deepen capital markets and a renewed focus on making real, lasting improvements that will have an impact going forward.

Competitiveness declines as pandemic effect fades

This year has seen a decline in the international competitiveness of the EU's capital markets. Our global competitiveness indicator shows the EU is still significantly behind the US and UK, particularly regarding access to finance, market liquidity, and digital finance capabilities.

However, this follows a stellar year in 2021 when the EU's economy and capital market issuance were boosted by regulatory and monetary policy support to help the recovery from the Covid-19 pandemic.

Similarly, household savings have fallen this year compared to 2022. Savings levels grew substantially during the pandemic as spending was necessarily restricted, and many households put more of this money to work in capital markets. However, this effect is beginning to fade and, as inflation has risen sharply, our household investment indicator has declined to the lowest level since AFME's first CMU report. This is most likely due to people withdrawing from their savings to meet rising costs.

Year-on-year, there has been a slight improvement in the overall access to finance for corporates indicator – but this compares to a particularly bad year in 2022 and remains below pre-pandemic levels. For small and medium-sized enterprises (SMEs), access to capital has declined over the past 12 months. Early-stage funding, private equity and crowdfunding have all been affected. Initial public offerings (IPOs) have also been subdued, continuing a longer-term trend.

The EU's market for financial technology seemed to stall this year, in part due to the decline in access to capital. For the first time since AFME first published this report, no new regulatory 'sandboxes' or fintech hubs were opened this year, implying limited opportunities for fintech companies in some Member States to develop their offerings within structured environments. In some countries that offer these regulatory features, however, they could be used more widely to facilitate innovation. In addition, there was a decline in the number of unicorns (start-ups worth €1bn or more) and in overall investment.

Similar effects have been felt in the fintech markets in the UK and the US. Companies in this sector may also have been affected by the turmoil in the banking sector, with many banks becoming more risk averse in their approach to fintech in the wake of volatility and scandals in cryptocurrency markets.

EU securitisation issuance has bounced back somewhat after a lacklustre year in 2022, largely supported by a single large French RMBS deal (EUR 49.5 bn), which, once excluded would indicate a 15% decline. EU securitisation issuance adjusted by GDP continues to languish far behind global competitors. Over the last 10 years, EU issuance has experienced muted growth and in the first half of 2023, EU issuance was equal to 0.3% of EU GDP which compares with 0.7% in the UK, 1.1% in the US (excluding agency mortgages), 2.6% in Australia, 1.4% in Japan and 1.5% in China.

Green bonds take the lead in ESG issuance

Sustainable finance is an area in which the EU continues to be a clear world leader. This is demonstrated through its growing market for ESG bond issuance.

Environmental, social and governance (ESG) related bonds raised €206bn in the first half of 2023, an 18% annualised increase from 2022. Within this, green bonds are increasing in popularity, with issuance having increased by 32% year-on-year.

However, ESG bond issuance as a percentage of the overall bond market has declined over the past two years to 12.7%, primarily due to a sharp increase in non-ESG government and corporate bond issuance. At the same time, the UK appears to be closing the gap in this metric, with 7% of all UK bonds issued this year being linked to ESG in some way.

Cyprus entered the ESG bond market for the first time and there were significant increases in the ESG Finance Indicators for Austria, Italy and Portugal.

30 years of the Single Market

On 1 January 1993, the Single Market came into being. Our data, discussed in the Market Competitiveness chapter (see page 56), provides a ‘snapshot’ of some key economic metrics to show how the EU has developed over the past three decades.

When viewed in this context, the data points are disappointing and there has been little significant change in the development of the EU’s capital markets in a global context. For example, immediately before the creation of the EU, the current configuration of EU27 Member States accounted for 5% of global IPOs. In the first few years of the single market this rose to 20%, but over the past three years this indicator was just 7%. When adjusted by GDP and by market capitalisation, there has been some limited progress in IPOs over the last 30 years, but despite this, levels in the EU continue to be well below the annual flow of primary offerings observed in the US.

This 30-year period has seen seismic economic, geopolitical, and technological changes and challenges. The global financial crisis, Eurozone debt crisis, Brexit, the Covid-19 pandemic, and most recently the Ukraine-Russia conflict have all affected European economies and capital markets in different ways. However, the continued efforts to build a single capital market for the EU have continued and all in all, EU markets have remained robust.

It must also be remembered that new CMU initiatives are still in flux with many yet to be fully implemented. The Capital Markets Union is still developing, while negotiating significant challenges at the same time.

That said, there is room for improvement to the CMU if the European Union is to achieve its dual goals of a sustainable finance regime and a globally competitive digital services market.

“The Capital Markets Union is still developing, while negotiating significant challenges at the same time”

Overview of indicators

A summary of each indicator and what it measures is shown in the box below:

1. Access to capital

a. Market Finance Indicator: measures how easy it is for companies in the EU to enter and raise capital on public markets (initial public offerings, bonds, secondary equity offerings)

b. Pre-IPO Risk Capital Indicator: assesses how well start-ups, SMEs and non-listed companies can access risk capital finance;

2. Pools of investment capital

a. Household Market Investment Indicator: measures the amount of savings from retail investors deployed in capital market products and instruments like bonds, equity shares, investment funds and pension funds

b. ELTIF Indicator: measures the availability of European Long-Term Investment Fund (ELTIF) products financing long-term projects and SMEs

3. Transition to sustainable finance and digitalisation

a. ESG Finance Indicator: quantifies the labelling of new ESG bond issuance

b. FinTech Indicator: assesses to what extent national countries are able to host an adequate FinTech ecosystem

4. Efficiency of capital markets ecosystem and integration

a. Loan Transfer Indicator: measures the capacity to transform loans into capital markets instruments such as securitisations and loan portfolio transactions;

b. Cross-border Finance Indicator: measures capital markets integration within Europe and with the rest of the world

c. EU market competitiveness*: measures EU capital markets competitiveness from a holistic perspective, recognising the multiple factors behind deep, liquid and efficient capital markets and comparing them with the United States and the United Kingdom

Table 1: Progress of EU capital markets against key performance indicators[1]

	Indicator	What this indicator measures	2018	2023H1	3Y avg	National findings
Access to capital	**Market Finance** Non-financial corporates (NFC) equity and bond issuance as % of total NFC annual financing	Capacity for companies to raise finance on public markets	12.8%	10.3%	10.7%	**Finland** had a sharp increase in 2023H1 following strong bond issuance. **Sweden and Portugal** experienced an increase in the use of market-based funding following strong secondary equity offerings and bond issuance. **Ireland and the Czech Republic** saw a large decline in bond issuance.
	Pre-IPO Risk Capital Equity crowdfunding, business angel, private equity growth investment and venture capital investment	How well start-ups and non-listed companies are able to access finance for innovation	2.4%	3.7%	4.7%	The **Netherlands** has visibly improved the availability of risk capital over the last 6 years, from 6% of total SME funding in 2018 to 24% in 2023H1.
Pools of investment capital	**Household Market Investment** Household financial assets saved in financial instruments (excluding cash, deposits and unlisted equity) as % GDP	Availability of savings from retail investors to support capital market financing	98%	90%	98%	By far the most retail financial assets are held in **Denmark** (187% of GDP), the **Netherlands** (174% of GDP) and **Sweden** (165% of GDP).
	ELTIF Products Number of European Long-Term Investment Fund (ELTIF) products marketed in the EU	Availability of ELTIF fund products financing long-term projects and SMEs	10	80	62	**Hungary** saw the first ELTIF vehicle marketed locally.
Transition to sustainable finance and digitalisation	**ESG Finance** ESG bond issuance as % of total bond issuance	Labelling of ESG bond markets as a percentage of all bond issuances	3.6%	12.7%	14.1%	In 2023H1, **Cyprus** became the 16th EU sovereign to enter ESG markets issuing an inaugural sustainable government bond. **Germany** overtook France to become the country with issuers of the greatest value of ESG bonds in the EU.
	FinTech Composite indicator of funding for FinTech companies, talent pool, regulatory environment, and innovation. Range 0-1	Capacity to enable an adequate FinTech ecosystem	0.15	0.16	0.17	The **Netherlands** leads in the capacity to host an attractive FinTech ecosystem in the EU. The number of national innovation hubs and regulatory sandboxes has not changed since 2022.

1 For the purpose of estimating trends, this table compares the respective indicators for the period 2018 (as the baseline for a 5-year evaluation) against the most recent performance in 2023 and a three-year average 2021-23. Figures in red indicate negative change since 2018.'

	Indicator	What this indicator measures	2018	2023H1	3Y avg	National findings
Efficiency of capital markets ecosystem and integration	**Loan Transfer** Securitisation issuance and loan portfolio transactions as % of outstanding bank loans	Capacity to transform bank loans into capital markets instruments (securitisation and loan transactions)	3.2%	1.8%	1.9%	**Greece** had the largest rise in indicator value among EU countries. The **Netherlands and France** both experienced an increase in the Loan Transfer Index, after a surge in securitisation issuance. Securitisation issuance was subdued in **Spain** during 2023H1, offset entirely by higher loan portfolio sales.
Efficiency of capital markets ecosystem and integration	**Cross-border Finance** Composite indicator of cross-border M&A transactions, equity & bond issuance, private equity, and portfolio holdings. Range 0-1	Capital markets integration within the EU	0.21	0.19	0.2	**Luxembourg** leads in intra-EU integration as the EU's hub for the cross-border distribution of investment vehicles. **Latvia** stands as a closely integrated EU market, due to the large portion of securities held cross-border within the EU.
Efficiency of capital markets ecosystem and integration	**Cross-border Finance** Composite indicator of cross-border M&A transactions, equity & bond issuance, private equity, and portfolio holdings. Range 0-1	Capital markets integration with the rest of the world	0.18	0.2	0.2	**Luxembourg** is the most globally integrated EU market driven by the large portion of global equity and fund shares registered in the country.
Efficiency of capital markets ecosystem and integration	**Market Competitiveness** Composite indicator of access to capital, market liquidity, pools of capital, transition to a sustainable and digital market	Measures attractiveness of EU capital markets	0.14	0.17	0.18	**Sweden, Denmark and the Netherlands** stand as the most competitive national ecosystems in the EU.

* Data as of 2023H1 except for the Household Market Investment Indicator which is based on Q1 2023 data.

Table 2: European country rankings by indicator

The table below shows country rankings for EU member states and the United Kingdom (where the data is available) across the indicators included in this report.

	Access to Capital		Pools of Investment Capital		Transition to Sustainable Finance and Digitalisation		Efficiency of Capital Markets Ecosystem and Integration			Comepetitiveness ranking	
	Market Finance Indicator	Risk Capital Indicator	Household Market Investment Indicator	ELTIF Indicator	ESG Finance Indicator	FinTech Indicator	Loan Transfer Indicator	Intra-European Integration Indicator	Global Integration Indicator	2023	2019
Austria	19	10	10	12	5	3	14	6	10	13	15
Belgium	16	22	5	5	15	21	28	4	12	12	8
Bulgaria	28	16	26	28	28	27	28	21	23	28	28
Croatia	28	27	15	28	28	23	28	28	27	26	25
Cyprus	28	5	18	16	1	28	1	24	14	9	17
Czech Republic	10	15	19	16	13	24	28	17	25	20	16
Denmark	8	4	1	8	4	5	28	14	6	2	3
Estonia	28	6	23	28	9	19	28	10	15	11	20
Finland	3	8	11	9	12	17	10	7	17	8	10
France	7	9	7	2	10	20	5	13	13	5	5
Germany	14	11	8	4	11	14	9	19	7	7	7
Greece	18	14	24	14	28	9	2	26	9	23	12
Hungary	6	20	16	19	19	16	28	22	20	19	23
Ireland	13	2	14	13	3	10	3	9	4	6	6
Italy	12	25	6	1	16	15	8	20	16	10	9
Latvia	20	7	22	28	22	7	28	3	26	22	24
Lithuania	28	18	27	28	23	4	28	12	21	24	18
Luxembourg	11	13	13	7	14	6	28	1	1	16	13
Malta	1	28	12	15	28	18	28	15	3	17	21
Netherlands	9	1	3	6	6	2	6	5	8	4	2
Poland	15	26	25	18	21	12	28	27	19	21	19
Portugal	5	21	17	11	8	22	11	11	22	14	14
Romania	28	19	28	28	20	26	28	23	18	27	22
Slovakia	28	17	20	28	28	13	28	25	24	25	27
Slovenia	28	23	21	28	2	25	28	8	28	18	26
Spain	17	24	9	3	17	8	4	18	11	15	11
Sweden	4	12	4	10	7	11	28	16	5	3	4
UK	2	3	2	NA	18	1	7	2	2	1	1

Ranked 1 — Ranked 28

Higher rankings ← Lower rankings

NA: data not available to produce the indicator.

Countries with no capital markets activity in a given indicator are ranked 28th.

Access to capital

1. Market Finance Indicator

The Market Finance Indicator measures the capacity for companies to raise finance on public markets.

The indicator does this by quantifying the proportion of total finance for non-financial corporates (NFCs), which is provided by capital markets instruments (equity and bonds). The indicator is calculated as annual gross NFC equity and bond issuance as a percentage of the sum of annual gross lending (new loans) to NFCs and equity and bond issuance.

$$\frac{\text{NFC Equity and Bond Issuance}}{\text{Total NFC Financing}} \Rightarrow \frac{\text{IPO} + \text{Secondary Offerings} + \text{Investment Grade Bonds} + \text{High Yield Bonds} + \text{Convertible Bonds}}{\text{NFC Loans (New Issuance)} + \text{IPO} + \text{Secondary Offerings} + \text{Investment Grade Bonds} + \text{High Yield Bonds} + \text{Convertible Bonds}}$$

Flow measures (annual new issuance), rather than stock measures (outstanding amounts), are used in this indicator to allow a better comparison between equity markets and bonds and loans, and to more accurately analyse changes in activity in a given period.

Use of capital markets in the EU bounces back from 10-year low but remains below historical levels

The first half of 2023 was eventful for financial markets and corporate financing. The first quarter of the year saw sharp but temporary volatility episodes following the merger/resolution of a large European bank and a sequence of failures of US regional banks. These volatility episodes, however, did not fundamentally disturb the EU's financial stability.

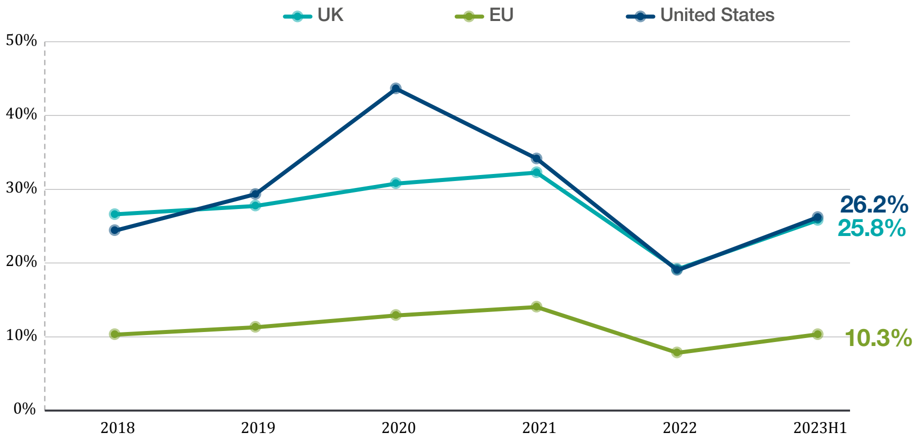
The ongoing withdrawal of the monetary stimulus has continued to transmit to the wider economy while contributing to ongoing rebalancing of the EU's corporate funding mix. Euro area policy rates have increased by 400bps in the 12 months since July 2022 while inflation has visibly declined from double digits to 5% at the end of 2023H1.

In this context, in 2023H1 total issuance from capital markets instruments increased by an annualised 29% year-on-year (YoY), with volumes bouncing back from the record low level observed in 2022. This was driven by a significant increase in bond issuance, while issued equity volumes, on aggregate, remain comparable to last year. IPOs continued to be significantly subdued. Bank lending declined 5% YoY, as higher policy rates have begun to transmit to tighter conditions for bank lending.

In 2023H1, 10.3% of EU NFC finance was derived from capital markets sources, up from 7.8% in 2022 but substantially below the peak of 14.0% observed in 2021 (see Chart 1.1 on the following page).

Despite the recent increase in bond issuance, EU corporates continue to over rely on bank lending. Capital market utilisation remains below historical levels, with the average proportion of NFC funding derived from bonds and equity at 11.5% for 2016-2019, the years leading up to the pandemic.

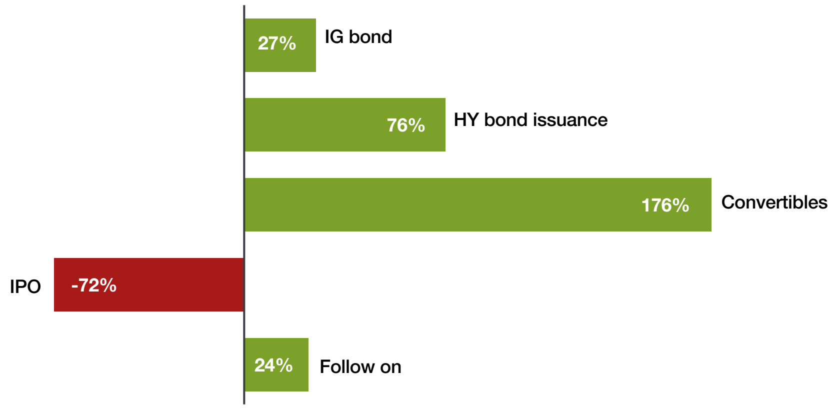
1.1: Market Finance Indicator (NFC equity and bond issuance as a % of total NFC annual financing)



Source: Dealogic, US Fed, ECB, BoE and other European central banks. Monthly averages. Cost of equity estimated as an average of multiple models based on P:E and dividend yield models

Issuance trends among equity offerings varied in 2023H1, with IPO issuance falling 72% YoY (annualised) to a record low, which, if current market trends persist, will put 2023FY on track to have the lowest NFC IPO issuance volume since 2011.

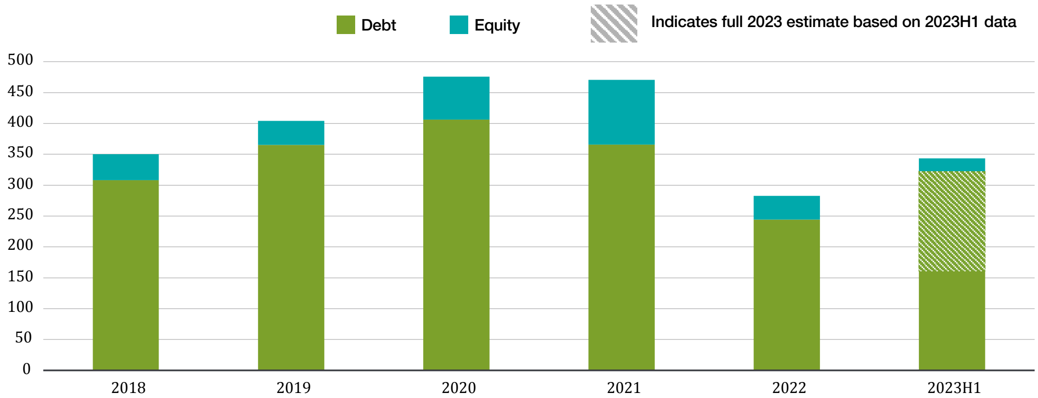
1.2: Breakdown of EU market finance by category (YoY % change)



Source: Source: Dealogic, YoY % changes based on annualisation of 2023H1 issuance volumes

Compared to most recent years, total EU NFC market finance issuance in 2023H1 (EUR 182 bn) remains below 2019-2021 and, once half-year data is annualised, 2023 looks set to have comparable levels of activity to 2018.

1.3: **Breakdown of EU market finance (EUR bn)**



Source: Dealogic, US FED, ECB, BoE and other European central banks

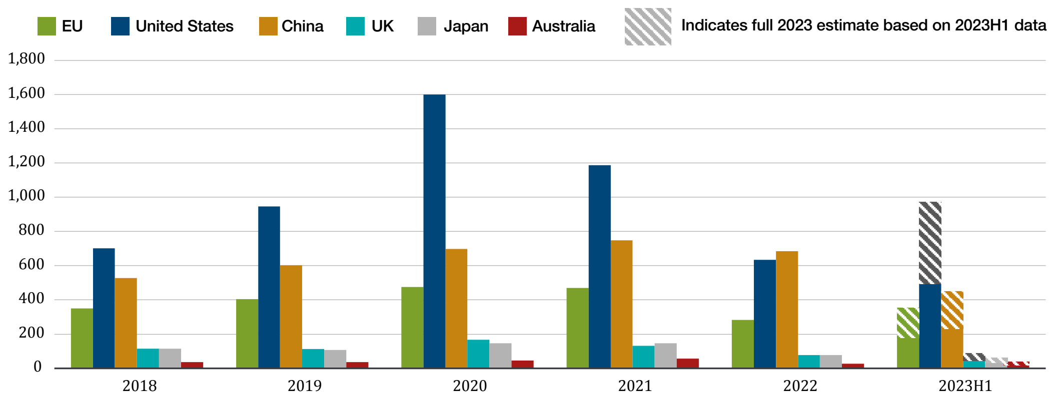
Lukewarm growth in EU market-based finance in a global context while private capital decelerates

Among global regions, the 29% increase in EU NFC market finance provision was less than that of the US (56% YoY), Australia (44% YoY) and the UK (31% YoY). Growth across regions was predominantly driven by the record-low levels observed in 2022 and the relatively low comparative base.

In the UK, the Market Finance Index increased to 25.8% during 2023H1, driven exclusively by a 40% increase in NFC bond issuance (equity issuance in the UK decreased by 39%).

In China, issuance fell 32% YoY (annualised) in 2023H1, driven by a decrease in bond issuance of 37% YoY and equity issuance of 15% YoY. It is the second consecutive year in which issuance has fallen in China, with volumes in 2023H1 38% lower than in 2021 once half-year figures are annualised.

