



European stock markets – hidden champion Germany

July 22, 2024

Author
Jan Schildbach
+49 69 910-31717
jan.schildbach@db.com

Editor
Robin Winkler

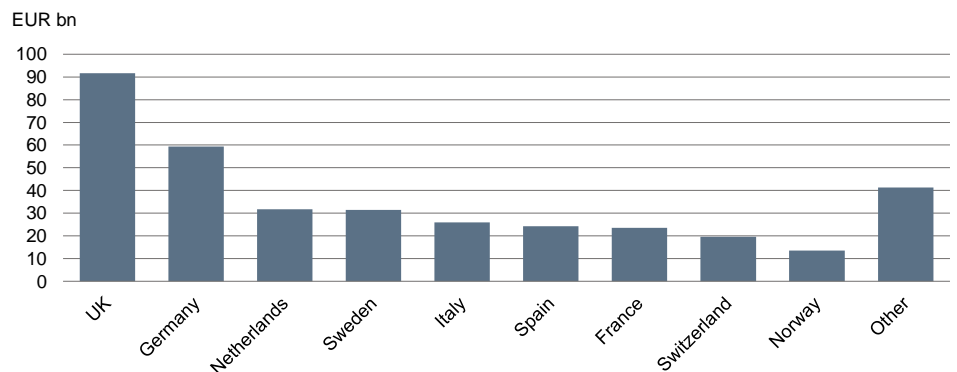
Deutsche Bank AG
Deutsche Bank Research
Frankfurt am Main
Germany
E-mail: marketing.dbr@db.com
Fax: +49 69 910-31877

www.dbresearch.com

DB Research Management
Robin Winkler

- Many equity indices in Europe are close to record highs, despite stagnation in the real economy. Yet, the structural picture is far from rosy. The continent's share in global market cap continues to decline. Given a dearth of growth stocks from the tech industry, there is also a substantial valuation gap to the US. IPO numbers and volumes have been on a downward path over the past decade across Europe. Follow-on transactions have also declined. The trade venue landscape remains fragmented, with about 20 independent national and pan-European exchanges competing for market share. Despite a political commitment to the Capital Markets Union, the integration of equity markets remains a work in progress.
- This lack of integration means that there are important differences across European stock markets. As is well known, the Nordic and Baltic countries, Switzerland and the UK have a relatively large number of listed firms, as well as high market caps compared to GDP. By contrast, Germany has relatively few publicly-traded companies and a low aggregate market cap. However, the German equity market performs strongly in terms of IPO volumes and capital increases. It also remains relatively liquid. In addition, the DAX has outperformed all other major European stock indices over the long term. While it is undervalued compared to the US market, the German stock market has a solid valuation, and it trades at no discount to peers. Overall, it is a hidden European champion, in our view.

Total capital raised in European IPOs since 2013



Sources: Dealogic, Deutsche Bank Research

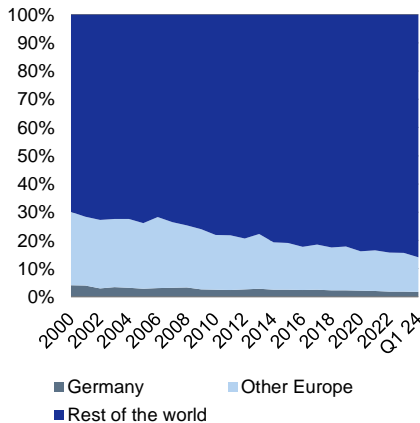


European stock markets – hidden champion Germany

Europe & Germany continuously losing ground in global stock markets

1

Share in total market cap in %



Sources: WFE, LSE, Deutsche Bank Research

At face value, European stock markets appear to be in good shape. Major indices, such as the FTSE 100, the DAX or the CAC, have reached all-time highs in recent months. Dividend payments are also partially at a record high. Equity markets seem to have shrugged off the various crises that the European real economy has been going through over the past four years. European equity performance has been far better than economic performance.