1.4: **Evolution of capital markets issuance by non-financial corporations in selected global regions (EUR bn)**

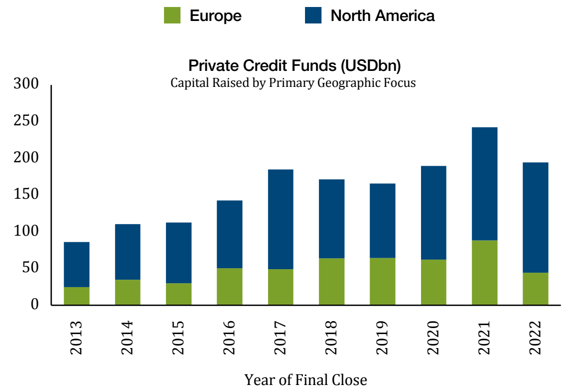


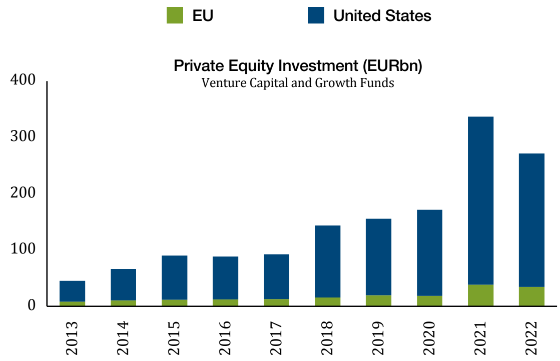
Source: Dealogic

Private credit and equity sources contributed an additional EUR 74.5 bn to European NFC funding, representing just over a quarter of finance raised from public markets (EUR 282.5 bn). Funds raised for European private credit funds decreased 50% YoY in 2022, while capital raising in private equity funds in Europe were more resilient, decreasing 9% YoY.

The decrease in funds raised for private credit is part of the wider fundraising crunch in the alternatives space with visible declines in real estate funds (-14%) and infrastructure funds (-84%). Investors have become more risk averse in a macroeconomic environment of weaker growth and higher interest rates.

1.5: **Private funding sources in Europe and US**





Source: Prequin Pro, Invest Europe and Dealroom

EU Country variations and smoothing issuance outliers

Overall in the EU, NFCs increased their use of capital market instruments for funding in 2023H1, with 14 EU countries improving their Market Finance Index compared to 2022. There were 10 countries that saw deteriorations in indicator value while 3 remained at 0%.

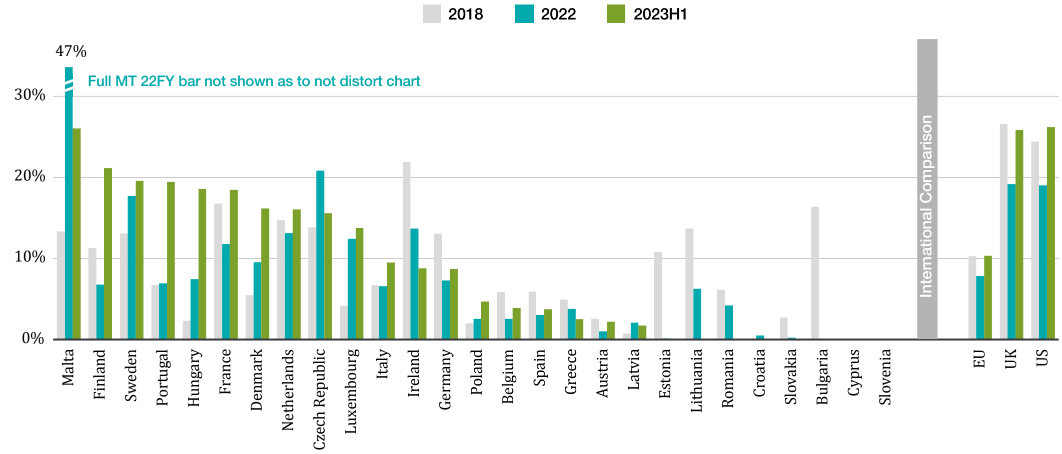
Malta continued to lead the EU for the second consecutive year with 26% of total NFC funding derived from bonds and equity, however, this represents a single corporate bond with an issuance volume of EUR 0.4 bn (following 3 bond issues with combined value of EUR 1.3 bn in 2022).

The Market Finance Index for Finland increased to 21% in 2023H1 following a 343% YoY (annualised) increase in IG bond issuance. Sweden and Portugal both experienced an increase in the Market Finance Indicator following strong secondary offering equity issuance and IG bond issuance.

Among EU Member States, 10 countries had at least 10% of funding for NFCs derived from securities issuance, down from 12 during 2022 and 11 in 2018.

"Private credit and equity sources contributed just over a quarter of finance raised from public markets"

1.6: Market Finance Indicator by country NFC bond and equity issuance as % of total NFC financing

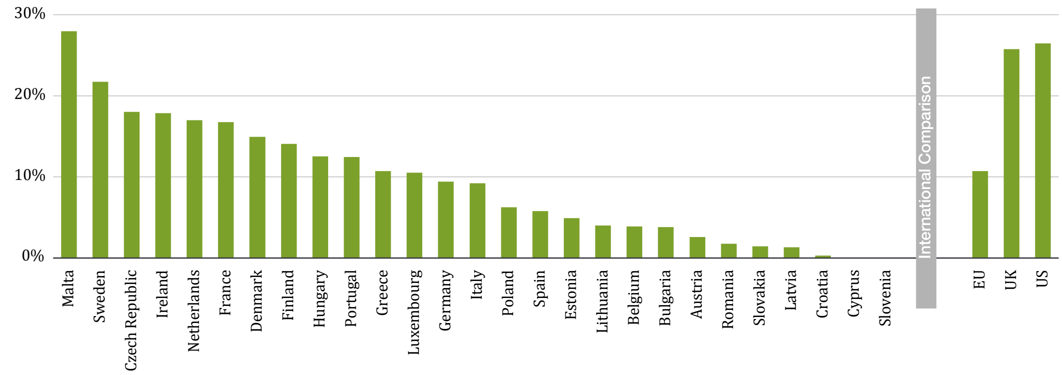


Source: Dealogic, US FED, ECB, BoE and other European central banks

Some countries, typically those with smaller financial economies, may score very highly in the Market Finance Indicator in a given year due to a small number of relatively large bond or equity transactions taking place.

Once 3Y averages are considered and changes in capital markets issuance are spread over a larger time horizon to smooth for possible annual outliers, more consistent utilisation of capital markets for NFC funding can be highlighted. The composition of the leading countries in the Market Finance Index changes, with Finland, Portugal and Hungary dropping from the top five and the Czech Republic, Ireland and the Netherlands swapping in.

1.7: 2020-2023H1 3Y average Market Finance Indicator by country NFC bond and equity issuance as % of total NFC financing



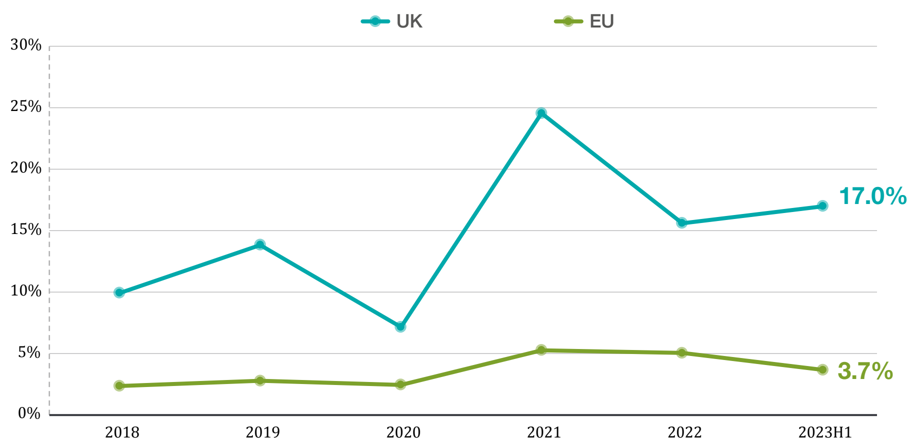
Source: Dealogic, US FED, ECB, BoE and other European central banks

2. Pre-IPO Risk Capital Indicator

The Pre-IPO Risk Capital Indicator measures the capacity of small and medium-sized enterprises (SMEs) to raise equity risk capital from private markets. The indicator is measured as a ratio of the flow of equity risk capital investment relative to the flow of new funding for SMEs (including bank lending).

$$\frac{\text{Risk Capital Investment}}{\text{Bank Capital and Bank Lending}} \Rightarrow \frac{\text{Venture Capital} + \text{Private Equity (Growth)} + \text{Business Angel} + \text{Equity Crowdfunding}}{\text{SME Bank Loans (New Issuance)} + \text{Venture Capital} + \text{Private Equity Growth} + \text{Business Angel} + \text{Equity Crowdfunding}}$$

2.1: Evolution of Pre-IPO Indicator: (investment from VC, growth PE, business angel and equity crowdfunding as % of risk capital and bank lending)



Source: EBAN, Invest Europe, Eikon, Dealroom, ECB, BoE and other national central banks

The latest indicator readings for the EU exhibit a decline from a peak of 5.3% observed in 2021 to 3.7% in the first half of 2023. The decline was predominantly driven by a lower flow of risk capital for SMEs, from the record volumes observed in 2021 and 2022.

The indicator value for the EU stands consistently below the ratio observed for the UK where the market for risk capital is comparatively deeper.

Decline in SME risk capital with higher cost of finance and lower company valuations

The decline in the indicator value ensues as the era of 'cheap money' has come to an end — in Europe and globally.

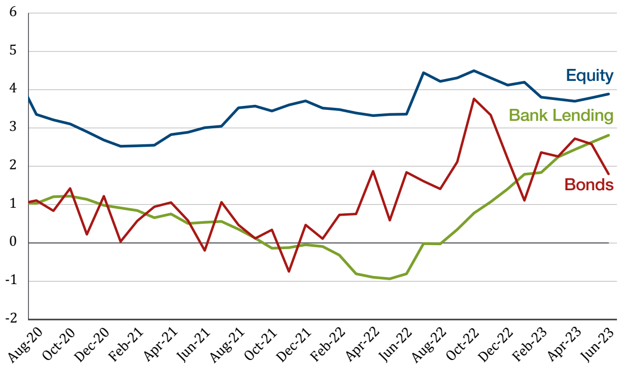
Monetary policy tightening and higher interest rates are making it more expensive for SMEs to access finance. More broadly, monetary tightening has transmitted to the wider economy with higher cost of all forms of finance for SMEs (in nominal and real terms).

According to ECB data, bank lending rates for SMEs have increased by 330bps between June 2021 and June 2023 (230bps in real terms); Dealogic data indicates that the cost of 10Y bond financing has increased by a similar 300bps nominal in the same period (200bps in real terms). AFME estimates suggest that the cost of equity has increased by 200bps (100bps in real terms) in the last two years. See Chart 2.2.

The increase in the cost to access finance has been reflected in lower company valuations, as investors demand a higher rate of return for investing in growth companies. See Chart 2.3.

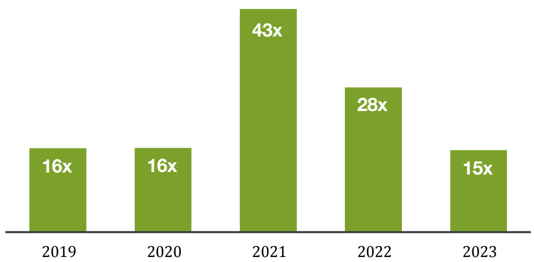
Going forward, markets will continuously assess the appropriate equilibrium value for the cost of finance (R*, or the real neutral rate of interest, and its ramifications to other forms of finance) and if monetary policy has had any significant implications in long-run cost of capital.

2.2: **Cost of equity, cost of market-based debt and SME bank lending rate on new loans (%, real terms adjusted for 1Y-ahead inflation expectations)**



Source: ECB and AFME with Eikon data

2.3: **Valuation ratios of European PE-backed M&A (Enterprise value/EBITDA)**



Source: Dealogic

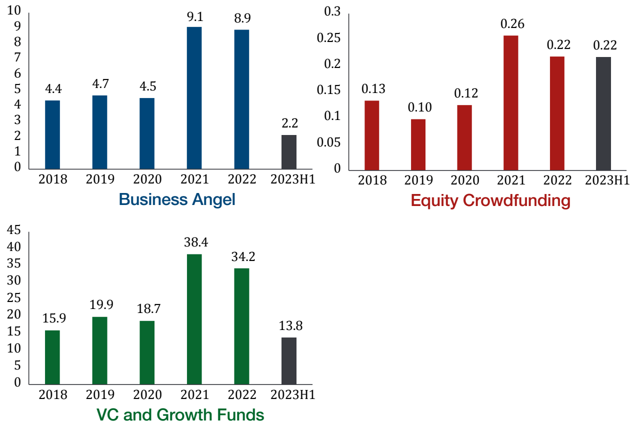
Venture capital, Private Equity and Business Angel investment all decelerate

Over the last 12 months, the private equity and venture capital industry has experienced a phase of deceleration. According to Eikon data, investment from private equity and venture capital funds has declined 19% YoY in 2023H1. More broadly, fundraising has declined 36% YoY in 2023H1; exits have been less frequent as PE-backed IPOs have declined from €19.3bn in H1'21 to €1.4bn 2023H1, M&A transactions sponsored by private equity companies have declined 45% YoY in 2023H1, and high yield bond issuance for leveraged buyouts (LBOs) declined 56% YoY in 2023H1. There is, however, a relevant level of preservation of market depth as private equity investment stands to finish the year above the levels observed prior to the Covid-19 pandemic (see Chart 2.4).

Business angel investment has decelerated from the peak values of 2021. Investment from angel investors accumulated c€2.2bn in the first half of 2023 and looks set to finish the year c50% below the amount invested in 2022 (€8.9bn according to European Business Angels Network[2]). Medium-term trends show, however, a structural increase in the number of angel investors members of an EU angel club, from 165 in to 2019 to 192 in 2022 according to Business Angels Europe data. Technology continues as a focus sector while there is growing interest in impact investment seeking to achieve a measurable positive impact on society and the environment alongside a financial return.

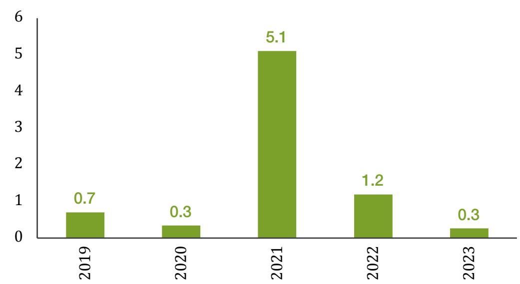
Equity investment via crowdfunding platforms exhibited strong resilience in 2023H1. Although market data continues opaque, industry sources and commercial databases suggest growth in 2023H1. According to Dealroom, equity crowdfunding investment accumulated €220mm in 2023H1, about the same amount invested in the whole of 2022, while data sourced from platforms' websites and aggregated by EUROCROWD indicate €299mm in equity investments in 2023H1[3]. Crowdfunding growth continues to progress as platform providers prepare to implement the European Crowdfunding Service Providers Regulation (ECSPR) and request authorisation to operate cross-border under the new framework. See thematic box at the end of this chapter.

2.4: Evolution of EU risk capital investment by sources (EURbn)



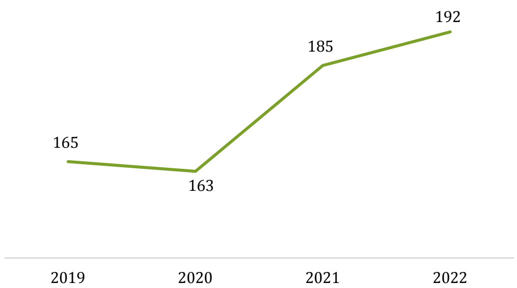
Source: EBAN, InvestEurope, Dealroom , Eikon

2.5: Capital raised via IPOs on European junior exchanges: H1 2019-22 (EURbn)



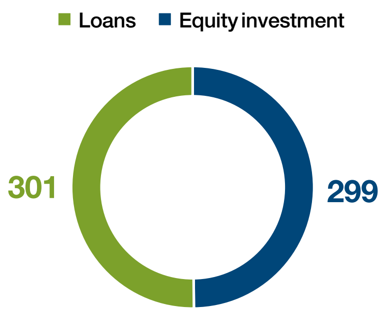
Source: Dealogic

2.6: Median number of angel investors members of EU angel clubs (members per club)



Source: BAE

2.7: SME finance via EU crowdfunding platforms (2023H1, EURmm)



Source: EUROCROWD. Includes only loans and investment under the ECSPR

2 Assuming a 10x expansion factor for the unreported invisible market

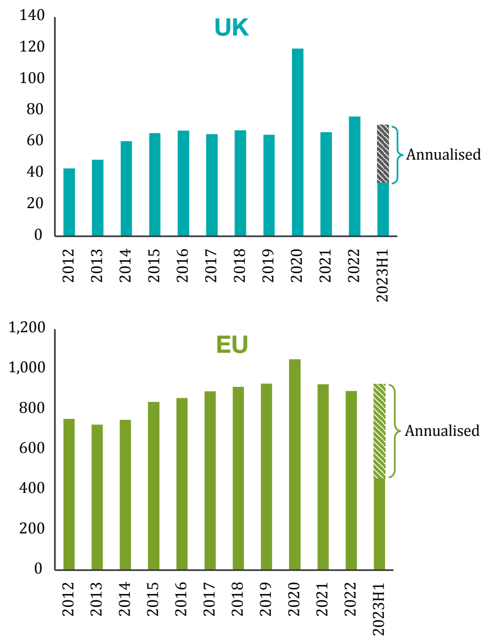
3 Undertaken only by crowdfunding platforms that have obtained an EU license under the new Crowdfunding regulation

Tightening conditions for SME bank lending

Bank lending to SMEs has declined from a peak in new gross loans observed in 2020, with continued net tightening in funding availability, lower demand, and rising borrowing costs.

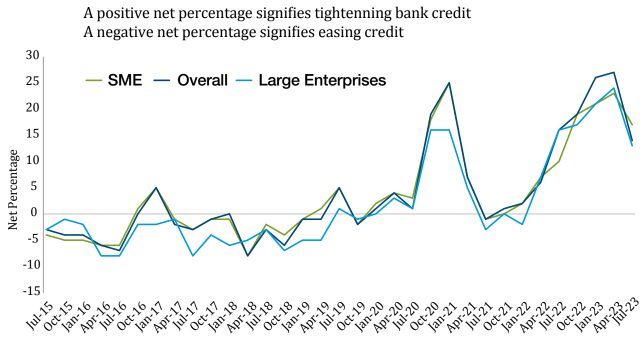
According to the July 2023 ECB bank lending survey, credit standards for SMEs have continued to tighten, predominantly driven by the uncertain economic and monetary outlook. Loan demand has declined significantly in tandem, predominantly due to higher interest rates. See Chart 2.7.

2.8: SME new gross lending (EURbn)



Source: ECB, BoE and national central banks

2.9: Bank credit standards (net percentage)



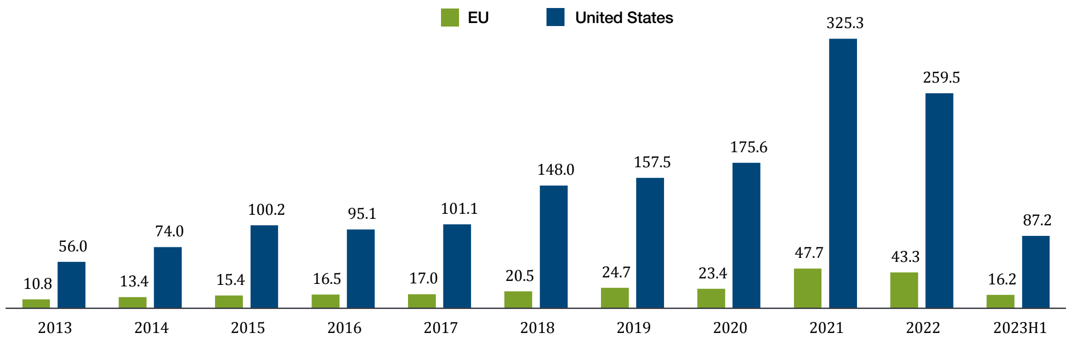
Source: ECB

"The EU continues to exhibit a large gap in risk capital funding compared to that of the US"

Continued risk capital gap between EU and US

The EU continues to exhibit a large gap in risk capital funding compared to that of the US. The total US volumes, despite the recent deceleration in risk capital investment, continue to represent 5.4x the European investment amounts.

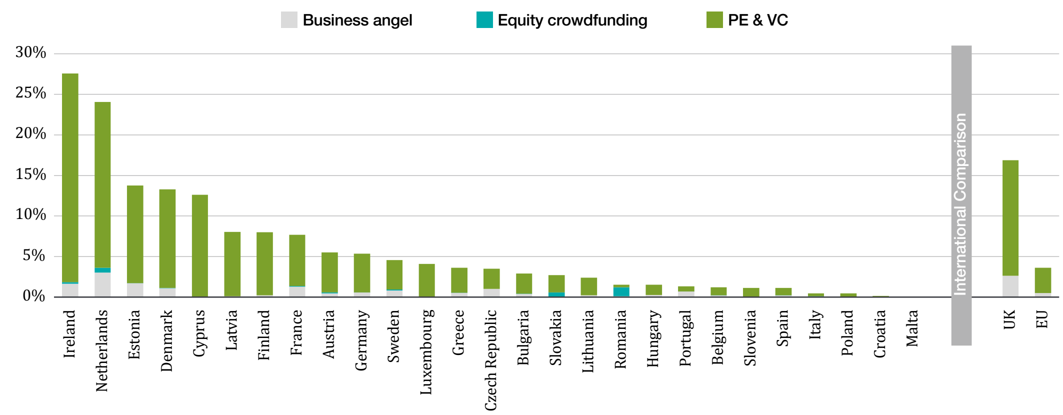
2.10: **Risk capital investment in the United States and the EU (EURbn)**



Source: NVCA. Angel & seed, early VC and late VC. EBAN, Dealroom, InvestEurope

There are wide disparities in pre-IPO risk capital funding across jurisdictions, when measured by our indicator. Ireland leads in risk capital availability, predominantly driven by private equity investment. Among large Member States, Italy and Spain continue to stand out as the countries with the highest potential to increase the presence of funding from risk capital sources. The Netherlands has visibly improved the availability of risk capital over the last 6 years, from 6% in 2018 to 24% in 2023H1 (and having a stable 3Y average of 22% over the last 3 years).

2.11: **Pre-IPO risk capital index: 2023H1 (investment from VC, growth PE, business angel and equity crowdfunding as % of risk capital and bank lending)**



Source: EBAN, Dealroom, InvestEurope, Eikon, ECB, and national central banks

Evolution of the crowdfunding ecosystem and market adaptation to the new ECSPR

Crowdfunding is one of the critical sources of finance that help SMEs bridge the funding gap. Although equity investment from EU crowdfunding platforms is relatively minor (c€0.3bn in 2023H1 vs €13.8bn from private equity funds), its contribution is crucial for companies that seek to raise finance at start-up and early stage where other funding sources are typically unavailable.

The European crowdfunding market is adapting to a new regulatory landscape. The new European Crowdfunding Service Providers Regulation (ECSPR) harmonises rules across the EU for the cross-border provision of equity-based and lending-based crowdfunding services for business financing.

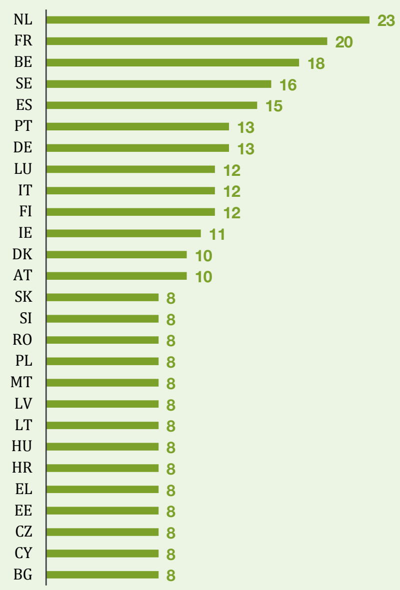
The ECSPR became effective across the European Union on 10 November 2021, with a transition period until November 2022 (extended to November 2023) for crowdfunding platforms to request an EU-level operation license. In April 2022, the first such license was granted.

As of August 2023, there were 44 platforms operating under ECSPR as reported on the ESMA register of crowdfunding services providers. Of these, 21 were single-country platforms that registered the intention to offer crowdfunding services in only one EU country. Additionally, 3 platforms did not disclose the countries where they intend to operate and 8 platforms have registered to offer crowdfunding services in all EU countries.

By countries, the Netherlands leads by number of crowdfunding platforms with 23, followed by France (20) and Belgium (18). See Chart 2.12.

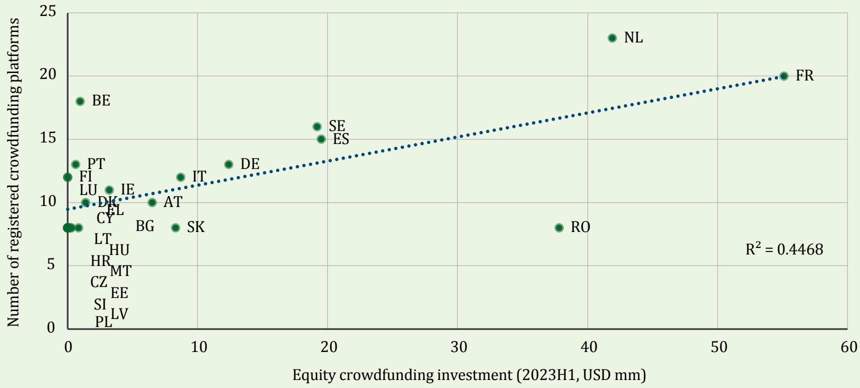
There is an unsurprising positive correlation between the number of platforms registered for the provision of services in the various Member States and the amount of investment via crowdfunding platforms. See Chart 2.13. Romania is a visible outlier in this correlation which is due to a single deal of USD 35m in Series A capital, raised in a combination of equity crowdfunding via Seedblink and from two venture capital firms. The amount of capital raised from each source was undisclosed.

2.12: **Number of crowdfunding platforms intending to offer services in by country**



Source: ESMA

2.13: **Correlation between number of platforms and equity investment via crowdfunding platforms**



Source: ESMA and Dealroom

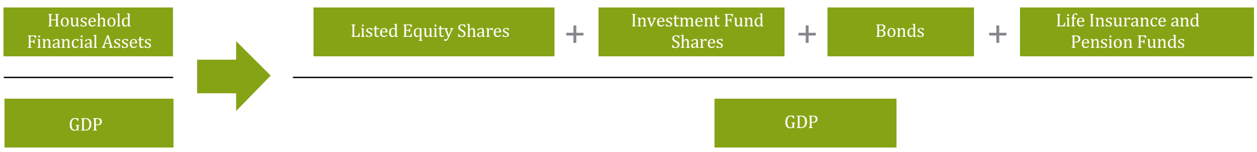
The number of registered platforms so far and the strong momentum in equity crowdfunding investment is a promising start for the ECSPR, reflecting the resilience for the crowdfunding industry in a turbulent year for risk capital investment. The trend also reflects the aspiration for success of reform as crowdfunding platforms utilise the benefits of the single market to provide finance for SMEs.

Industry experts anticipate that the number of ECSPR registered platforms should reach between 70-100 by the November 2023 deadline, hopefully with more EU-wide and fewer single-country platforms.

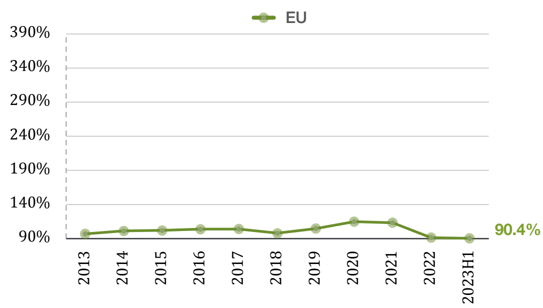
Pools of investment capital

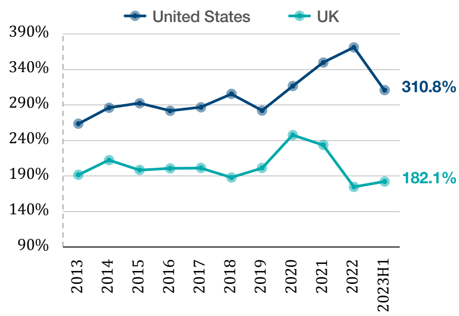
3. Household Market Investment Indicator

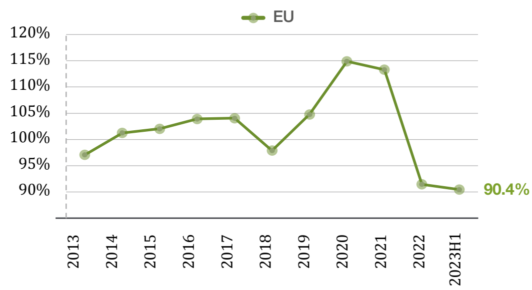
The household Market Investment Indicator measures the availability of savings from retail investors to invest in capital markets instruments. This ratio is estimated as household financial assets (excluding cash, deposits and unlisted equity) as a percentage of GDP. The asset classes aggregated as "household financial assets" in this indicator include listed equity shares[4], investment fund shares, bonds, life insurance reserves and pension fund holdings.



3.1: Evolution of Household Market Investment Indicator: Household market financial assets (excluding cash, deposits and unlisted equity) as % of GDP





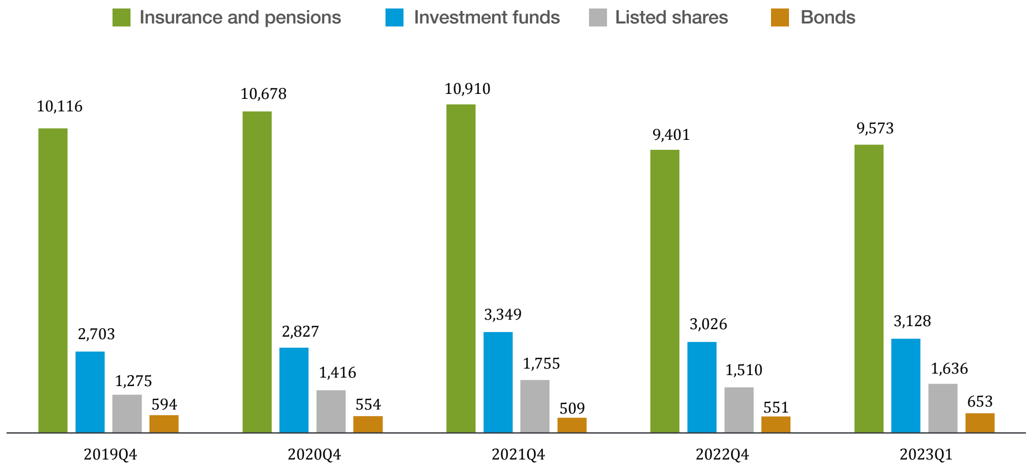


4 Unlisted shares, which are not necessarily a capital markets instrument, are not included the indicator.

Decline in retail investment

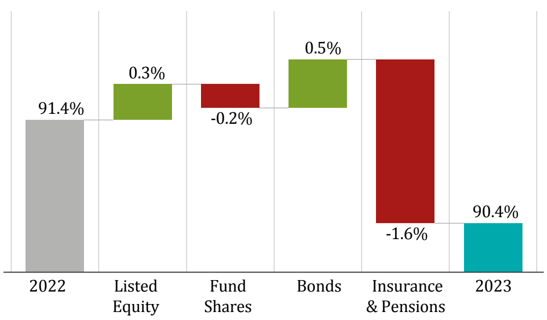
The household Investment Indicator stands at 90.4% in 2023, falling from 91.4% in 2022, and is now at its lowest level since AFME began measuring it. While retail investment levels were expected to normalise after the pandemic driven by the reduction and depletion of pandemic savings, the continued decline in 2023 is concerning. Analysing the aggreated nominator and denominator of the indicator more closely shows that the amount invested in relevant assets has actually increased slighty. However, this increase was not able to offset the nominal growth in EU GDP of 4% during 2023 (annualised), leading to an overall decline of the ratio. While the indicator is measured in nominal terms, given the heightened inflation at the reference point and that the real GDP growth rate was 0.3% in 2023 (annualised), it is likely that the retail investment indicator saw a decline in real terms over the relevant period.

3.2: Development of household financial assets in absolute terms (2019-2023)



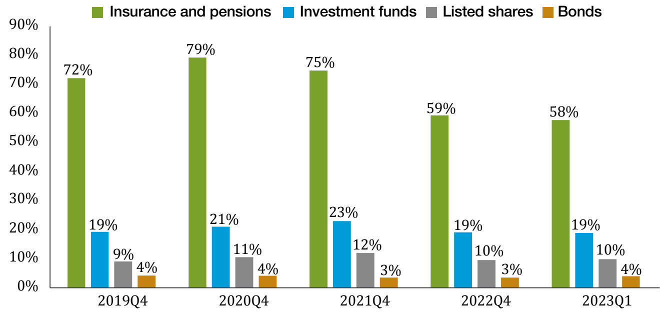
Source: Eurostat

3.3: Variation in EU Household market Investment Indicator by components (2022-2023 Q1 variation)



Source: Eurostat

3.4: EU households' holdings of life insurance and pension funds, investment funds, listed equity and bonds (as % of GDP)



Source: Eurostat

There has been no significant change in the composition of financial assets during 2023. Insurance and pensions still contribute 58% of the portfolio (59% in 2022), followed by investment funds (19%), listed shares (10%) and bonds (4%, 3% in 2022). The majority of retail investment is therefore held in passive investments, reflecting the overall reluctance of EU households to make targeted and active choices about their investment. A change in household, i.e. retail investment behaviour, is a crucial component of the facilitation of the EU's capital Markets Union. However, it is unclear whether the European Commission's Retail Investment Strategy published in May 2023, although well intentioned, will deliver this ambition.

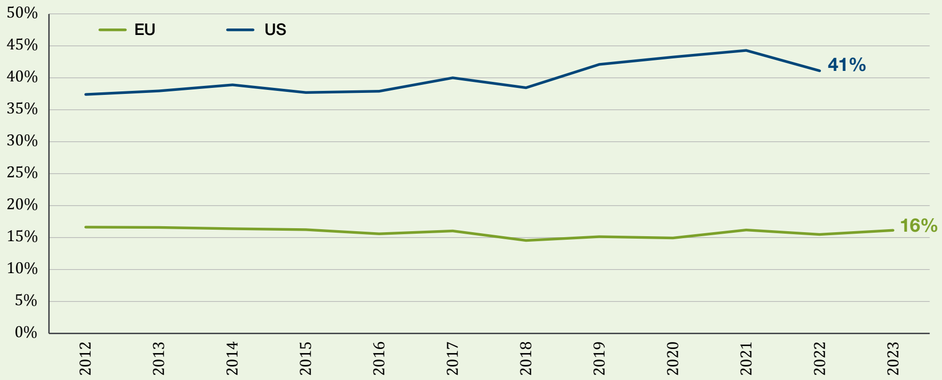
The EU Retail Investment Strategy

The European Commission's Retail Investment Strategy (RIS) was published on 24 May 2023. The package amends investor protection provisions across key legislations including: MiFID, AIFMD, UCITS, Solvency II and IDD. This is complemented by a proposed regulation amending PRIIPS.

Proposed changes in MiFID are extensive and deep in scope. Market participants have expressed remarks particularly on three areas: i) targeted ban on inducements, ii) three new best interest tests, and iii) the new value for money assessment.

The importance of improving retail participation in capital markets is quite evident. Only 17% of EU households' financial assets are held in the form of financial securities (listed shares, bonds, mutual funds and financial derivatives). In comparison, households in the US hold around 43% of their financial assets in securities. See Chart 3.5.

3.5: **Proportion of household financial assets held in financial securities: EU and US**



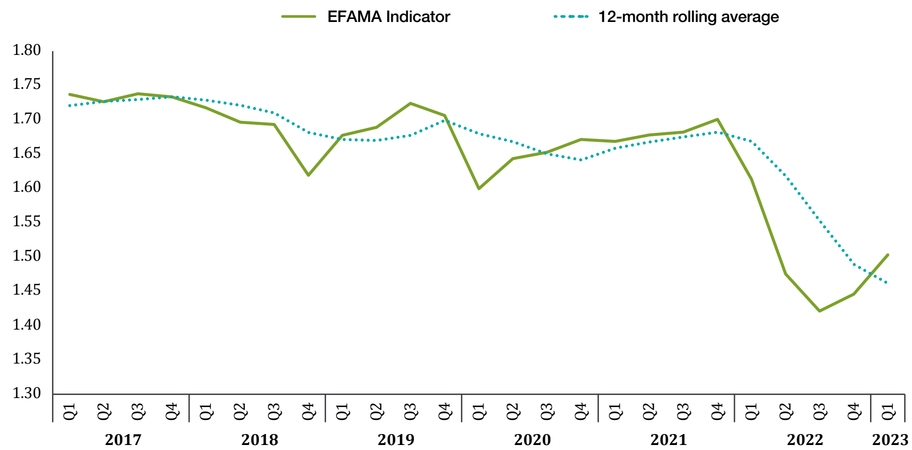
Source: Eurostat, US FED

Alternative approaches, including those used in other jurisdictions, should continue to be carefully explored based on their success to ensure the effectiveness of the proposals, while also considering differences between the national retail markets.

Continued preference for cash and deposits

The ratio of investments to deposits is persistently low in the EU, displaying households' preference for (sight) deposits. The EFAMA CMI index, measured as capital markets investments relative to household deposits, rebounded in 2023 after reaching a record low in 2022, standing now at 1.5% (1.45% in 2022). The rolling average has further declined with 1.46% in 2023 compared to 1.49% in 2022.

3.6: EFAMA CMI index: EU households' capital markets investments as % of household deposits

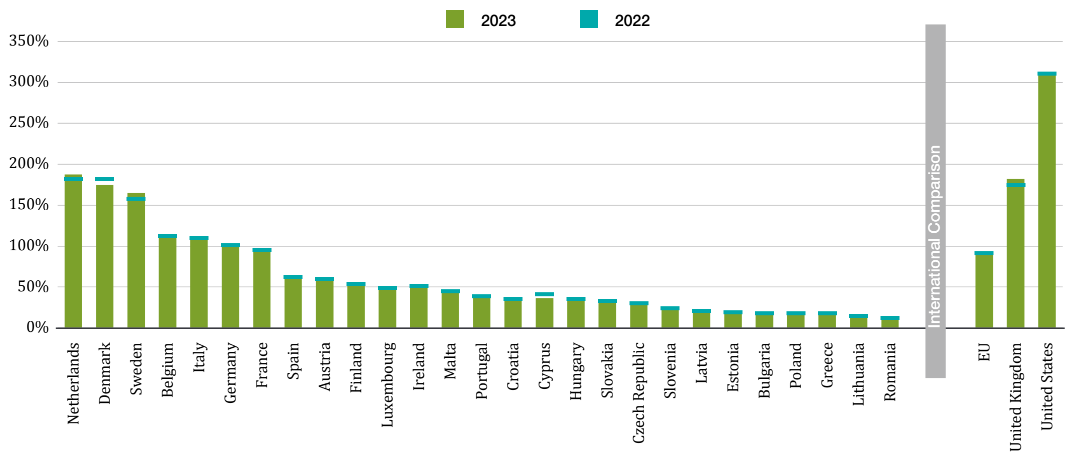


Source: Eurostat

Nordics and northern European countries take the lead

By far the most retail financial assets are held in Denmark (187% in terms of GDP), the Netherlands (174% in terms of GDP) and Sweden (165% in terms of GDP), with the aforementioned countries equal to around double the EU average of 90.4%. Countries at the average investment rate are Belgium, Italy, France and Germany and 20 countries are below the EU average, with eastern and south-eastern European countries having the lowest indicator values. Compared to 2022 there have been no significant changes in retail investment among EU countries nor has a change in country rankings been observed.

3.7: Household Market Investment Indicator by European countries

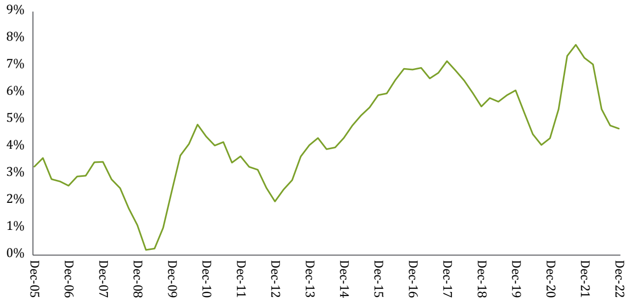


Source: Eurostat, US FED and OECD

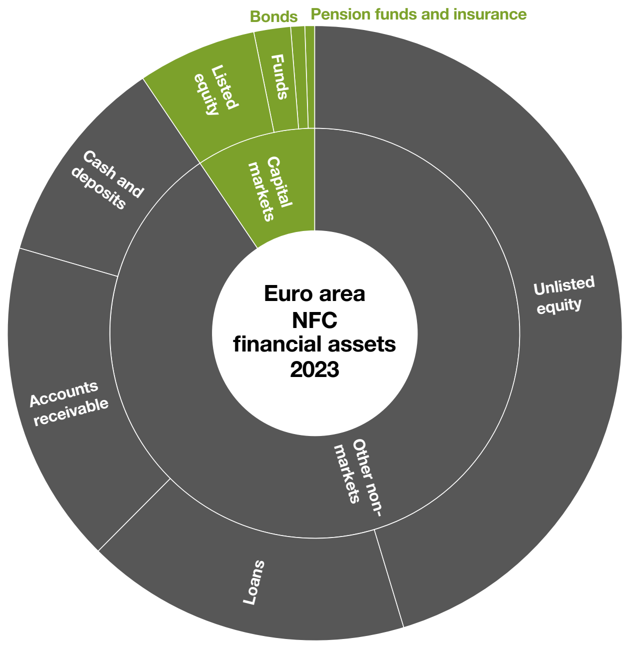
Corporate savings as a complementary source to household investment?

The savings rate of corporates has increased over the last two decades, making corporate savings a complementary source of private investment in financial assets in the EU. The composition of corporate savings are predominantly in non-capital markets vehicles, which makes sense for cash management and operational purposes.

3.8: **Euro area non-financial corporate net savings rate (% value added)**



3.9: **Composition of euro area non-financial corporates (NFC) financial assets: 2023**



In contrast to an increasing savings rate, corporate holdings in the form of capital markets instruments have declined over time. However, there is a steady and relevant increase (+10%) in unlisted equity holdings by corporates since 2008, suggesting that there is both supply and demand of funds within the corporate sector that might be better met within an active publicly traded market that ensures effective price building and steering of resources towards the highest demand. The same holds for loans provided by corporates.

"Corporate holdings in the form of capital markets instruments have declined over time"

Pan-European Personal Pension Product (PEPP)

The pan-European Personal Pension Product (PEPP) is a voluntary personal pension product that offers EU citizens a new option to save for retirement. The PEPP is complementary to existing national pension regimes. PEPP is a personal pension product (pillar three). As such, it is independent from existing state-based pensions (pillar one) and from occupational pension systems (pillar two). Key features of PEPP include:

- Possibility to switch providers every five years, at capped costs
- Mobility: savers will be able to continue saving in the same product even when they change residence in the EU
- Full transparency on the product, including on costs and fees – relevant information will be disclosed via a simple Key Information Document (KID) supplied before the purchase, complemented by a personalised pension benefits statement during the product lifetime
- Affordable default investment option (Basic PEPP): costs capped at 1% of the accumulated capital per annum
- Protection of the capital invested, based on a guarantee or a risk-mitigation technique, such as life-cycling.

PEPPs can be offered by a range of financial institutions:

- credit institutions
- insurance undertakings engaged in direct life insurance
- institutions for occupational retirement provision (IORPs) which are authorised and supervised to provide also personal pension products
- investment firms providing portfolio management
- investment companies or management companies
- EU alternative investment fund managers (EU AIFM)

As of this date, eligible providers can submit an application for registration of a PEPP to the relevant national competent authority.