Structurally, however, the picture is far from rosy. In fact, in international comparison, stock markets in Europe have been falling behind for many years. Their share in global market capitalisation has declined from around 30% in 2000 to just 14% today.¹ In part, this has to do with the shrinking weight of the European economy, as both emerging markets and the US have consistently outperformed Europe in terms of economic growth. It also has to do with market fragmentation remaining high across the continent, despite a decade of political efforts to create a European Capital Markets Union (CMU) within the EU, as lower liquidity and different national sets of rules deter non-European investors to some extent. Moreover, it has certainly not helped that the UK has left the EU during this period. At the very least, this has cemented fragmentation and deprived the EU of its most active champion of CMU, repeated commitments of EU policymakers to push CMU forward notwithstanding.

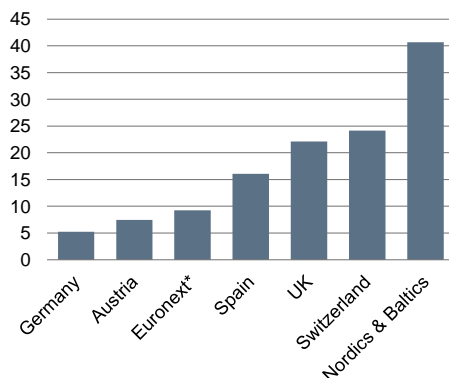
Alongside the share of global market cap, another reason for concern is that the number of firms which are listed on the stock market in many countries has been contracting for a long time. This phenomenon is not just confined to Europe. Indeed, only about 4,200 domestic companies are currently trading on the New York Stock Exchange (NYSE) and Nasdaq US combined, compared to 4,800 20 years ago (-12%). The picture is similar at most trade venues in Europe – shrinkage abounds. But in Europe, this decline has been less offset by rising average market caps than in the US and elsewhere.

Europe thus sports a portfolio of fragmented national equity markets that, in aggregate, have struggled in comparison to the US and Asia. Yet, rather than delving into the international comparison in greater detail, in this note, we look at the fault lines within the European equity market. The various national markets are a diverse bunch, with important differences across a number of key metrics. How do they compare to each other, where are the strengths and weaknesses, who are the laggards, and what could be done to reinvigorate them? This is important, in our view, as equity markets should be a deeper source of financing for the private sector as it faces growing investment needs, not least for the green transition.

Number of listed domestic companies

2

Per million inhabitants, as of March 31st, 2024



* combining France, Italy, Netherlands, Belgium, Ireland, Norway and Portugal

Sources: WFE, Eurostat, Deutsche Bank Research

a) Number of listed firms

The first thing to look at is the breadth of the market. In absolute terms, the largest number of listed firms is on Euronext, the multi-country stock exchange of France, Italy, the Netherlands, Belgium, Ireland, Norway and Portugal. It combines 1,642 companies, followed by the London Stock Exchange with 1,507 and the combined stock market of the Nordic and Baltic countries with 1,160 firms. Only 773 enterprises are listed on the Spanish exchanges and even fewer (just 442) on Germany's main stock exchange in Frankfurt. However, to compare apples to apples, the ratio of listed firms relative to population size may be the more appropriate measure. Here, the Nordics & Baltics lead by far, with 41 public companies per million people, followed by Switzerland and the UK. Germany ranks last among the larger markets, with no more than 5.2 firms per million inhabitants. Indeed, this is one of the main conclusions of this paper: the lack of breadth of publicly traded enterprises is the central weakness of the

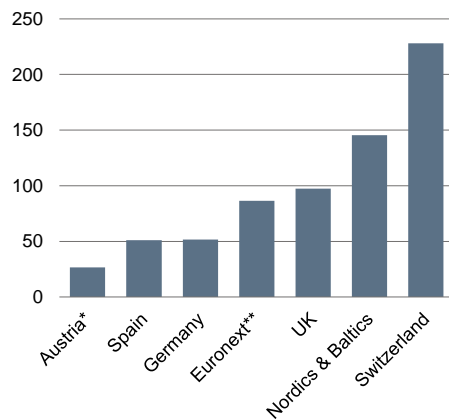
¹ Throughout this report, Europe is defined as the EU-27 plus the UK, Switzerland, Norway and Iceland, unless otherwise noted.