EIOPA carried out a survey to better understand the potential take-up of PEPP by eligible providers in February 2022. In total, 21 entities reported to EIOPA that they considered offering a PEPP. Those entities were mainly asset managers and insurance undertakings.

As of August 2023, only six PEPP products (offered in Slovakia, Croatia and Czech Republic) from one single provider were registered. A review of the PEPP regulation and the fee cap is needed to address the reasons why only one provider has decided to offer a PEPP so far.

4. European Long-Term Investment Funds (ELTIFs) Indicator

This indicator measures the number of ELTIF products marketed in EU Member States and in the EU.

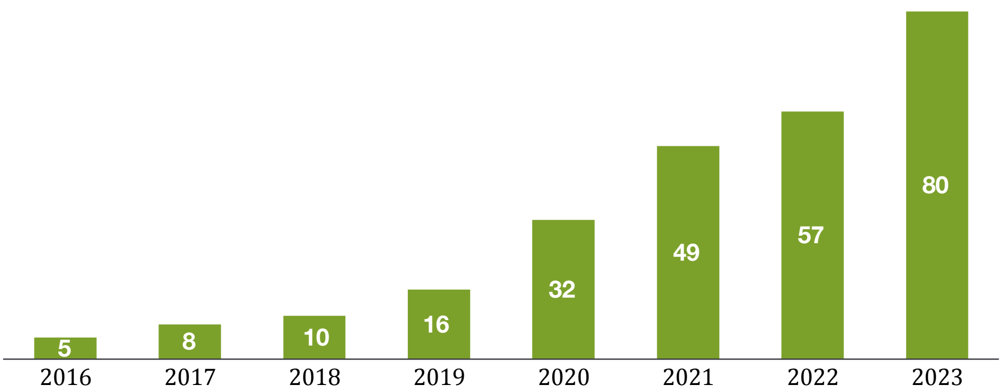
ELTIFs are EU collective long-term investment vehicles that are intended to channel funds for infrastructure, real estate, transportation and energy, as well as in SMEs.

We abstain from adjusting the indicator to country-specific characteristics (e.g. population size, depth of pension fund industry, or the number of UCITS) due to the small number of existing ELTIF funds registered and marketed to investors.

ELTIFs' potential to unlock growth

According to the ESMA ELTIF register, as of June 2023 there were 95 ELTIFs registered in the EU, of which 80 were marketed and 15 registered but not offered to investors. This represents a visible growth in new ELTIF funds marketed in the EU and the largest annual increase to date, with 23 additional funds being marketed in the first half of 2023, from a total of 57 in June 2022.

4.1: **Number of ELTIF funds marketed in the EU**



Source: AFME, ESMA and Fund sources.

In terms of market volume, Scope Ratings estimates that the ELTIF market size in terms of assets under management (AuM) stood at between €11.25bn and €11.35bn at the end of 2022. Compared to 2021, this AuM amount rose by approximately €3.9bn (52% YoY). Data is not currently available for the market size amount for 2023.

The significant expansion of ELTIF AuM shows that this EU-wide vehicle is experiencing an encouraging level of growth, albeit from a low base. Industry experts remain optimistic about the contribution of the new ELTIF regulatory framework as a key driver for recent growth and anticipate that the framework will contribute to further growth in coming years.

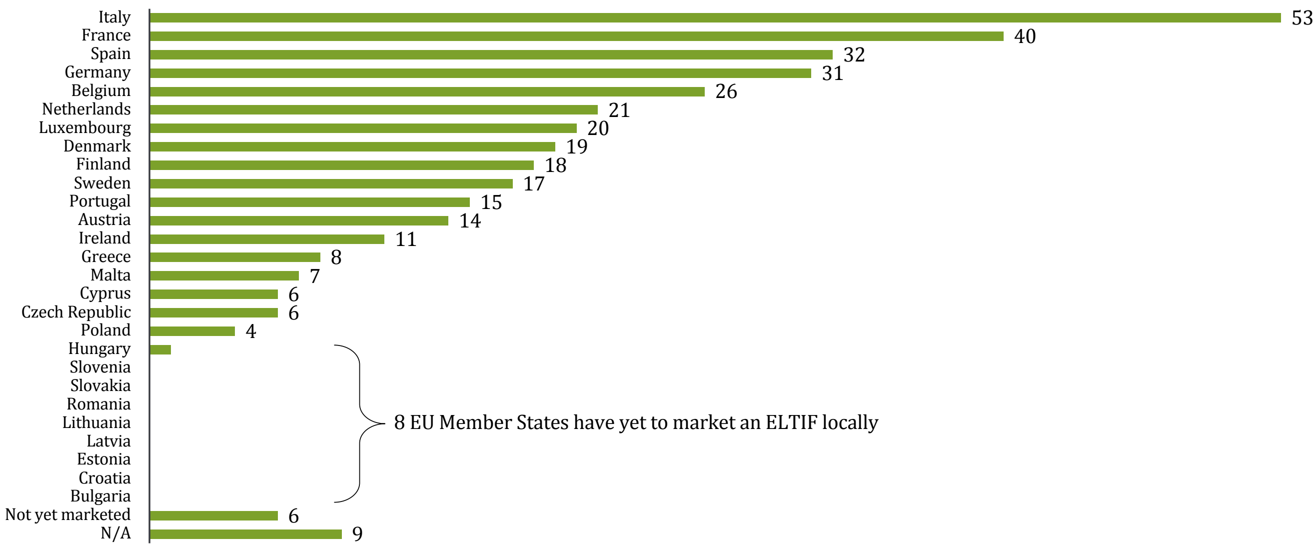
Italy leads in ELTIF growth

Compared to 2022, there were no substantial changes in the country leaders for the marketing of ELTIF products. Italy and France exhibited the largest annual increase in ELTIF products by 15 and 12 vehicles respectively. Italy, France and Spain continued as the EU leaders in ELTIF products.

It is encouraging that Hungary saw its first ELTIF vehicle marketed locally over the last year. There are now 8 countries that do not offer ELTIF products locally: Slovenia, Slovakia, Romania, Lithuania, Latvia, Estonia, Croatia and Bulgaria.

ELTIF vehicles continued to be domiciled in only four EU member states: Luxembourg (59), France (21), Italy (13) and Spain (2). Italy and Spain did not observe an annual variation in the number of ELTIF products domiciled locally.

4.2: **Number of ELTIFs marketed by country**



Source: ESMA

The ELTIF version 2.0 will help channel investments into the real economy

The ELTIF 2.0 framework entered into force on 9 April 2023 and will apply from 10 January 2024. This is an encouraging regulatory modernisation that was widely well received by market participants and is expected to lead to a significant increase of investment into the EU economy. Regarding the future of the product, some of the observations from market participants include:

As the new framework enters into force, it is important to let the regulation take its course and evaluate success of reform in due course. Major additional changes to the existing framework may create regulatory instability and prevent investors and investment recipients from seizing the benefits of reform.

Regulators should uphold the positive momentum of reforms initiated at Level 1 and guarantee that the requirements established by the future ESMA draft Regulatory Technical Standards (RTS) are conducive to the ongoing success of the ELTIF product.

Transition to sustainable finance and digitalisation

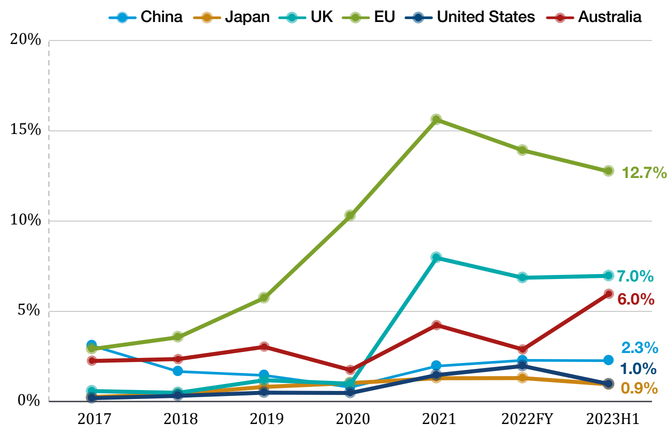
5. ESG Finance Indicator

Funding for the sustainable transition is a cornerstone of future EU growth. This indicator seeks to quantify the labelling of ESG bond instruments and is estimated as a simple ratio of ESG bond issuance (corporate, government, municipal, agency, and securitisation) relative to total bond issuance. The definition of ESG (environmental, social and governance) bonds is based on the Climate Bonds Initiative's use of proceeds-based criteria (green, social and sustainable).

The indicator does not consider sustainable equity issuance due to the difficulty in assessing and classifying entire organisations as sustainable, but could evolve over time reflecting changes in the sustainable finance sector and data availability. This indicator does not take into account sustainability-linked bonds in the methodology used to compute the ratio of sustainable or ESG bond issuance to total bond issuance, however this specific feature of the market is commented on later in the chapter.

$$\frac{\text{Sustainable Bond Issuance}}{\text{Total Bond Issuance}} \Rightarrow \frac{\text{Sustainable Corporate Bonds} + \text{Sustainable Government Bond} + \text{Sustainable Municipal and Agency Bonds} + \text{Sustainable Securitisation}}{\text{Total Corporate Bonds} + \text{Total Government Bond} + \text{Total Municipal and Agency Bonds} + \text{Total Placed Securitisation}}$$

5.1: **ESG Finance Indicator (ESG bond issuance as % of total bond issuance)**



Source: CBI, Dealogic, ECB, SIFMA and AFME

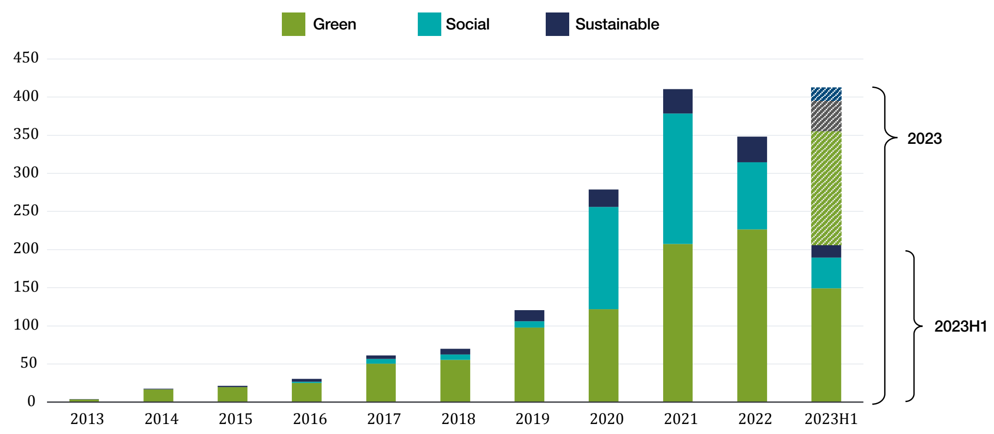
Decline in ESG finance while the EU contines as a global ESG leader

In 2023H1, ESG-labelled bond issuance in the EU reached EUR 206.1 bn, making up 12.7% of total EU bond issuance

EU ESG issuance increased 18% YoY (annualised) in 2023H1. Nonetheless, the EU ESG indicator declined from 13.9% in 2022 to 12.7% in 2023H1 as a result of a surge in the denominator as non-ESG government bond and corporate issuance increased 25% and 38% respectively (annualised).

The EU is the global leader in ESG bond origination, with issuers from other regions continuing to issue around 1% to 7% of bonds with ESG labelling. No major growth in ESG bond market has been recorded in China, Japan or the US compared to 5 years ago, with Japan and the US recently recording a decline in indicator value in 2023H1.

5.2: EU Green, Social and Dual-Purpose bond issuance, EUR bn, 2018–2023 (annualised)



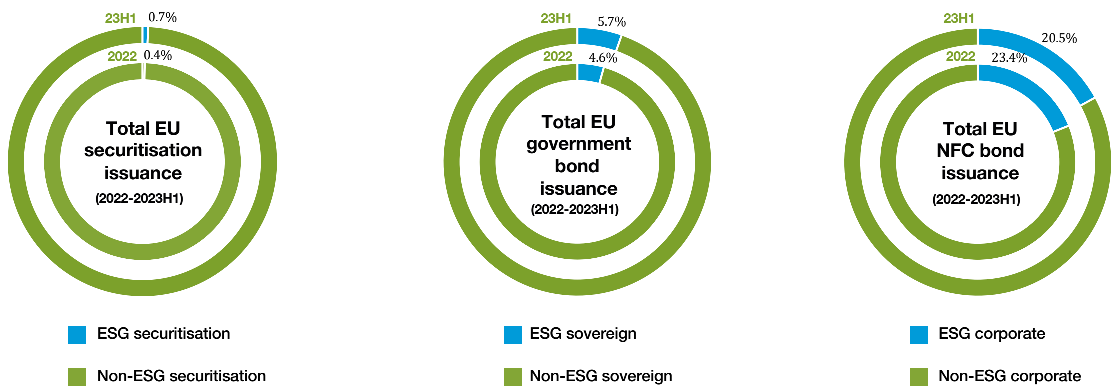
Source: CBI and Dealogic

EUR 149.2 bn worth of green bonds were issued in the EU during the first six months of 2023, with green volumes up 32% YoY (annualised). Green issuance continues to dominate the EU ESG bond landscape, making up 72% of total ESG volumes issued in 2023H1, which represents the highest proportion since 2019.

Momentum in the social bond market has failed to keep up with previous years with a decline of 8% YoY (annualised) in issuance during 2023H1. The absence of any sovereign issues with social labelling since the EU SURE scheme concluded in 2021 has played a key role in the lack of growth.

There is considerable heterogeneity in the contribution of ESG issuance to each sub-sector of EU capital markets. For instance, in 2023H1, EU ESG issuance made up 0.7% of total EU securitisation issuance, 5.7% of sovereign bond issuance and 20.5% of non-financial corporate (NFC) bond issuance.

5.3: ESG Finance Indicator for EU securitisation, government and corporate bond issuance (ESG issuance as % of total issuance)



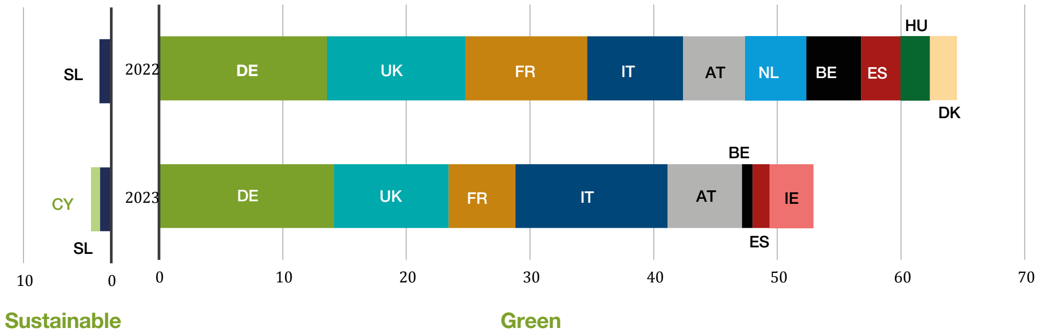
Source: CBI, Dealogic, ECB, SIFMA, ECBC and AFME

The contribution of ESG issuance in EU securitisation markets is significantly below other markets, with issuance currently limited to a few issuers with a handful of EU deals finalising each year. With inaugural green, social and sustainable securitisations already issued in EU markets, significant opportunities exist for further utilisation of securitisation in order to support current ESG funding channels and the development of deeper and more dynamic ESG capital markets in Europe.

Due to the significant volumes issued in the government sector, EU ESG government bonds (predominantly green-labelled) were the largest issuance category in terms of ESG volumes, with EU sovereigns accounting for 23.2% of total EU ESG volumes in 2023H1 (compared to 16.0% for NFCs).

In 2023H1, Cyprus became the 16th EU sovereign to enter ESG markets issuing an inaugural sustainable government bond, the third of its kind in the EU, after the Luxembourgish and Slovenian sustainable bonds were issued in 2020 and 2021 respectively. This follows the entry of Denmark and Austria in 2022 with their inaugural green government bonds, leaving less than half of EU sovereigns yet to tap government bond markets for ESG funding.

5.4: ESG bond issuance by European sovereign issuer 2022 and 2023H1 (EUR bn)



Source: CBI, Dealogic, AFME Government Bond Data Report Q2 2023

The European Commission remains an active ESG issuer via issuance of EU-bonds, which accounted for 5.2% of total EU ESG bond issuance during 2023H1, down from 7.4% in 2022FY.

Inaugural Cyprus ESG bond and Germany deepens green government bond market

Germany continues to issue the largest nominal volume of green bonds for any EU country for the third year in a row, with EUR 36.9 bn issued in 2023H1, an annualised increase of 26%. In 2023, the German government issued two new green federal bonds raising for EUR 10.75bn, deepening the green government bond market and expanding the green German yield curve. This was in addition to further tap issues of other existing references.

Cyprus leads EU countries with 71.6% of total bond issuance having ESG labelling, driven solely by the government's inaugural ESG bond, which raised EUR 1bn. This marks the first time ESG bond issuance has taken place in Cyprus and the first time the country has scored a non-zero value in the ESG indicator.

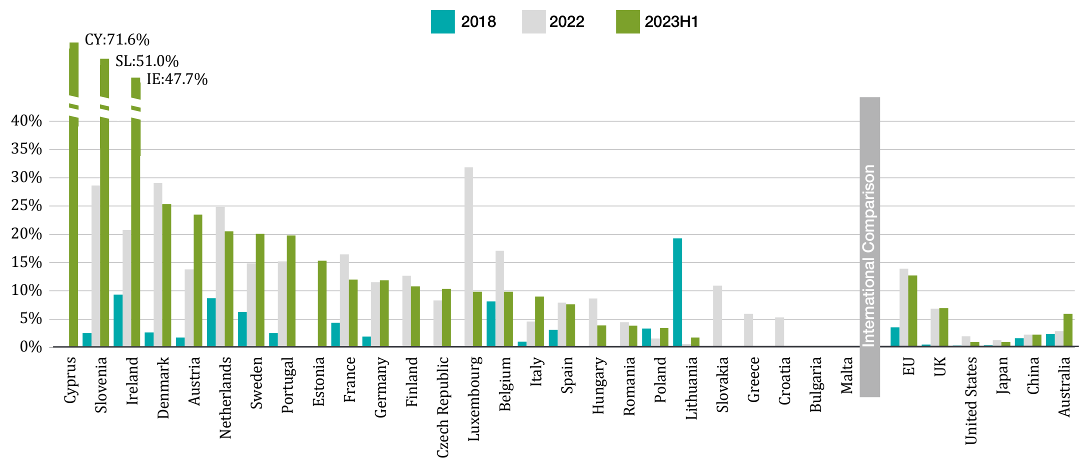
ESG issuance in the UK increased by 46% YoY (annualised) during 2023H1, with 7% of total bond issuance in the UK having ESG labelling. The increase in UK ESG issuance has been driven predominantly by the sovereign sector with continued momentum in the UK Debt Management Office's green Gilt programme throughout 2023H1.

In Slovenia, the ESG bond market was exclusively driven by government activity, with 51% of bonds labelled ESG following a second Slovenian sustainable government bond issued in January 2023.

Austria, Italy and Portugal all significantly increased their ESG Finance Indicator value after green bond issuance increased, on an annualised basis, by 150% (YoY), 196% (YoY) and 52% (YoY) respectively.

Malta and Bulgaria are the last remaining two EU countries from which issuers are yet to tap ESG markets for funding, with issuers from neither country recording any ESG issuance as of 2023H1.

5.5: **ESG finance Indicator by country (2018-2023H1) (ESG bond issuance as % of total bond issuance)**

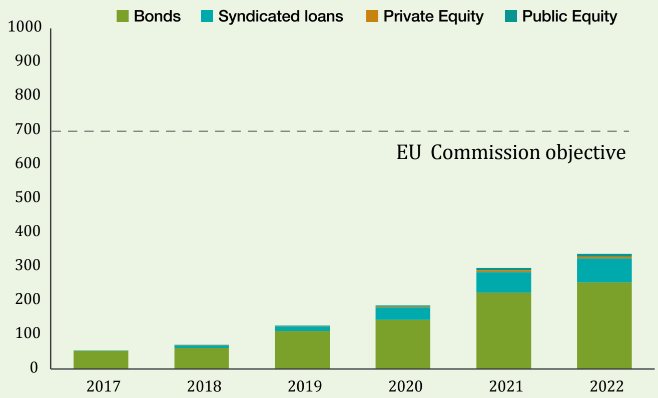


Source: CBI, Dealogic, ECB, SIFMA, ECBC and AFME

Further developing sustainable finance
Prepared by Oliver Moullin

As the European Commission has highlighted, the EU will need additional investments of c. EUR 700 bn annually to meet the objectives of the Green Deal, REPowerEU and the Net Zero Industry Act, with the majority reliant on private financing. For the year 2022, markets (including syndicated lending) contributed c€350bn to finance green and sustainable projects, which highlights the sizeable importance of capital markets for the sustainable transition.

5.6: EU green and sustainable market-based finance (2017-2022) and green financing needs (EURbn)



Source: Dealogic, New Financial and AFME. Excludes funding for refinancing or repayment of debt.

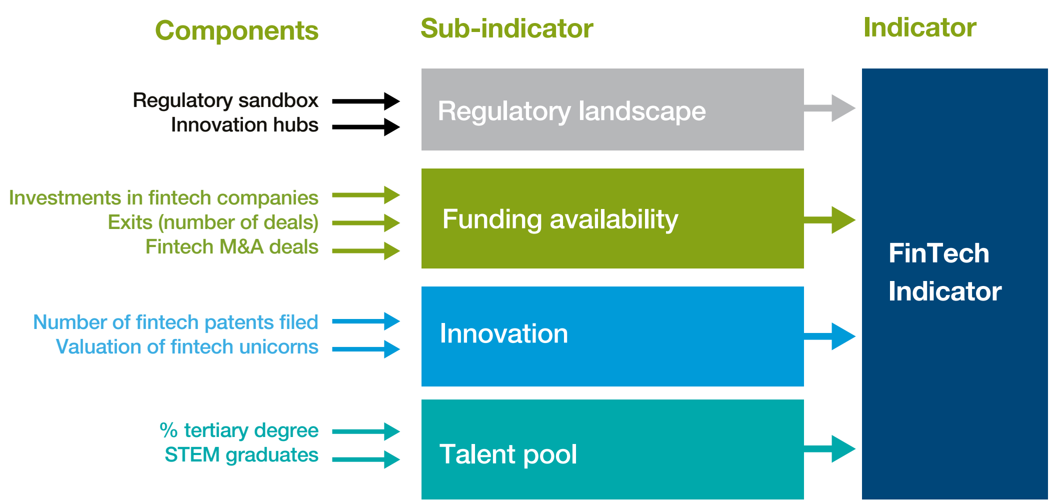
It is crucial that the EU institutions and Member States focus on putting in place the policies, roadmaps, incentives and mandates for the real economy to have the information, the tools, and the incentives to adapt their businesses. This will in turn facilitate finance that will be available to support companies' investment and financing needs throughout the transition. This should be the foremost priority going forward.

The building blocks for the regulatory framework for sustainable finance in the EU are now in place or in the process of implementation. The last five years have seen a Herculean effort to establish and implement a regulatory framework for sustainable finance. This has been done at speed and has created important new legislation aiming to facilitate the provision of finance in support of the EU's sustainability objectives and to ensure that financial institutions manage climate risk effectively. It is essential that the EU regulatory framework supports the role of capital markets in helping finance the transition and that it works in a way that supports the growth and competitiveness of the EU economy.

At the same time, there is a growing concern among EU corporates on the emerging complexity and level of detail of the framework. Ensuring the coherence and consistency across the various pieces of legislation of which the framework is comprised (e.g. the Corporate Sustainability Reporting Directive, European Sustainability Reporting Standards, the upcoming Corporate Sustainability Due Diligence Directive and the EU Taxonomy) will therefore also be an important next step to ensure private finance flows to where it is needed to meet EU and global climate, environmental and societal objectives.

6. FinTech Indicator

The FinTech Composite Indicator seeks to rank countries by their capacity to host a fintech ecosystem. The indicator is constructed based on four sub-indicators: (i) regulatory landscape; (ii) availability of finance for companies; (iii) degree of innovation; and (iv) talent pool. Each of the four sub-indicators is composed of individual metrics as illustrated in the figure below:

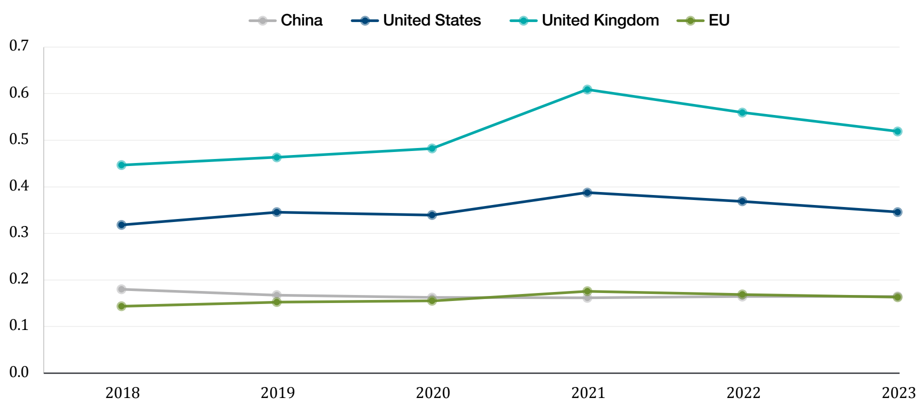


Stagnation in fintech evolution

Recent trends point towards stagnation or even decline of the fintech industry.

The fintech industry saw a decline in funding during 2022 and 2023 as well as a decline in M&A activity involving fintech, while IPO exits did continue. The total market value of fintech unicorns declined. As regards the regulatory landscape in Europe, no Member State introduced new sandboxes or innovation hubs over the last year.

6.1: **Evolution of FinTech Indicator [0: Min, 1: Max] based on regulatory landscape, funding availability, innovation and talent pool**



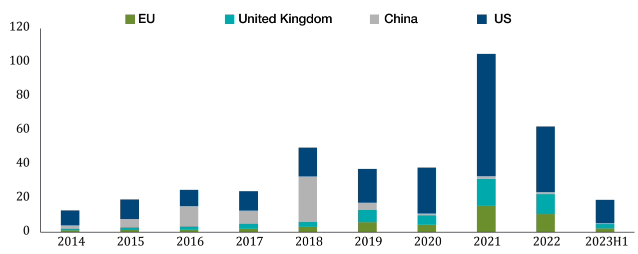
6. FinTech Indicator

In line with the global fintech ecosystem, the EU fintech sector continued slowing down in 2023. The fintech ecosystem in the European Union has never been particularly strong, and has now nearly returned to 2019 levels. This is reflected in our FinTech Indicator standing at 0.16 for 2023 (0.17 in 2022) and 0.15 in 2018.

Decline in funding for FinTech companies

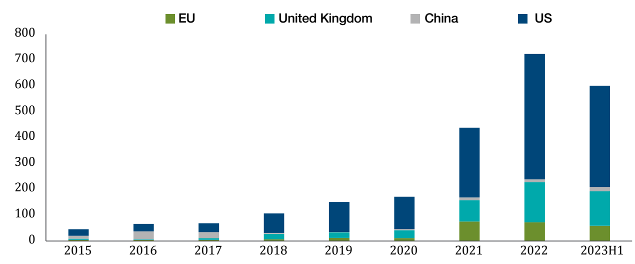
Investment in fintech saw a sharp decline in 2023 across regions compared to the same period in 2022. In the UK investment dropped by approximately 80% to USD2.40bn, followed by the EU where investment decreased by 78% to USD2.39bn. The US saw roughly 65% less investment in 2023. The same development is observed in the valuation of fintech unicorns which decreased across regions. In the EU the cumulative value of unicorns decreased from USD72.3bn in 2022 to USD59.4bn in 2023 (20%). In the UK the valuation reduced from USD155.8bn to USD132.53bn in 2023 (15%).

6.2: Global investment activity in fintech: amount 2014-2023H1 (USD bn)



Source: Dealroom

6.3: Value of fintech unicorns (USD bn)

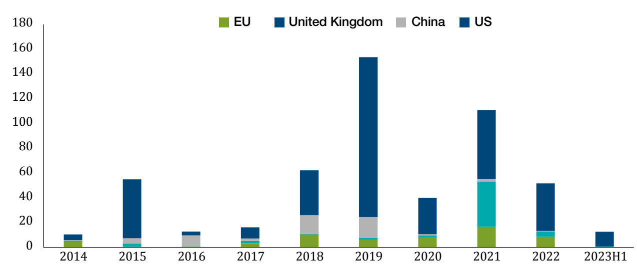


Source: CBInsights

Overall, a trend for consolidation can be observed where unicorns expand to other products. For instance, Qonto expanded from a fintech payments provider to a wider enterprise services provider offering invoice management, expenses and bookkeeping. The fintech Alan developed from pure insurance to wider healthcare services like online therapy.

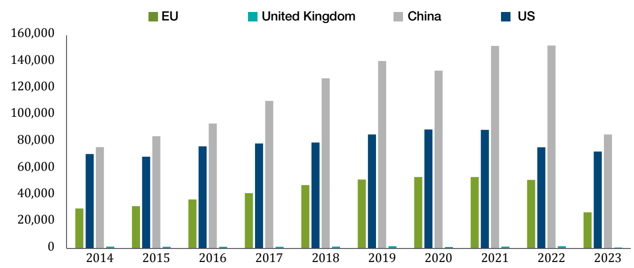
Mergers and acquisitions have reduced accordingly by 95% both the EU and UK, and 70% in the US. Registered patents fell back to 2014 levels across all jurisdictions and halved in the EU and UK compared to 2022. The US remains fairly stable with on average about 80,000 patents registered every year over the last 9 years.

6.4: Fintech M&A (EURbn)



Source: Dealogic

6.5: New fintech patents registered by jurisdiction



Source: Google patents

A steady state in fintech innovation facilitators?

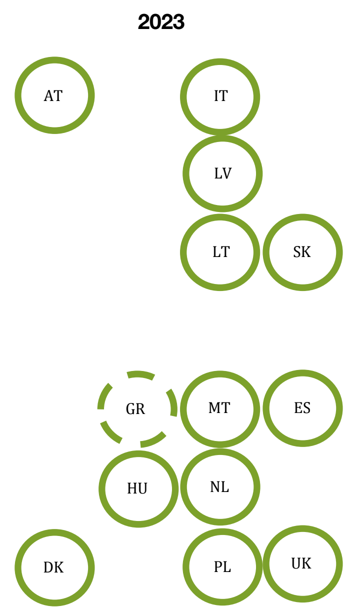
In 2023, no new regulatory sandboxes were established by any EU Member State. Therefore, only 12 countries in Europe (including the UK) currently have full sandboxes while Greece operates a partial sandbox (see caption below). There are visible differences in the use of regulatory sandboxes between Member States; whereby in some countries the regulatory feature exists, but it is not widely used or is significantly limited to only a few technology activities.

At the EU level, however, the entry into force of the Distributed Ledger Technology (DLT) Pilot Regime in March 2023 and the Blockchain regulatory sandbox launched in February 2023, are intended to improve the EU's FinTech ecosystem. The DLT pilot regime is a regulatory sandbox specific for the development of DLT market infrastructures for trading and settlement for 'tokenised' securities, while the Blockchain sandbox is intended as a forum for regulatory dialogue to increase legal certainty for the development of innovative blockchain products.

The ability to successfully transform financial legislation to support the use of DLT across financial services will depend on how broadly the sandboxes are used by industry participants and what is the uptake level (see AFME, 2023).

Regulatory sandboxes provide an environment to enable firms to test innovative financial products, financial services or business models, pursuant to a specific testing plan agreed and monitored by a dedicated function of the competent authority. Sandboxes may also imply the use of legally provided discretions by the relevant supervisor (with use depending on the relevant applicable EU and national law) but sandboxes do not entail the disapplication of regulatory requirements that must be applied as a result of EU law.

6.6: European countries with regulatory sandboxes

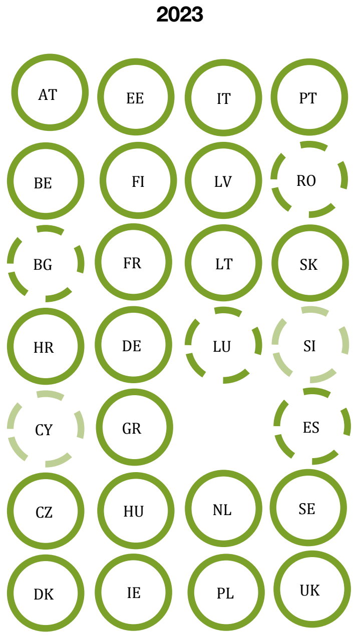


Source: EBA, ESMA, EIOPA and EFIF. Countries with dotted circle offer sandboxes for some but not all financial services activities

The number of innovation hubs has remained unchanged since 2022. 21 countries (including the UK) operate comprehensive innovation hubs and 5 countries provide services for some fintech aspects.

Innovation hubs provide a dedicated point of contact for firms to raise enquiries with competent authorities on fintech-related issues and to seek non-binding guidance on the conformity of innovative financial products, financial services or business models with licensing or registration requirements and regulatory and supervisory expectations.

6.7: European countries with fintech innovation hubs



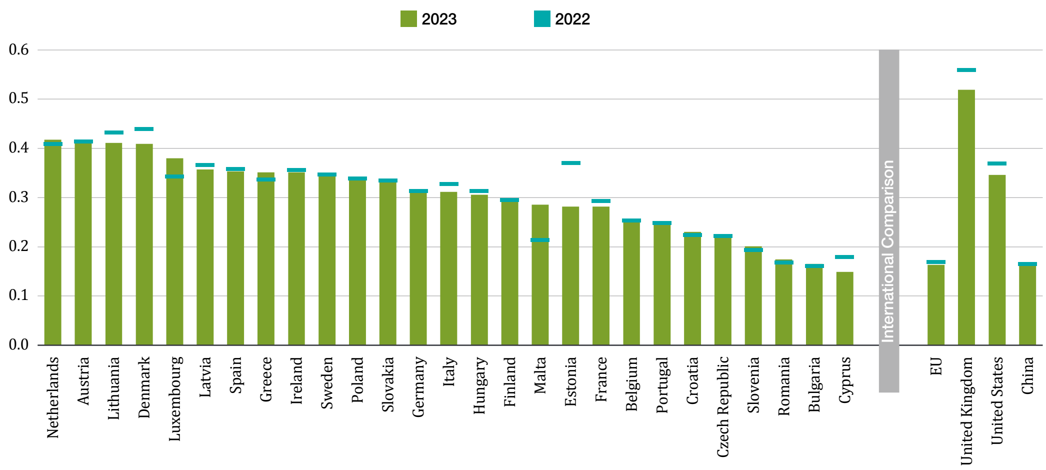
Source: EBA, ESMA, EIOPA and EFIF. Countries with dotted circle offer innovation hubs for some but not all financial services activities

Fintech performance by countries

Fintech performance is a composite indicator based on regulatory landscape, funding availability, innovation, and talent pool. The overall fintech performance across regions declined compared to 2022. The largest reduction could be observed in the UK, followed by the US and EU.

Within the EU, the Netherlands, Austria, Luxembourg, Greece and Malta further increased their fintech performance, and by and large all the eastern European countries did so too. Lithuania, Denmark, Estonia and Cyprus saw a relatively sharp reduction in their fintech performance.

6.8: FinTech Indicator by countries: 2022 and 2023
Composite indicator based on regulatory landscape, funding availability, innovation, and talent pool [0: Min, 1: Max]



Source: AFME

6.9: **Fintech Indicator by components. Top 5 countries (ranking 1: top; 27: bottom)**

	Fintech ranking	Funding	Talent pool	Regulation	Innovation
Netherlands	1	6	14	1	3
Austria	2	17	10	1	7
Lithuania	3	22	4	1	22
Denmark	4	7	12	1	9
Luxembourg	5	2	9	24	2

The top five countries have not changed since 2022, but the order has. The Netherlands is top-ranked in 2023 and improved its funding and talent pool components, while the local regulation environment continues to offer innovation hubs and sandboxes for all the financial services activities. Denmark's talent pool and innovation components declined, meaning it dropped to fourth from being top-ranked in 2022. Lithuania and Austria have swapped ranks too, where both countries deteriorated across the field. Regulation by nature is the only area stable across time.

Digital bonds and future developments

While not covered in this indicator, a promising recent development is the growing origination of digital bonds in the EU. Bonds that use the Distributed Ledger Technology (DLT) are know as digital bonds, where bonds use the technology for the issuance, transfer, settlement, or payments of principal and coupons, among other features.

The EU regulatory framework has evolved to facilitate the issues of digital bonds, including recently approved initiatives such as the EU DLT Pilot Regime, and other national initiatives at the EU Member State level in Luxembourg, Germany, France, Italy, Spain, and Poland (Clifford Chance, 2023).

Some visible examples of digital bonds issued in the EU include: EIB's project Venus[5] (€100mm, November 2022); World Bank[6] (€100mm, October 2023); EIB's Project Mars[7] (£50mm, January 2023); Vesteda green digital bond[8] (€5mm, September 2023).

"The EU regulatory framework has evolved to facilitate the issues of digital bonds"

5 https://www.eib.org/en/press/all/2022-448-eib-innovates-further-with-project-venus-the-first-euro-denominated-digital-bond-on-a-private-blockchain

6 https://www.worldbank.org/en/news/press-release/2023/10/24/world-bank-is-the-first-issuer-on-euroclear-s-new-digital-securities-platform

7 https://www.eib.org/en/press/all/2023-030-eib-issues-its-first-ever-digital-bond-in-british-pounds

8 https://news.vesteda.com/vesteda-first-real-estate-investor-to-use-public-blockchain-in-green-financing/

Generative artificial intelligence (AI)

Prepared by Coen ter Wal and Raouiya Lebbakh

This box comments on the emergence of generative AI in capital markets, its potential applications and some emerging risks for financial consumers and market participants.

Generative AI has captured the attention of many - including in capital markets, with analysis by McKinsey indicating that it could generate USD340bn worth of value for banks.[9] Generative AI is a type of AI technology that can produce various types of content from an input or prompt, including text, images, audio, code and video, based on the data it has been trained on. Generative AI tools are usually based on foundational models, which are trained on a broad set of data that can be fine-tuned to a wide range of downstream tasks and that act as a foundation for more task-specific models.

The application of generative AI can be divided into a number of categories: content generators (models that generate content and data through Generative Adversarial Networks); information extractors; smart chatbots; language translators (multilingual models that can translate multiple languages); and code generators (that convert natural text into code).[10] Well-known generative AI applications include Open AI's DALL-E and ChatGPT, as well as Stable Diffusion and Midjourney. Large technology companies have also launched generative AI tools, including Google's Bard and DeeMmind, or Microsoft's Copilot.

Generative AI: transforming capital markets?

Adoption of generative AI in the financial industry has been varied. While a number of financial institutions have placed strict restrictions and conditions on the use of generative AI[11] (predominantly due to legal, contractual, compliance reasons), others are exploring ways to incorporate AI in their operations to improve the quality and resilience of IT systems[12].

Generative AI can provide myriad business benefits, including improved information security and analysis, simplifying business operations, boosting workers' productivity, drafting and reviewing contract terms or regulations[13]. In the context of capital markets, specific applications that may prove particularly valuable include:

- **Operational**: AI can enhance customer service through chatbots or email recognition, as well as using generative AI to summarise emails or notes

- **Trading and settlement:** Generative AI can enhance the efficiency of trading as well as settlement processes. The additional analytical capabilities provided by large language models (LLMs) can be used for more advanced portfolio optimisation and risk management. It can also enhance trade-matching efficiency, and provide a basis for automation of post-trade reconciliation[14];

- **Research:** LLMs are well-versed in extracting and analysing vast amounts of unstructured text data and generating content. This makes them particularly well placed for generation of automated research and analysis, including for instance regarding sentiment analysis. Indeed, in recent months, the number of investment reports generated by AI has increased exponentially (figure 6.10)[15] Additionally the creation of synthetic data can help train models in areas like fraud detection where data is sparse. This preserves data privacy and is a more cost-effective solution.

9 https://www.mckinsey.com/mgi/overview/in-the-news/ai-could-increase-corporate-profits-by-4-trillion-a-year-according-to-new-research

10 https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2023/04/generative-ai-models-the-risks-and-potential rewards-in-business.pdf

11 https://tech.co/news/wall-street-banks-ban-ai-chatgpt

12 https://www.mizuhogroup.com/news_release/20230619release_eng.html

13 https://kpmg.com/xx/en/home/insights/2023/04/generative-ai-models-the-risks-and-potential-rewards-in-business.html

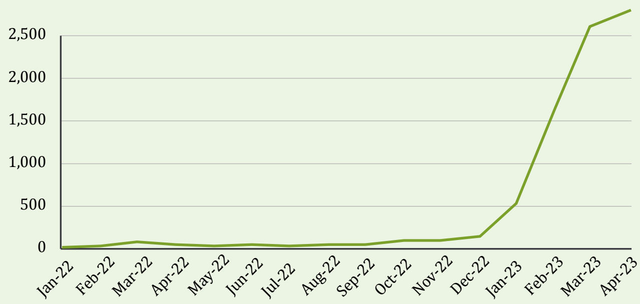
14 https://www.fintechweekly.com/magazine/articles/driving-efficiency-in-capital-markets-by-leveraging-generative-ai-to-overcome-securities-settlement-failures

15 https://www.spglobal.com/marketintelligence/en/news-insights/blog/volume-of-investment-research-reports-on-generative-ai-skyrocketed-in-q1-2023

- **Regulatory compliance:** AI models can play a role in automation of interpretation and implementation of regulations. Moreover, through anomaly detection the technology can be used for trade surveillance and detecting market abuse. This can be achieved through trade surveillance software written with proprietary generative AI code.

Research shows that in global capital markets, generative AI is currently mainly applied for portfolio optimisation purposes, as well as for risk management, scenario analysis and data generation. [16]

6.10: **Number of investment reports created by generative AI**



Moulding Generative AI for specific uses in capital markets

The application of Generative AI has been complicated by concerns that data fed into the model may be used to retrain the LLM model in question and may – through content generated by an LLM – end up with other users. This is exacerbated by the fact that to increase the effectiveness of foundation models in carrying out specific tasks – including in financial services – further training on specific datasets is required. As a result, it may be that users – including in capital markets – will increasingly bring foundation models under their own control ("on-premise").

On-premise adoption often refers to significantly fine-tuning a model in-house and on-premise, or training a foundation model from scratch. Institutions will need to weigh up the return on investment that the system generates, since these two modes of adoption generally have high costs, need specific talent, required proprietary data and evolving process adjustments. Conversely, cloud adoption, in the form of SaaS and API gateways, will have relatively less cost in these areas[17]. Using generative AI via the cloud may also lighten the compliance burden that accompanies the role of acting as a developer of AI systems. It therefore may be more convenient and cost-effective for institutions to adopt cloud-based generative AI systems.

However, on-premise adoption has the merit of providing more controlled integration with pre-existing processes and systems, while allowing flexibility for the system to be perfectly tailored to the needs of the institution. This has the potential of reducing hallucination in comparison to accessing generative AI via the cloud where customisation can be limited. Greater customisation can also lessen the systemic risk of herding, which is a concern in cloud adoption. If similarly constructed generative AI models are used within capital markets, there may be a convergence of strategies in applications such as trading. This interconnectedness can pose a systemic cybersecurity risk in the sector if the widely adopted system were to fail. On-premise adoption gives institutions greater control over the security of the system including for the privacy of sensitive proprietary data, which allows for a superior adherence to data privacy regulation and other compliance requirements like the imminent EU AI Act.