European stock markets – hidden champion Germany

Stock market cap 3

% of GDP, as of March 31st, 2024

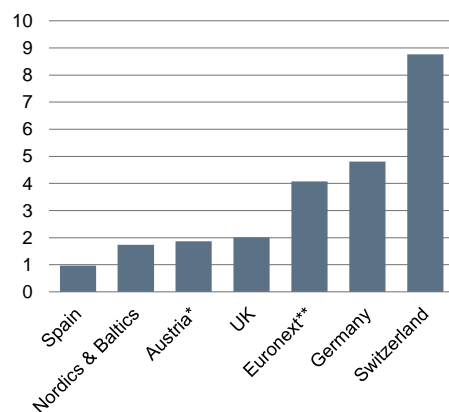


* market cap as of April 30th, 2024
** combining France, Italy, Netherlands, Belgium, Ireland, Norway and Portugal

Sources: WFE, Eurostat, LSE, IMF, Deutsche Bank Research

Average stock market cap per listed company 4

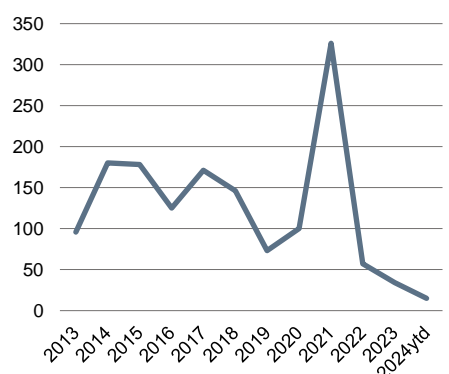
EUR bn, as of March 31st, 2024



* market cap as of April 30th, 2024
** combining France, Italy, Netherlands, Belgium, Ireland, Norway and Portugal

Sources: WFE, LSE, Deutsche Bank Research

European IPO numbers declining (except for 2021) 5



Sources: Dealogic, Deutsche Bank Research

German stock market in a European context. Of course, this is not least linked to the strong presence of *Mittelstand* SME firms, which are fully family-owned and often have been for generations. This, in turn, might be influenced by generous inheritance tax provisions for such firms, and a (perceived or real) less attractive listing environment, among other factors.

b) Market capitalisation

Pure numbers of listed firms only tell part of the story. Market capitalisation is of greater importance. In this respect, the overall picture broadly stays the same, but Germany has worked its way up from the bottom of the rankings. While Switzerland is atop the field with a market cap equivalent to a staggering 228% of GDP, and the Nordics & Baltics are behind at 146%, Germany reaches just 52%. At least, it is on eye level with Spain and commands a relative market value that is twice as high as that of Austria.

Of course, total market cap largely depends on how many firms have gone public at all. Hence, what is actually the average market cap per listed company? Perhaps surprisingly, on this indicator, Germany comes in second place, with EUR 4.8 bn, only behind Switzerland at EUR 8.8 bn. The two are quite distinct from other European countries – Switzerland is rich in listed firms, and it has the most valuable ones on the continent, whereas listed German firms are a rare, but precious species. This also suggests that there is no "Germany discount" compared to the rest of Europe (for details, see the valuation section below), and it shows that German companies are typically not smaller than their peers in other countries. The lower aggregate market cap is essentially only due to a smaller number of listed firms.

c) IPOs

The varying breadth of listed firms across countries or stock exchanges could be the result of different innovation and startup ecosystems and, subsequently, varying IPO cultures. In fact, venture capital availability is much greater in Northern and Western Europe than in the South and East.² Yet again, Germany is a relative underperformer: despite being one of the most innovative economies in the EU, the size of its risk capital market is only roughly the European average, which could limit growth opportunities of successful, young companies. Exit options are another crucial factor for venture capitalists (i.e., early financiers). And here, as a whole, Europe does not look particularly promising. The stock market is quite small, as shown above, and IPOs and trade sales to strategic buyers often involve non-European trade venues or acquirers.

A closer look at IPO trends shows that their numbers have declined across Europe over the past decade, with the exception of 2021. There were 454 European IPOs in total in 2013-15, compared to only 106 since the beginning of 2022. This refers to IPOs by European companies on European stock exchanges – i.e., it excludes listings by non-European firms in Europe or by European firms (e.g., in the US). It also excludes direct listings – a less organised process of going public with only limited investment bank involvement – such as those of Spotify or Wise.