16 https://marketresearch.biz/report/generative-ai-in-capital-market/

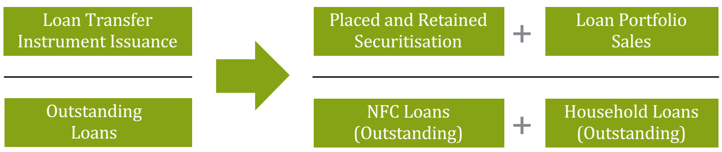
17 https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/what-every-ceo-should-know-about-generative-ai

Integration and efficiency of capital markets ecosystem

7. Loan Transfer Indicator

The Loan Transfer Indicator measures the capacity to transform bank loans into capital markets vehicles (securitisation and loan portfolio transactions), which is crucial for enabling additional lending to the real economy by freeing up bank balance sheet capacity.

The indicator is estimated as a simple ratio of securitisation issuance (placed and retained) and loan portfolio sales relative to outstanding loans to non-financial corporates and households. The indicator is calculated by dividing flow measures by stock measures to show what proportion of outstanding loans are converted into capital markets vehicles in a given period.

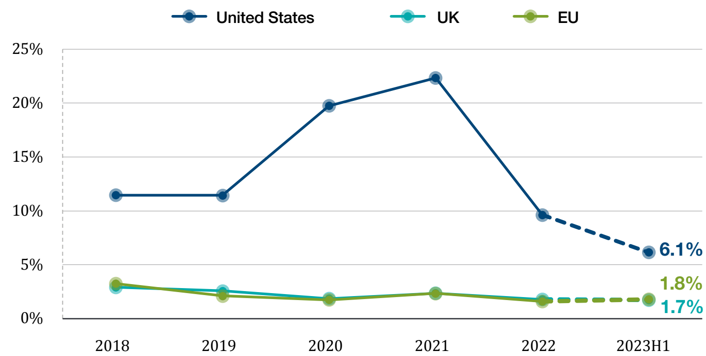


Modest growth in transfer of EU loans driven by securitisation issuance

The Loan Transfer Index calculated for the EU increased modestly during 2023H1, supported by a recent increase in securitisation issuance and to a lesser extent loan portfolio sales. This followed a record low transfer of loans during 2022.

EUR 146.7 bn worth of securitised product and loan portfolio sales were issued in the EU during 2023H1, representing 1.8% of total outstanding EU loans once half-year figures are annualised, up from 1.6% in 2022 and down from 2.3% in 2021.

7.1: Loan Transfer Index: securitisation and portfolio sales as % of outstanding loans



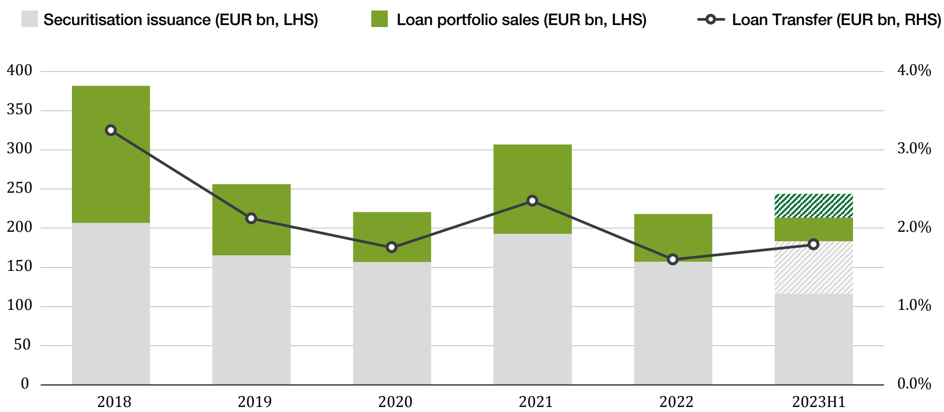
Source: AFME, SIFMA, ECBC, FDIC, ECB, US FED, Bank of America, JP Morgan, Debtwire, Deloitte, and React News. Indicator for 2023 annualises H1 volumes.

Increase in securitisation issuance driven by a single deal

EU securitisation issuance has bounced back somewhat after a lacklustre year in 2022, increasing 17% YoY (annualised) in January to June 2023, making up 75% of total loan transfer instrument issuance in this period. Securitisation issuance in the EU was supported by a large French retained retail mortgage-backed securities (RMBS) deal (EUR 49.5 bn) originated in May 2023, which, once excluding issuance volumes from this single deal, would indicate a 14.8% YoY (annualised) decline in EU issuance.

Loan portfolio sales, which comprised the remaining 25% of loan transfer instrument issuance in 2023H1, saw relatively muted growth with an increase of 4% YoY (annualised). Outstanding EU bank loans in 2023H1 were comparable to 2022, falling just 0.1% YoY.

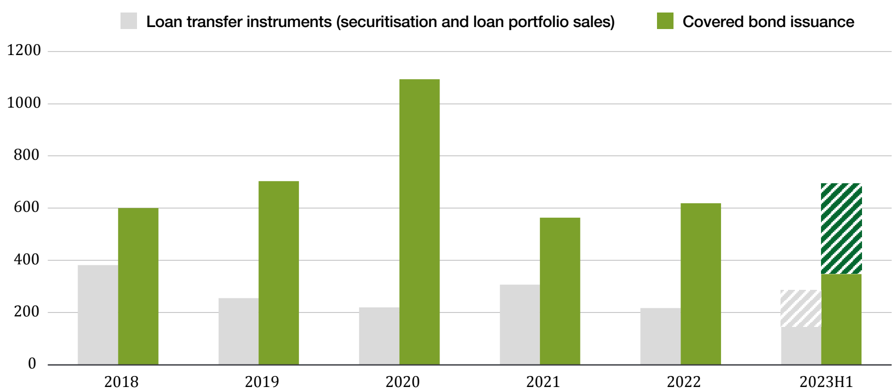
7.2: Evolution of Loan Transfer Indicator and EU securitisation issuance and loan portfolio sales (EUR bn)



Source: AFME, SIFMA, ECBC, FDIC, ECB, US FED, Bank of America, JP Morgan, Debtwire, Deloitte, and React News

Issuance of loan transfer instruments (securitisation and loan portfolio sales) in the EU are significantly under covered bond issued volumes, which increased by 12.3% YoY (annualised) in the first half of 2023. If issuance trends from the first half of the year persist, covered bond issuance in 2023FY will be 15.8% larger than in 2018, compared to a 23.2% decline in EU loan transfer instruments during the same period. Covered bonds are typically seen as an inexpensive form of borrowing and highly-rated, safe debt that is backed by the issuing bank and also an underlying pool of assets, usually mortgages on the balance sheet of the bank. The increase in covered bond issuance in 2023H1 may be driven by banks looking to secure cheaper sources of funding in the context of monetary policy tightening and winding down of central bank support for debt markets introduced during the pandemic.

7.3: Comparison of loan transfer instruments (securitisation issuance and loan portfolio sales) and EU covered bond issuance (EUR bn)



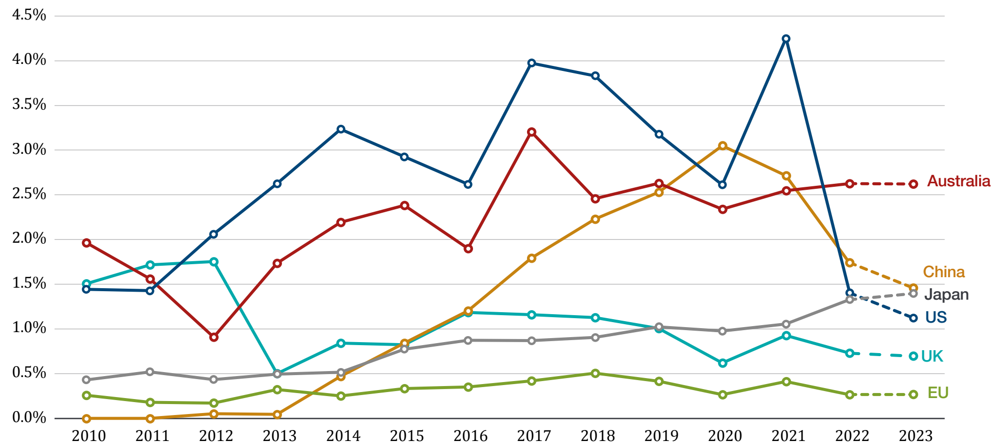
Source: AFME, SIFMA, ECBC, FDIC, ECB, US FED, Bank of America, JP Morgan, Debtwire, Deloitte, and React News

EU continues to languish far behind global competitors

During 2023H1, the indicator for the UK decreased to 1.7% and was below that of the EU (1.8%) for the first time since 2018. This was driven by a 14% YoY (annualised) decrease in UK securitisation issuance in 2023H1, and while UK loan portfolio sales increased by 167% YoY (annualised), it only offset the fall in securitisation issuance, which makes up 88% of the contribution to the Loan Transfer Index for the UK.

In the US, the indicator decreased to 6.1% which represents the lowest value on record (since 2015) and less than a third of the value it was in 2019 (19.7%). This was a result of a 40% YoY (annualised) decrease in securitisation issuance, following a 47% decrease YoY in 2022 from peak issuance in 2023 (EUR 3891.0 bn). Loan portfolio sales activity in the US, which typically make up a small contribution to the indicator, have recently surged as a result of large transactions related to recent bank failures in the US and the corresponding organised sale of loans via the FDIC.

7.4: International securitisation issuance as a proportion of GDP (2010-2023H1, %)



Source: AFME Securitisation Data Report Q2 2023. AFME, SIFMA, Bank of America, JP Morgan, NAB (National Australian Bank), Macquarie, S&P, World Bank. US and Australian volumes include ABS, RMBS, CMBS and CDO. US volumes exclude Agency issuance. Australia volumes include ABS and RMBS. European volumes include placed issuance only. This is a flow measure and quantifies new issuance in a given year as a proportion of GDP. Securitisation issuance in 2023 estimated via the annualisation of 2023H1 issued volumes. Latest GDP data is as of 2022FY, with calculations for 2023 using 2022 GDP as an estimate.

Once securitisation issuance is considered as a proportion of GDP, contrasting trends are highlighted with the rest of the world, demonstrating that the EU and UK languish far behind global competitors in terms of the amount domestic securitisation markets contribute to the financing of the economy.

Over the last 10 years, annual securitisation issuance in the EU and UK has experienced muted growth and in 2023H1, EU issuance was equal to 0.3% of EU GDP, while UK issuance was equal to 0.7% of UK GDP. Excluding the most recent international slowdown in securitisation issuance, the product's contribution saw significant growth over the same time period (in 2023H1, US issuance was at 1.1% of GDP, Australia at 2.6% and Japan at 1.4%). The Securitisation market on China only opened in 2012 but by 2023H1, annual securitisation issuance represented 1.5% of GDP..

Growing presence of SRT

Significant Risk Transfer (SRT) plays a significant role in European (EU+UK) securitisation markets, with SRT issuance increasing 39% YoY during 2022 to EUR 107.0 bn, compared to EUR 203.3 bn (-13% YoY) for true sale issuance. Most recently in the first quarter of 2023, SRT issuance made up 28% of total (SRT and true sale) issuance in the EU and the UK combined.

Only 12 EU Member States used a form of loan transfer in 2023H1

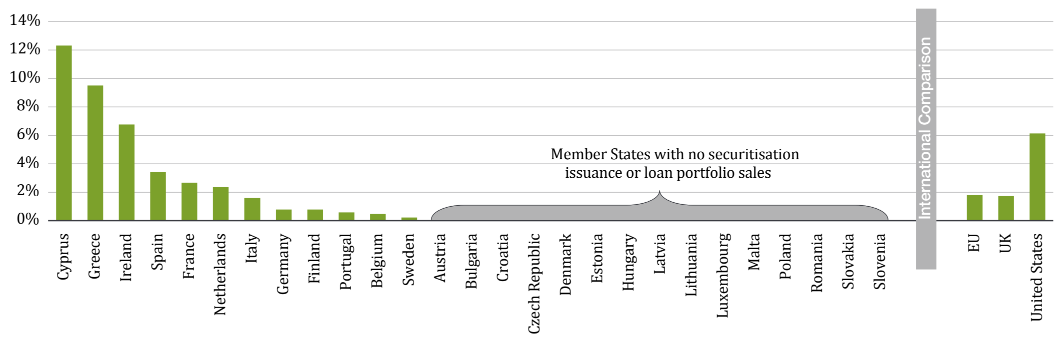
Less than half of EU Member States used a form of loan transfer vehicle in 2023H1, of which issuers from only 8 Member States used securtisation (13 in 2018). The narrowing issuer base represents challenges for investors to diversify country risk or amplify the liquidity pool for the product.

Cyprus leads European countries for the second consecutive year in the transfer of loans into marketable securities during 2023H1, with loan portfolio sales equal to 12.3% of outstanding Cypriot bank loans. Greece had the largest rise in indicator value among European countries, as a result of a 59% YoY (annualised) increase loan portfolio sales transactions, which were equivalent to 9.5% of outstanding Greek bank loans in 2023H1.

The Netherlands and France both experienced an increase in the Loan Transfer Index, after a surge in securitisation issuance during 2023H1 (416% YoY and 155% YoY respectively). Whilst securitisation issuance was subdued in Spain during 2023H1, falling 39% YoY (annualised), this was offset entirely by loan portfolio sales rising 318% YoY (annualised), which as a result raised the Loan Transfer Index in Spain to 3.4%.

Ireland and Italy both experienced declines in the Loan Transfer Index, after a fall in securitisation issuance during 2023H1 (-75% YoY and -51% YoY respectively).

7.5: **Loan Transfer Indicator 2023H1 – EU Member State and international comparison (securitisation and portfolio sales as % of outstanding loans)**



Source: AFME, SIFMA, ECBC, FDIC, ECB, US FED, Bank of America, JP Morgan, Debtwire, Deloitte, and React News

Non-bank presence in the European securitisation market

Non-bank market participants play a significant role in EU securitisation markets, with the proportion of securitisation issuance derived from non-bank sellers increasing to 17% in the EU during 2023H1, up from 14% in 2022 and c10% in 2007.

The distribution of non-bank sellers among EU securitisation markets varies, with non-bank participants having a significant presence in the Irish and Finnish markets, comprising 100% of Irish and 55% of Finnish issued volumes during 2023H1.

Non-banks make up a significant proportion of active issuers in the UK market, and accounted for 54% of total securitisation issuance in 2023H1, compared to 70% in 2022 and 75% in 2021.

Across a longer time horizon, there has been a decline in utilisation of ABS funding by banks, with a significant shrinkage in issued securitised volumes since the financial crisis. The establishment of a non-bank presence in European securitisations has meant an increasingly diversified landscape of issuers using ABS. While this has meant increased provision of finance to a section of the market, typically the retail consumer segment, that may otherwise go underserved, the withdrawal of incumbent banks has meant market participants are accessing funding in an increasingly diminished pool of liquidity.

The strong focus in recent years on the EU Securitisation Regulation has done little to reverse this trend, nor of the longer-term trend of long-term decline and stagnation in European securitisation primary issuance markets.

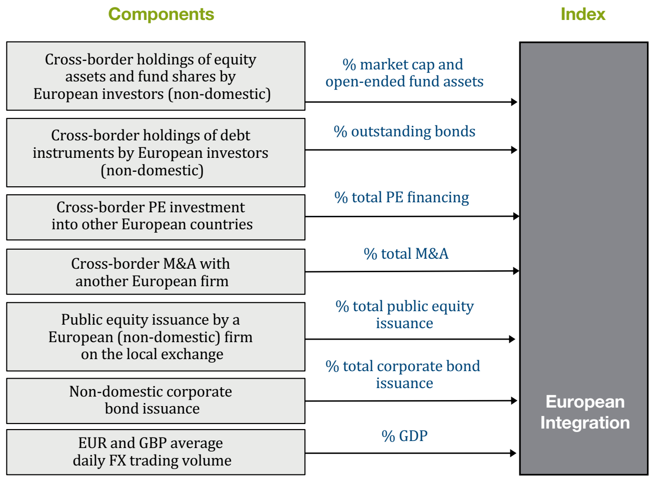
"The long-term decline and stagnation in European securitisation primary issuance markets has continued"

8. Cross-border Finance Indicator

We have produced two indicators to quantify "intra-EU" integration and integration of capital markets activities with the rest of the world (RoW).

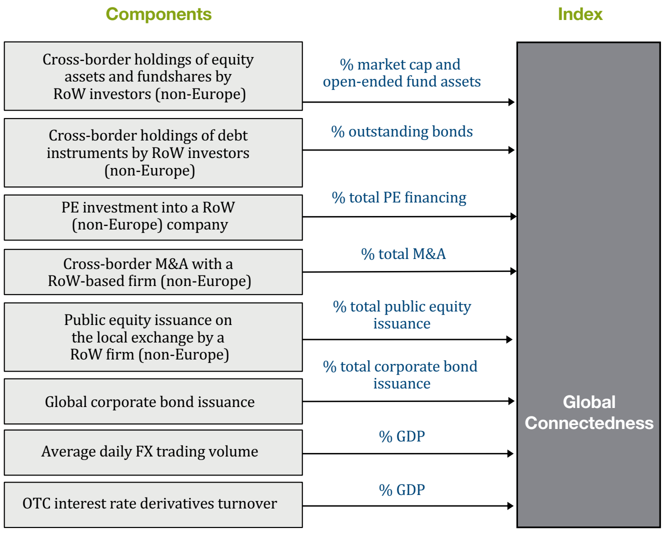
The indicators consider different capital markets dimensions by estimating two composite indicators aggregating the following features: (i) cross-border holdings of equity assets and fund shares, (ii) cross-border holdings of debt assets; (iii) cross-border private equity (PE) financing; (iv) cross-border M&A transactions; (v) cross-border public equity raising; (vi) non-domestic corporate bond issuance; and (vi) participation in intermediating foreign exchange and derivatives trading. Each of these subcomponents are quantified both for cross-border transactions within Europe and with the rest of the world for purposes of producing each of the indicators. Each component is quantified with the appropriate metrics as shown on Charts 8.1 and 8.2:

8.1: **Capital markets intra-European integration index**



Source: AFME

8.2: **Capital markets global integration index**



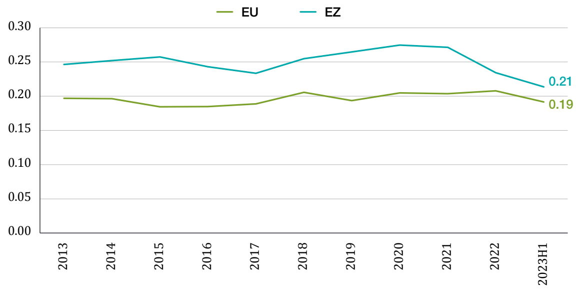
Source: AFME

Capital markets integration within EU

Our indicators exhibited a continued deterioration in intra-EU integration over the last year, mostly driven by a decline in cross-border intra-EU equity issuance and intra-EU private equity as these activities have been undertaken at a greater scale domestically. The remaining indicator components did not exhibit a large variation over the last year.

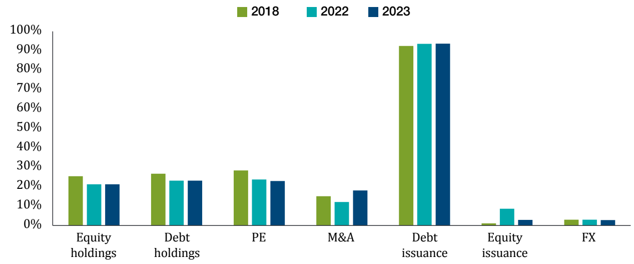
In 2023H1, 3% of equity issuance was originated cross-border by EU companies outside their local exchange, which compares with 9% in 2022FY and 2021FY.

8.3: Intra-EU integration index [0: Min, 1: Max]



Source: AFME from multiple sources

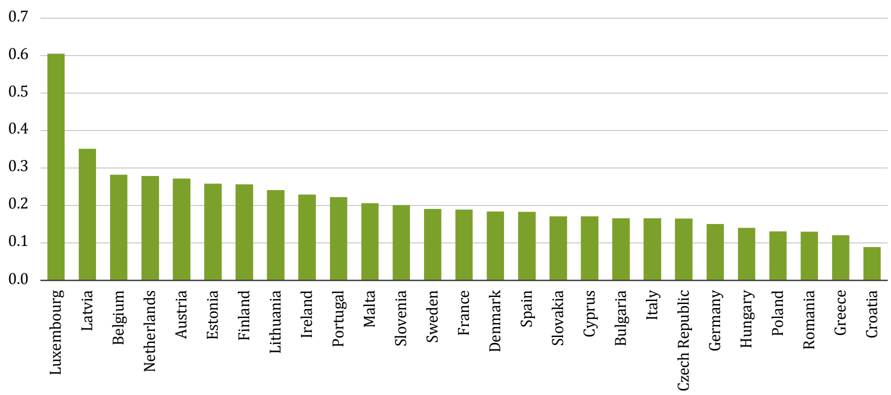
8.4: Intra-EU integration index by components and evolution[18]



Source: AFME from multiple sources

Calculating 3Y averages to avoid any large annual outliers, Luxembourg consistently leads in intra-EU integration as the EU's hub for the cross-border distribution of investment vehicles. It is the largest domicile of UCITS and AIFs in the EU. Latvia stands as a closely integrated EU market, predominantly driven by the large portion of securities held cross-border within the EU.

8.5: Intra-EU capital markets integration by countries: 2021-2023 [0: Min, 1: Max]



Source: AFME

18 Equity holdings: cross-border holdings within the EU of equity shares and fund shares issued by European companies as a percentage of market capitalisation of listed shares and assets of open-end investment funds. Debt holdings: cross-border holdings within the EU of bond instruments issued by European companies as a percentage of outstanding public and corporate bonds. PE: cross-border private equity investment by European funds into European companies (non-domestic) as percentage of total PE investment. M&A: cross-border M&A transactions with European companies (excluding domestic transactions) as percentage of total M&A activity. Debt issuance: issuance of corporate eurobonds as percentage of total issuance of corporate bonds. Equity issuance: issuance of public equity on the national exchange by European companies (excluding domestic companies) as a percentage of total public issuance. FX: average daily turnover of EUR and GBP as s percentage of GDP.

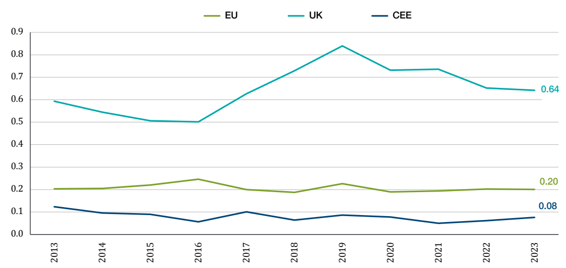
EU capital markets integration with the rest of the world (RoW)

Capital markets integration of the EU with the rest of the world remained on average unchanged during the last year, although with visible fluctuations by components.

Among the pro-integration contributors are private equity and M&A. In 2023H1, 67% of private equity financing was undertaken cross-border with the rest of the world, which compares with 28% in 2022 and 25% in 2021. The proportion of cross-border M&A with the rest of the world increased to 36% in 2023H1 from 31% in 2022.

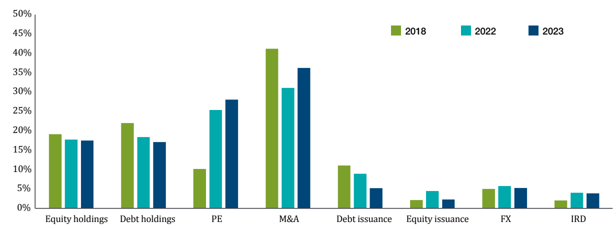
We have observed a continued deterioration in the proportion of EU corporate bonds marketed globally. According to Dealogic, 5.2% of debt issuance was marketed globally in 2023H1, from 9% in 2022 and 19.2% in 2016. Equity issuance on EU exchanges by non-EU companies declined from 4% of total equity raised in 2022 to 2% in 2023H1. The International Monetary Fund (IMF) notes that foreign portfolio investment assets declined on the back of global economic uncertainty, price changes caused by monetary policy tightening, fragmentation, geopolitical tensions and shifts in investor sentiment (see Chart 8.7).

8.6: Global integration index [0: Min, 1: Max]



Source: AFME from multiple sources

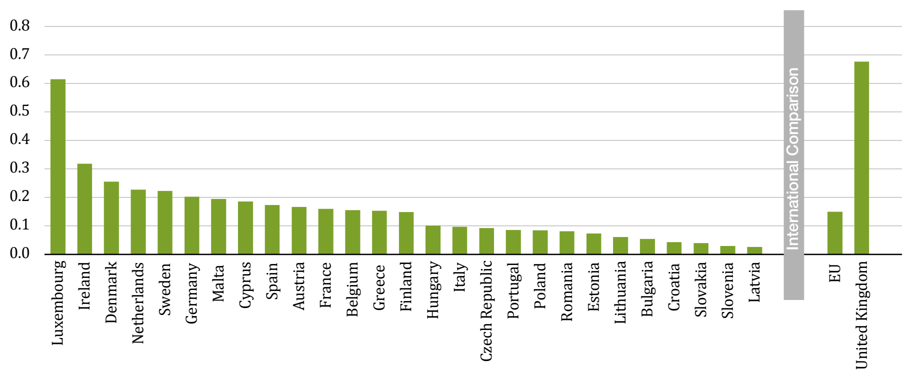
8.7: Global integration index by components[19]



Source: AFME from multiple sources

According to our indicator, the UK continued as the most globally interconnected regional capital market, driven by its large role in intermediating global flows of interest rate derivatives and FX transactions. Within the EU, Luxembourg is the regional leader driven by the large portion of global equity and fund shares registered in Luxembourg.

8.8: Cross-border RoW indicator: 2021-23 [0: Min, 1: Max]



Source: AFME

19 Equity holdings: cross-border holdings in the RoW of equity shares and fund shares issued by European companies as a percentage of market capitalisation of listed shares and assets of open-end investment funds. Debt holdings: cross-border holdings in the RoW of bond instruments issued by European companies as a percentage of outstanding bonds (public and private). PE: cross-border private equity investment by European funds into RoW companies as a percentage of total PE investment. M&A: cross-border M&A transactions with RoW companies as percentage of total M&A activity. Debt issuance: issuance of global corporate bonds as percentage of total corporate bond issuance. Equity issuance: issuance of public equity in the national exchange by RoW companies as percentage of total public equity issuance. FX: average daily turnover of FX instruments as percentage of GDP. IRD: average daily interest rate derivatives trading as percentage of GDP.

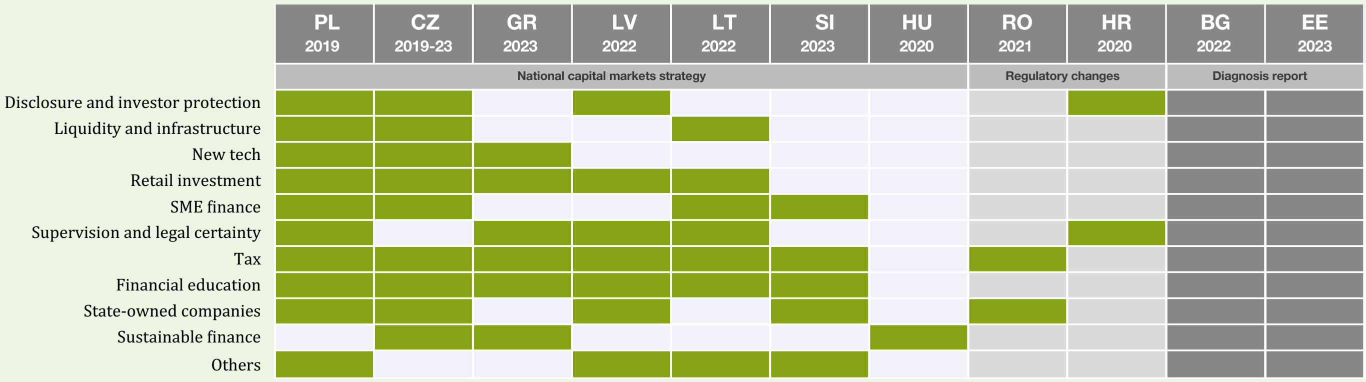
Bottom up and top down approach: a strategic debate

There is an emerging strategic debate between developing European capital markets as a top-down approach (i.e. addressing issues via EU-level initiatives such as a new CMU Action Plan) or bottom-up (via local Member State initiatives to improve their domestic capital markets).

With a bottom-up approach, some key benefits are the ability to target local issues and introduce regulatory change relatively quickly, build local market practices and facilitate local business funding and information for local savers on investment opportunities.

As shown in Table 8.9, since 2019, several EU countries have established national strategies to improve their national capital markets ecosystems. There are some commonalities in the thematic areas covered in such national strategies, including taxation, financial literacy, retail investment and supervisory changes.

8.9: National capital markets initiatives in the EU (non-exhaustive list)



Green represents the themes covered by the respective national initiatives.

Romania introduced taxation changes in 2021 to foster market development while Croatia developed targeted changes to its Capital Markets Act in 2020. Bulgaria and Estonia have produced diagnosis reports as a first step prior to developing a national capital markets strategy.

The EBRD and the Commission's Structural Reform Support Service (SRSS) have been instrumental at facilitating the production and implementation of national strategies in central and eastern Europe (CEE) and the Baltic area.

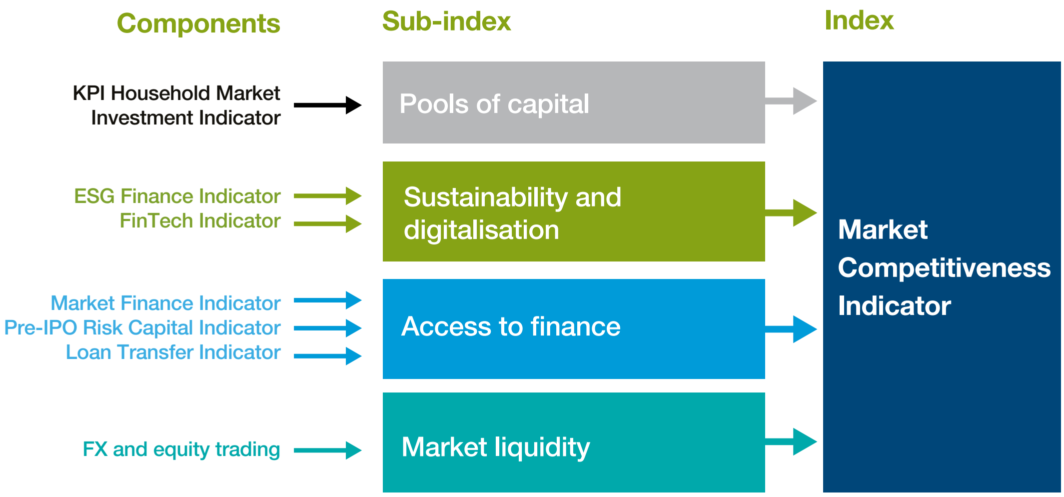
While this national political impetus is encouraging, there are persistent concerns that the upcoming debate is likely to encounter ongoing national and vested interests when discussions are elevated at the EU level. This is therefore another area where views will need to converge to create the conditions for renewed actions to be successful.

It is evident that the Member State interest in developing national capital market strategies shows how achieving a true CMU continues to be of critical importance for the EU and for individual Member States. Only with a CMU will market participants be able to leverage the benefits and economies of scale of the Single Market.

9. Market Competitiveness

We measure capital markets competitiveness from a holistic perspective.

This composite indicator considers the following dimensions: (i) availability of pools of capital, (ii) sustainability and digitalisation, (iii) access to finance, and (iv) equity and FX market liquidity[20]. Each of the four dimensions is composed of individual metrics as illustrated in the graphic below:



Measured as a composite indicator, it measures whether EU markets have improved as an ecosystem and how they compare with other third countries such as the UK and the US. It also helps identify the areas where policy intervention can be prioritised, and tracks progress for the various EU Member States.

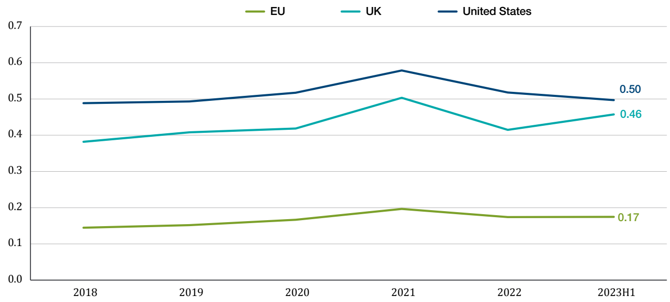
Reversal in EU competitiveness

Chart 9.1 shows the evolution of capital markets competitiveness as measured by the indicator for the EU, the UK and the US.

EU capital markets have reduced global competitiveness from peak levels achieved in 2021 when global markets experienced a period of wide monetary, fiscal and regulatory support. Most recently, with the reversal of the various stimulus measures, market depth has retracted in the EU and globally.

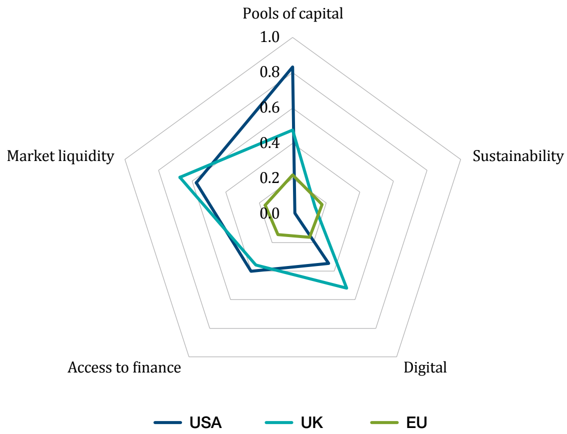
20 FX turnover relative to GDP and equity trading liquidity based on on-exchange bid-ask spreads

9.1: Global competitiveness indicator [0: Min, 1: Max]



Source: AFME from multiple sources

9.2: Global competitiveness indicator by components [0: Min, 1: Max]

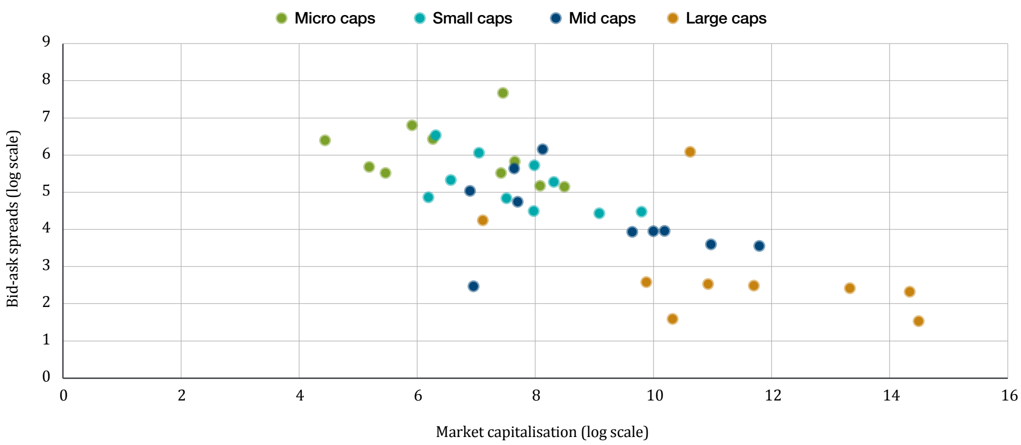


Source: AFME from multiple sources

By components, as seen on Chart 9.2, the EU leads globally in the area of sustainable finance, with the UK slowly converging to the EU's global leadership (as shown in the ESG Finance Indicator section). In the other components of pools of capital, access to finance, digital finance, and market liquidity (predominantly FX trading), the EU lags largely behind the UK and the US.

For the equity market liquidity component, some of the large EU trading centres (France, Germany, The Netherlands) exhibit similar levels of depth to other large global jurisdictions. However, EU market fragmentation and the significant differences in liquidity between trading centres make the EU equity trading landscape less competitive than that of the US and the UK. According to FESE data, even with similar firm size, there is a wide difference in market liquidity across EU trading exchanges, where large market capitalisation generates economies of scale and therefore deeper liquidity pools. A counterintuitive observation from the EU's liquidity fragmentation: large cap companies in some small exchanges trade at similar bid-ask spreads as small caps in large exchanges. See Chart 9.3.

9.3: Equity market liquidity and market size by company size

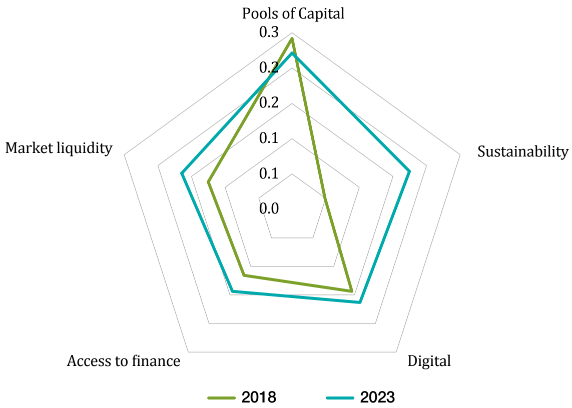


Source: FESE. Each dot represents an EU exchange by market cap segment.

9. Market Competitiveness

The EU's evolution since 2018 has been largely a story of sustainability. As shown on Chart 9.4, there have been marginal improvements in access to finance, digitalisation, and market liquidity, with the amount of pools of capital declining over the last 5 years.

9.4: **Evolution of EU competitiveness by component**



Source: AFME

30 years of the single market in a global context

Since its creation in 1993, the single market has contributed to the well-being of EU citizens by facilitating the free movement of goods, capital, services, and people.

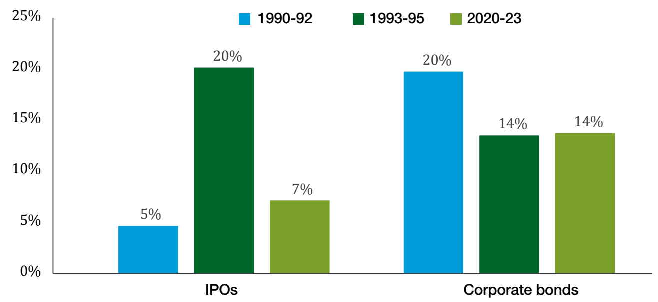
The free movement of capital, including equity capital, is a cornerstone of the single market that seeks to facilitate access to finance and diversification of risks for companies and households. However, from a competitiveness point of view, more consistent progress is needed in a global context when other emerging areas have progressively taken a larger share in global capital markets activities.

In the early 1990s and prior to the formation of the single market, the existing configuration of the 27 EU Member States contributed to 5% of the world's IPOs when the current country block represented 26% of the world's GDP. In the first years of the single market, the same EU27 block represented 20% of the world's IPOs following a period of optimism for growing regional integration. 30 years later, in the 2020-23 period, the EU27 IPOs contributed a portion similar to that observed to the creation of the single market (7%) and well below the current relative size of the EU's GDP against the world's total (16%).

When adjusted by market capitalisation and by GDP, EU companies have witnessed growth in IPO activity over the last 30 years, but continues well below the annual flow of offerings observed in the US (see Chart 9.6).

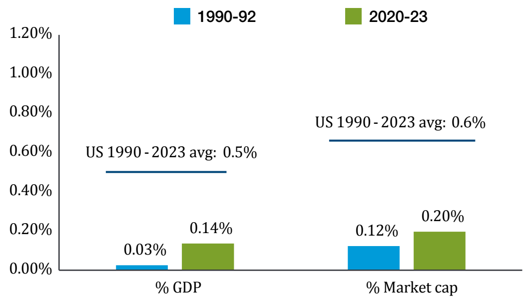
The corporate bond market has not exhibited large growth relative to the world's total over the last 30 years. The amount of corporate bonds issued by the existing 27 EU Member States has declined from 20% of global issuance prior to the single market to 14% in 2020-23. The decline is consistent with the relative reduction of the EU's GDP relative to the world's total during the period. See Chart 9.5.

9.5: **30 years of single market: EU IPOs and corporate bond issuance as % of world's total**



Source: Dealogic

9.6: **EU IPOs as% of GDP and as % of market capitalisation of listed shares**



Source: AFME with Eikon, World Bank, and Dealogic data

In previous editions of this report we have commented on the contraction of the EU's market cap relative to the world's total and its repercussions for the EU's global competitiveness. The EU market capitalisation of listed shares has declined from 18% in 2000 to 13% in 2023 (10% in mid-2022 when valuations dropped and the euro declined against the US dollar). In this context, the US has consolidated its position as the global undisputed leader as measured by market capitalisation accounting for 50% of the world's equity market cap in mid-2023. China has rapidly expanded as a global equity centre, from a market capitalisation of 0.3% of the world's total in 2000 to 13% in 2023.

The evolution of market capitalisation also has repercussions on the depth of regional liquidity pools. Market data suggests US and China are more liquid centres than Europe and Japan, with turnover ratio (trading volume relative to market cap) standing at 3.5x in the US, 2.6x in China, 1.5x in Europe, 1.4x in Japan in 2022.

Same known challenges ahead

Europe's corporates continue to over-rely on bank financing as opposed to capital markets funding. EU capital markets continue to be underdeveloped and strongly fragmented across national lines, although the union stands as a global leader in green and sustainable finance. US corporates have diversified funding sources with large access to capital markets via IPOs, secondary equity offerings, and bond financing. In a global context, the Chinese capital market is rapidly growing and converging with the US in size. Chinese banks have risen up global primary markets league tables over the last two years. Four Chinese banks are in the top 10 global ECM league tables in 2023H1.

The challenges in the free flow of capital within the single market are underpinned by a fragmented banking system. The EU's unfinished banking union limits competitiveness and reduces the economies of scale advantages of the single market. Banking consolidation continues to be limited as M&A transactions involving EU banks have declined since the global financial crisis in 2007-09. Bank capital and liquidity is still largely retained within the Member States in which they operate, rather than being freely transferable across the banking union: 84% of banking assets within the banking union are in their home Member State, the same percentage as in the US as a whole.

The potential for capital markets to fund ideas is clear. Over the last 30 years, the EU has visibly grown as a centre for generation of new Research and Development (R&D) ideas. The number of EU researchers in R&D has expanded from 2 thousand per million people (pmp) in the middle of the 90s decade to 4.3 thousand pmp in 2020, converging closely to the US average. Although EU productivity has stagnated due to macroeconomic factors, the EU has consolidated as a global hub for various innovative industries, such as the pharmaceutical industry as the world's largest producer of vaccines; in energy transition as the second world's largest onshore wind electricity producer; and in traditional technological industries as the second world's largest car manufacturer, among many other visible examples.

Nordics lead in EU competitiveness

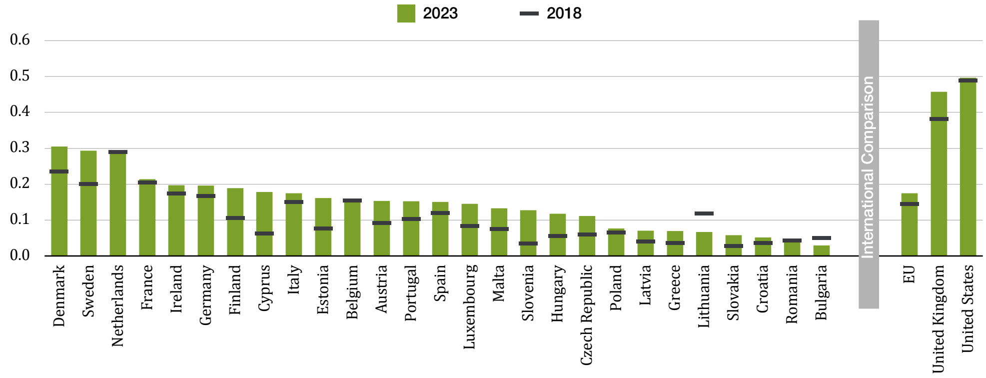
There is a deep geographical diversity in market competitiveness between EU Member States.

The Nordic countries have exhibited an encouraging growing presence of capital market activities, leading in primary offerings. Swedish and Danish companies have a more diversified funding mix, with a higher proportion of market-based finance compared to the Netherlands and to a larger extent than France and Germany.