IPO activity is traditionally the strongest in the UK. Yet, the Nordic countries are also a vibrant market, combined even roughly matching the number of deals in

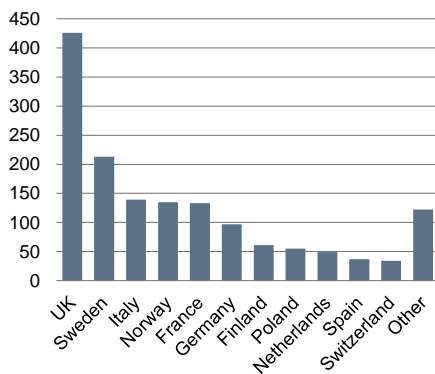
² See, e.g., Walther, Ursula (2024). Strong risk capital markets: Vital for unlocking green & digital innovations. Deutsche Bank Research. EU Monitor. January 29.



European stock markets – hidden champion Germany

Total number of European IPOs since 2013, by country of listing

6



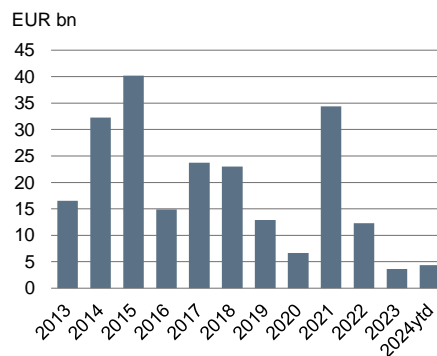
Sources: Dealogic, Deutsche Bank Research

the UK. Germany performs relatively poorly, lagging most other large European economies in terms of number of transactions.

Generally, the decrease in IPO numbers is also reflected in shrinking funding volume over time. In the five major European countries (UK, Germany, France, Italy, and Spain), aggregate IPO volume fell from EUR 89 bn in 2013-15 to just EUR 20 bn since the start of 2022. However, there are substantial differences between countries. Total funds raised through an initial public offering have been a market-leading EUR 92 bn in the UK since 2013, but Germany has already come in second with EUR 59 bn. It is the no. 1 within the EU. By contrast, France has not fared particularly well. Over the past decade, the significant slowdown has affected most nations, with one notable exception: Germany. Here, volumes have remained quite steady; there has been no meaningful acceleration or deceleration – a better outcome than for most other European heavyweights. Overall, however, the IPO market in Europe is in dire straits, as it continues to face headwinds. Its diminishing role becomes even more obvious when compared to the size of the economy, rather than being looked at in nominal figures. In the UK, cumulative volumes over 2013-18 and 2019-24ytd have slumped from 3.1% to 1% of GDP. It has not been much different in the other major economies, except for Germany, where IPO volumes have held up relatively well and were fairly robust, at 1.2% and 0.8% of GDP, respectively.