Sweden and the Netherlands stand as the EU countries with the deepest pools of capital, and certainly deeper than those in France and Germany.

CEE countries continue to significantly lag behind across virtually all capital markets depth metrics.

9.7: **Competitiveness by countries**



Policy Landscape of CMU

Policy Landscape of CMU

Drawing to the end of the policymaking cycle

The European Commission has now formally delivered all the legislative and non-legislative measures set out in its second CMU Action Plan of 2020. In April 2023, the leaders of the EU institutions committed to completing negotiations on any open CMU files before the next European elections[21]. The dedication of the Commission to completing its current CMU agenda, combined with the support expressed by the co-legislators to finalise proposals in the pipeline, clearly demonstrates the importance the EU attributes to developing its capital market capacity. It has the firm backing of the market participants supporting this report.

At the same time, efforts to rebalance the EU's funding mix towards a larger proportion of market-based financing, allocate individuals' savings to long-term, productive investments and integrate national capital markets to achieve the scale benefits of a truly integrated EU market are, unfortunately, still not borne out in the indicators tracked in this report.

There are several legitimate reasons for this. Policymakers at both domestic and European levels have naturally had to prioritise crisis-fighting measures required to deal with the successive external shocks which have characterised the current legislative cycle. Moreover, of those CMU measures which have already been finalised, or are close to completion, a large number will only be implemented, and their impacts fully felt, some years down the line.

At this stage in the policy cycle, it is therefore challenging to undertake a meaningful and comprehensive assessment of what has been achieved, and what remains to be done, to develop the EU's capital market. This section therefore does not attempt to undertake this task, but instead offers a short commentary on the remaining open initiatives of the present CMU agenda.

That being said, it is clear that the financing structure of the EU economy still needs to adapt, and at pace, if it is to support the EU's significant transformative investment needs, including the fast-approaching climate goals of 2030, as well as its demographic and competitiveness challenges.

The upcoming hiatus in the EU policymaking programme will be an important period allowing for the identification of policy actions which can deliver the required transformational results. In this vein, the initiative of the Eurogroup President to launch a strategic discussion within the Eurogroup, in its inclusive format, to set out recommendations for the next Commission on the development of the EU's capital markets is highly anticipated by the various market participants contributing to this report.

CMU proposals of the past year

1. Listings Act

The European Commission's December 2022 package of CMU measures includes proposals, referred to as the Listings Act, to make it easier for companies to list and carry out secondary capital offerings on EU public markets. These proposals are intended to support innovative, fast-growing companies' access to public markets and recognise that a well-functioning IPO market is also needed to support the pre-IPO risk capital market by providing exit opportunities. Finally, the proposals aim to create greater opportunities for investors and support the expansion of the EU's equity markets in general.

Amongst the multiple measures put forward in these proposals, the Listings Act includes the introduction of multiple vote share structures. These can provide an effective way for innovative, high-growth companies to access the market, particularly if founders have concerns related to relinquishing control. With appropriate safeguards, this initiative could be even more impactful if it were to be extended to companies of all sizes and not only to SMEs and therefore to all markets including for large non-Junior markets. Other key measures of the package, such as lowering the initial free float requirement, should also allow EU companies to pursue IPOs more easily and are also being considered in other jurisdictions seeking to achieve the same objective.

21 Renewed commitment to the capital markets union, 28 April 2023

To reduce the burden on issuers, the package also includes changes to the content and format of prospectuses, for instance by introducing greater standardisation and reducing their length. The co-legislators now have a difficult balancing act to achieve, making it easier for corporates to access markets while simultaneously ensuring sufficient information is still available to maintain high levels of investor protection and keeping the liability risks of transaction parties in mind.

It is worth noting that EU corporates continue to seek IPOs outside the EU even though the disclosure, accounting and other reporting obligations in other jurisdictions can be significantly more demanding and costly than the existing EU requirements. The development of a single civil liability regime across Member States might help reduce legal uncertainty when determining whether a prospectus is complete and correct.

Finally, the package also seeks to address the availability of investment research of listed companies, and SMEs in particular. As the current research regime has not proved conducive to increasing research coverage, an adjustment which would provide investors as the consumers of such research with the choice of how they wish to organise payments for research appears to be a promising route forward.

2. Harmonising Corporate Insolvency Law

The December 2022 CMU package also includes a proposal for a Directive which harmonises certain aspects of corporate insolvency law. The persisting disparity in insolvency frameworks across the EU has long been identified as a major obstacle to the development of the EU's capital markets. Convergence in domestic regimes is key to improving financial integration by enabling growth in cross-border asset holdings, reducing cross-country differences in funding costs and improving risk sharing across Member States. Moreover, as well as reducing barriers in intra-EU cross-border flows, a greater alignment in insolvency regimes is also important to attract international capital into the EU. Given the anticipated benefits for corporates, investors as well as for the development of a more integrated EU capital market, we are therefore strongly supportive of this initiative.

To maximise the recovery of value, the proposal includes an EU framework for so-called pre-pack proceedings, where the sale of a business is negotiated before the formal opening of insolvency proceedings. This mechanism already exists in some Member States and extending it across the EU is a good example of how best practice inspired by national measures can be implemented more broadly.

The pre-pack rules would rightly include safeguards to ensure transparency and the equal treatment of creditors. However, the proposal also includes a requirement for court authorisation which could make the process longer and less certain, potentially decreasing some of its advantages. This aspect of the proposal could be useful investigated further to maximise its potential benefits.

3. Retail Investment Strategy

In May 2023, the European Commission released an extensive reform of the EU legislative framework for retail investment. The objective of boosting retail participation in financial markets is a cornerstone of the CMU Action Plan and the package contains many proposals which are conducive to reaching this goal. These include encouraging a shift to "digital-by-default" communication, allowing more sophisticated and experienced investors to opt up to a professional client status, streamlining disclosures as well as measures to promote financial literary.

Nevertheless, several important aspects of the proposals will require careful consideration by the co-legislators as to whether they ultimately help or hinder the goal of increasing retail investor participation. In particular, the link between inducements and access to investment is a highly controversial topic. Moreover, while financial intermediaries should consider which products are in the best interests of their clients and provide them with fair value, the design of tests to ascertain what is in the client's best interest need to place sufficient emphasis on elements other than cost. The cheapest product may not necessarily deliver a better overall return which would be appropriate for a particular investor.

Some of the provisions may also be particularly ill-suited to the realities of products such as long-term funds, venture capital, and private equity funds.

Along these lines, the proposed introduction of a quantitative, "value for money" benchmark, determined by regulators, in addition to concerns around complexity and consistency in implementation, could overly focus on cost aspects. A more qualitative, outcomes-based alternative to assessing "value for money" may be an alternative worth considering.

4. Harmonising Withholding Tax Procedures

In June 2023, the European Commission put forward a Directive for the faster and safer relief of excess withholding taxes with the objective of tackling another one of the most well-known and long-standing obstacles to cross-border investment in the EU. In addition to an estimated EUR 5 billion costs savings for investors a year, the proposal is expected to help EU corporates raise capital from a broader investor base, within and outside the EU.

In particular the introduction of a common digital tax residence certificate and common reporting obligations for financial intermediaries will significantly streamline the withholding tax refund procedures and help ensure fair taxation.

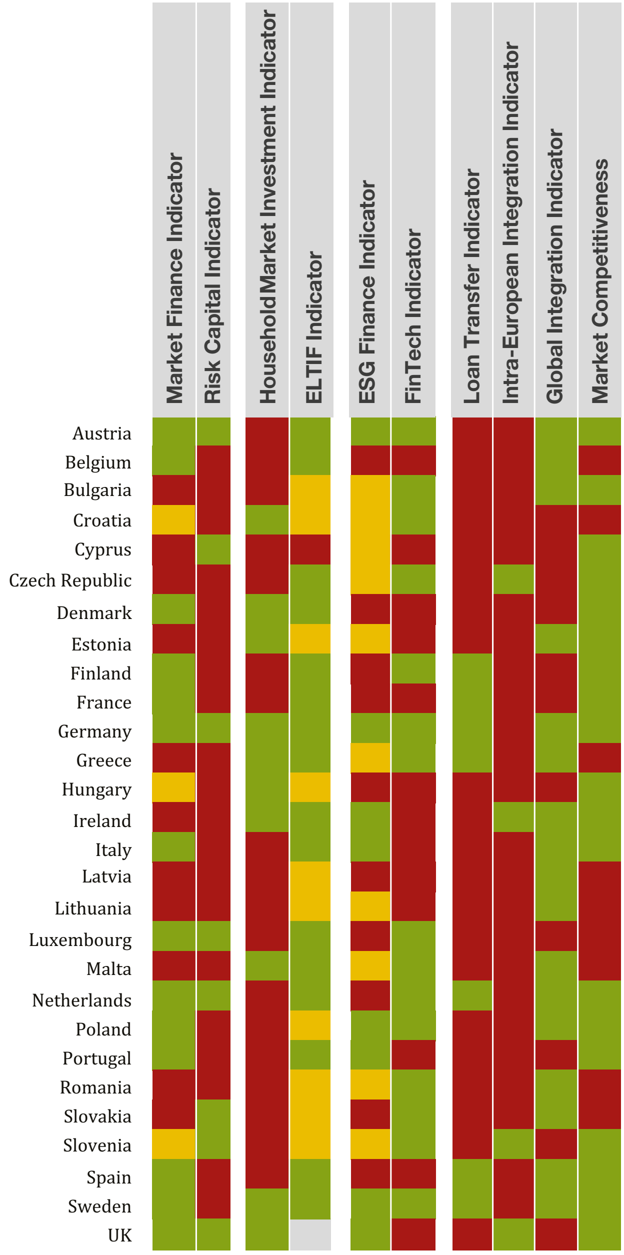
In light of the important role of certified financial intermediaries (CFIs) in the process, it will also be important to ensure a consistent approach across the EU to the due diligence obligations placed on these financial intermediaries. To achieve maximum benefits from this proposal, Member States should work towards an approach that provides clarity on key concepts such as beneficial ownership, financial arrangements and holding periods, ensuring the FASTER system will work in practice for investors as well as CFIs that ultimately will initiate the relief/refund procedures on their behalf.

"We will set ourselves the aim of, by March 2024, reaching agreement on areas that we would ask the next Commission to consider regarding how we would deepen the Capital Markets Union. We want to […] have a strategic reflection on further topics that we […] could tackle that would make a difference to how we can better fund growth within the European Union."

Eurogroup President Paschal Donohoe, following the Eurogroup meeting of 15 May 2023

Appendices

Appendix 1: Key performance indicators by countries and components: Comparison of progress between 2022 and 2023



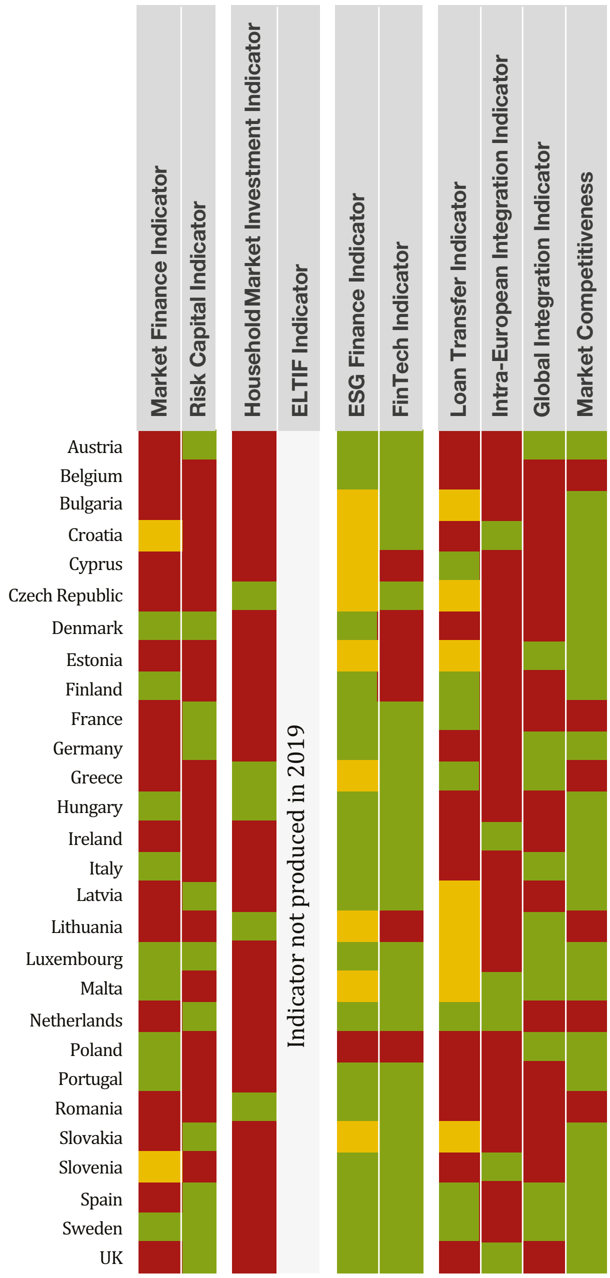
Green: increase in 2023 vs 2022

Red: decrease in 2023 vs 2022

Yellow: No variation between 2023 and 2022

We have produced the above scorecard chart which seeks to assist in keeping track of evolution of the key performance indicators at the Member State level. Each cell shows in colour coded form if a country has increased, decreased, or shown no change in the indicator value over the last year.

Appendix 2: Key performance indicators by countries and components: Comparison of progress between 2019 and 2023



Green: increase in 2023 vs 2019

Red: decrease in 2023 vs 2019

Yellow: No variation between 2022 and 2019

We have produced the above scorecard chart which seeks to assist in keeping track of evolution of the key performance indicators at the Member State level. Each cell shows in colour coded form if a country has increased, decreased, or shown no change in the indicator value since 2019.

Appendix 3: Methodology and data sources

Scope of data collection

We have constructed nine Key Performance Indicators (KPIs) in the form of composite indicators and ratios to assess progress across the seven political priorities of the CMU Action Plan.

The focus of the study is primarily European, although we have tried to compare EU capital markets with other non-EU jurisdictions on a best efforts basis where data is available.

The data is drawn from a wide range of sources, including contributions from trade associations, data platforms, central banks, Eurostat, and other international organisations.

All data is expressed in euros (€) unless otherwise indicated and translated using period-end exchange rates as reported by the ECB.

Data collection and methodology

Market Finance Indicator

Data sources - IPOs, secondary offerings, investment grade and high yield bonds (all Dealogic), NFC loans new issuance (ECB, national central banks, Federal Reserve, OECD, Mortgage Bankers Association).

For the EU, NFC loans are estimated using bank loans to NFCs due to the relatively low participation of non-bank lenders. For some EU countries in which data provided by the ECB for bank loans to NFCs is incomplete, issuance is estimated using central bank data or longer-term trends. In the US, there is significant participation of non-banks in the loan market and so lending from non-banks needs to be accounted for in the indicator.

A recent OECD study published the amount of commercial and industrial (C&I) lending originated by banks in the US, using data originally sourced from the US Federal Reserve. The aggregation does not include loans originated by non-banks such as finance companies and insurers, and does not include commercial real estate (CRE) or farm lending. Data from the Kansas City Fed was used to account for bank lending to farms and the Mortgage Bankers Association to account for bank and non-bank lending for CRE.

After adding the farm and CRE lending to C&I lending, this provides an estimate for total US bank lending to NFCs. However, the comparison of lending between EU and the US is not complete as non-bank lending to farms and C&I in the US needs to be accounted for. CRE lending data already includes non-banks.

The Federal Reserve website states that bank lending represents c30% total outstanding lending to NFCs. This proportion has remained stable over the last 3 years and was used to estimate the total amount of C&I and farm lending originated by banks and non-banks. This gives the following breakdown and comparison:

US Bank lending= €1.39tn
CRE: $235bn
C&I: $296bn / 0.3 = $986bn
Farm: $85.9bn / 0.3 = $286bn

US bonds = €456bn
US equity = €39bn
Total financing for US NFCs = €1.89tn

EU bank lending= €1.58tn
EU bonds= €166bn
EU equity = €16bn
Total financing for EU NFCs = €1.76 tn

The indicator does not consider NFC finance provided by unlisted equity and trade credit.

Loan Transfer Indicator

Data sources - Securitisation (AFME/SIFMA, JPMorgan and BofA), portfolio sales (Deloitte, React News, FDIC for the US), outstanding loans (ECB, Federal Reserve).

As was the case with the Market Finance Indicator, outstanding loans in Europe are estimated using outstanding bank loans, due to the relatively low participation of non-banks in the lending market in Europe. For the US, both bank and non-bank lending is considered when calculating outstanding loan volumes.

Sustainable Finance Indicator

Data sources – Green, social and sustainable/dual purpose bonds (Climate Bonds Initiative), securitisation (AFME/SIFMA, JPMorgan, BofA), NFC and financial bonds (Dealogic), government bonds (ECB, SIFMA, national central banks), municipal and agency bonds (Dealogic), covered bonds (ECBC).

FinTech Indicator

Data sources – Regulatory sandbox and innovation hubs (ESMA, EBA and EIOPA), investments in FinTech companies and exits (Crunchbase); number of patents filed with the following key terms: "G06Q", "G07F", "G07G", "finance", "banking", "fintech", "crypto", "insurance", "asset management" (Google Patents); valuation of FinTech unicorns (CB insights), M&A activity (Dealogic); percentage of working age population with tertiary degree (US FED, World Bank, Eurostat), STEM graduates (OECD, UNESCO, World Bank and Accenture).

Household Market Investment Indicator

Data sources – Household financial assets for EU countries (Eurostat and OECD), and household financial assets for the US (US Federal Reserve, Balance Sheet of Households and Nonprofit Organizations), non-EU countries (OECD), GDP (Eurostat and World Bank). Cash, deposits and unlisted shares are excluded from the aggregation to include only capital markets instruments. Includes equity shares, mutual fund shares, bonds, life insurance reserves and pension fund holdings.

ELTIF Indicator

Data sources – ESMA ELTIF register.

Pre-IPO Risk Capital Indicator

Data sources – SME loans new issuance (ECB, national central banks), business angel (EBAN, Crunchbase, and University of New Hampshire), equity crowdfunding (Crunchbase), and private equity (Invest Europe, Crunchbase and NVCA)

SME loans in this context are loans to NFCs with amounts below €1m.

Invest Europe's private equity (PE) statistics do not include infrastructure funds, real estate funds, distressed debt funds, primary funds-of-funds, secondary funds-of-funds and PE/VC-type activities that are not conducted by PE funds. The aggregation basis for these statistics is the location of the private equity firm where the resources are invested.

Business angel statistics are EBAN estimates which assume that survey results (i.e. "visible market") represent 10% of the total market. This report includes both visible and non-visible markets based on EBAN's methodology.

Cross-border Finance Indicator

Data sources – Cross-border holdings of equity shares and fund shares issued by European companies (IMF), cross-border holdings of bond instruments issued by European companies (IMF), cross-border private equity investment based on the location of the fund (Invest Europe and Eikon), cross-border M&A transactions (Dealogic), issuance of global corporate bonds (Dealogic), issuance of corporate eurobonds (Dealogic), cross-border issuance of public equity on national exchanges (Dealogic), FX average daily turnover (BIS), average daily interest rate derivatives trading (BIS).

Both the European integration indicator and the global integration indicator are estimated as weighted averages of the standardised value of the different inputs. The results are later normalised into an index that ranges from 0-1 subtracting from each score the minimum score value from the sample divided by the maximum and minimum values (X-min/max-min).

The results were validated using principal components analysis, with minor differences in trends and rankings. A sensitivity analysis was also undertaken by removing FX and cross-border equity issuance (using principal components analysis), which resulted in a significantly lower integration level in 2017 compared to that pre-crisis – the country rankings also exhibited variation compared to those presented in the report.

Market Competitiveness

Data sources – the “availability of pools of capital” component follows the same methodology as the Household Market Investment Indicator; “sustainability and digitalisation” follow the ESG Finance and FinTech indicators; access to finance follows the market Finance Indicator and the amount of risk capital adjusted by GDP. For the construction of the liquidity component, FX average daily turnover is sourced from the BIS, and equity from FESE and Eikon.

All subcomponents (availability of pools of capital, sustainability and digitalisation, access to finance, and market liquidity) have the same weight for the construction of the indicator. The results are standardised and normalised into an index that ranges from 0-1 subtracting from each score the minimum score value from the sample divided by the maximum and minimum values (X-min/max-min).

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Contacts

Julio Suarez
Director, Research
julio.suarez@afme.eu
+32 2 788 3970

Caroline Liesegang
Head of Prudential Regulation, Sustainable Finance, and Research
caroline.liesegang@afme.eu
+44 (0)20 3828 2676

Matt Johnston
Senior Analyst, Research
matt.johnston@afme.eu
+44 (0)20 3828 2702

Jacqueline Mills
Managing Director, Head of Advocacy
jacqueline mills@afme.eu
+32 2 883 55 47

Rick Watson
Managing Director, Head of Capital Markets
rick.watson@afme.eu
+44 (0)20 3828 2737

/ About AFME

The Association for Financial Markets in Europe (AFME) is the voice of all Europe's wholesale financial markets, providing expertise across a broad range of regulatory and capital markets issues.

We represent the leading global and European banks and other significant capital market players.

We advocate for deep and integrated European capital markets which serve the needs of companies and investors, supporting economic growth and benefiting society.

We aim to act as a bridge between market participants and policy makers across Europe, drawing on our strong and long-standing relationships, our technical knowledge and fact-based work.

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Finance for Europe

London Office
Level 10
20 Churchill Place
London E14 5HJ
United Kingdom
+44 (0)20 3828 2700

Brussels Office
Rue de la Loi, 82
1040 Brussels
Belgium
+32 (0) 2 883 5540

Frankfurt Office
Bürohaus an der Alten Oper
Neue Mainzer Straße 75
60311 Frankfurt am Main
Germany
+49 (0) 69 710 456 660

Press enquiries
Rebecca Hansford
Head of Communications and Marketing
rebecca.hansford@afme.eu
+44 (0)20 3828 2693

Membership
Elena Travaglini
Head of Membership
elena.travaglini@afme.eu
+44 (0)20 3828 2733

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