IPO volume in the big-5 European countries*

7

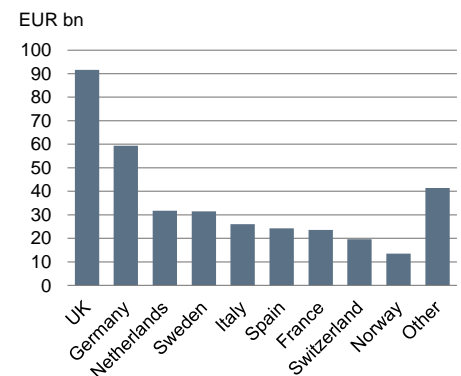


* UK, DE, FR, IT, ES

Sources: Dealogic, Deutsche Bank Research

Total capital raised in European IPOs since 2013

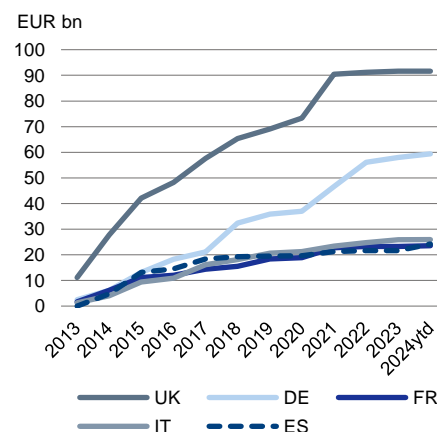
8



Sources: Dealogic, Deutsche Bank Research

Cumulative IPO volume by country since 2013

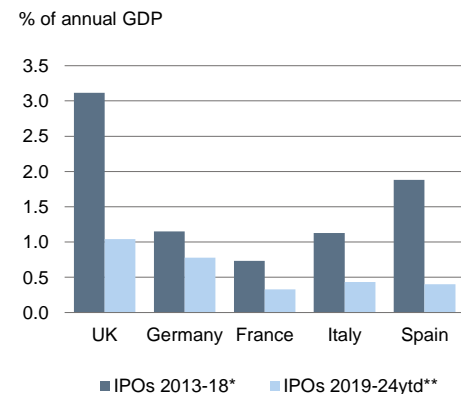
9



Sources: Dealogic, Deutsche Bank Research

Cumulative IPO volume

10



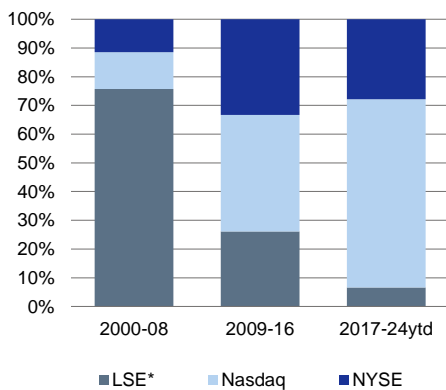
* in % of 2013 GDP
** in % of 2019 GDP

Sources: Dealogic, Eurostat, Deutsche Bank Research



European stock markets – hidden champion Germany

Distribution of IPOs by European companies on Anglo-Saxon exchanges 11



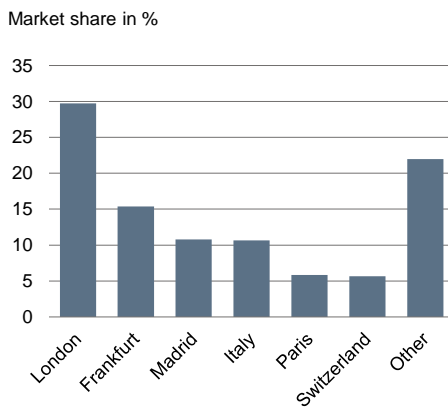
* excl. domestic firms

Sources: Dealogic, Deutsche Bank Research

On a side note: the UK (i.e., London) is a special case. In the past, it used to be a hub for companies from other European countries aiming to go public, even though absolute IPO numbers always remained limited. Yet, since the financial crisis, and even more following Brexit, this flow has almost come to a standstill. In total, there were 53 such cross-border IPOs on the London Stock Exchange (LSE) in 2000-08 – a figure which declined to 18 in 2009-16 and further to just four since then. Simultaneous to the massive shift away from London, listings on US exchanges have gained considerable ground. The NYSE, and especially the tech-heavy Nasdaq, have become much more popular, with European companies' IPOs on the latter surging from nine in the run-up to the financial crisis to 40 since the beginning of 2017. The total European deal count for all three Anglo-Saxon exchanges combined stayed broadly stable.

d) Capital increases

Capital increases on European exchanges in 2013-18 12

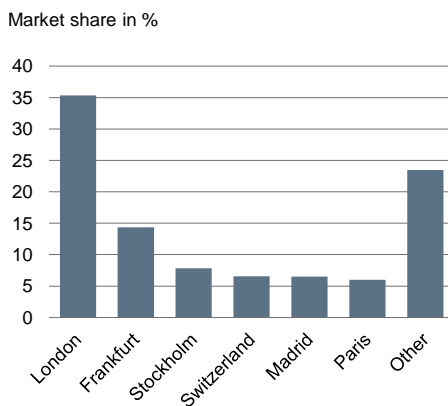


If capital raised on several exchanges simultaneously, amount allocated proportionally.

Sources: Dealogic, Deutsche Bank Research

Apart from going public, firms can raise fresh equity through follow-on transactions. And similar to IPOs, such capital increases have been on a downward path in recent years in Europe, falling from an annual average of EUR 62 bn in 2013-15 to just EUR 28 bn in 2022-23. Equity financing of European companies has obviously been on a retreat over the past decade, at least the external part (internal capital generation via profit retention has probably been decent). This is no coincidence: it is primarily the direct result of monetary policy actions. With the ECB's main interest rates at or below zero for most of this period, debt financing had become much cheaper than before, and enterprises reacted accordingly. Bank lending in the euro area gradually picked up from the lows during the course of the European sovereign debt crisis, when annual growth was negative (about -6%), reaching +8% p.a. in 2022. Equity investors, by contrast, may not have reduced their expected returns to a great extent, hence making equity capital a more expensive funding source compared to corporate bonds and loans. We note that this comes on top of the general bias in most countries in favour of debt over equity, as interest expenses are tax-deductible, whereas dividends or share buybacks are paid for with post-tax corporate income.

Capital increases on European exchanges in 2019-24ytd 13



If capital raised on several exchanges simultaneously, amount allocated proportionally.

Sources: Dealogic, Deutsche Bank Research

Within Europe, the London Stock Exchange maintained and even strengthened its role as the no. 1 place for capital increases. During the first half of this period, in 2013-18, its market share in all follow-on transactions was 30%, twice that of Frankfurt, the clear no. 2, with 15%. In both cases, this has not changed meaningfully during recent years, except for London's share rising to 35% – somewhat surprisingly, given Brexit. At other exchanges, however, the picture looks quite different. Madrid and Milan, prominent venues during and in the aftermath of the debt crisis, both later fell back significantly. At the same time, Stockholm/Sweden and Switzerland, strong economies outside of the euro area, have gained a lot of weight, ranking third and fourth, respectively, since 2019. The stock market of Paris has consistently seen few capital increases compared to the size of its domestic economy.

Overall, equity capital markets in Europe remain strongly fragmented. Exchanges outside the top-6 account for 23% of the total market – a large share, which has also increased over the years. Stock exchanges in EMU countries, on the other hand, command a relatively weak position that has not improved during the past decade.



European stock markets – hidden champion Germany

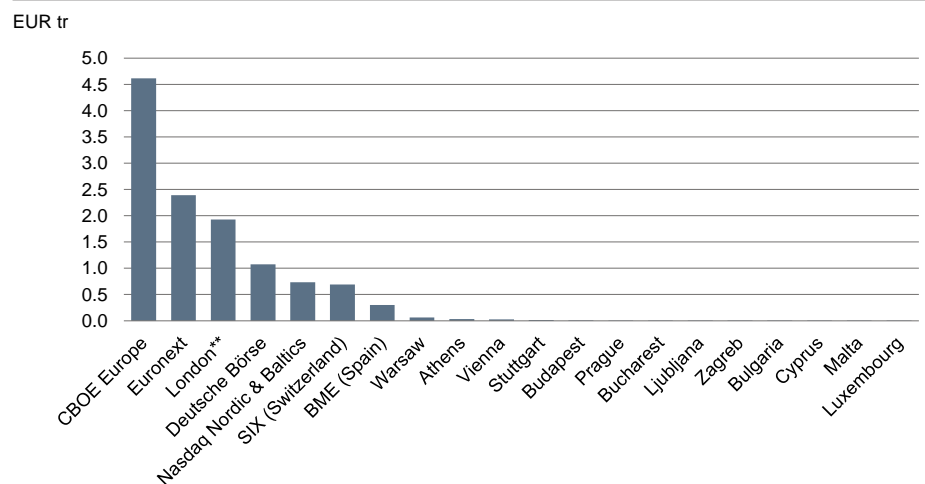
e) Trading volumes

Europe's stock exchange landscape also continues to be fragmented in a more fundamental way, despite minor consolidation efforts in recent years.³ There are still about 20 independent national and pan-European exchanges, in addition to a number of regional exchanges, with an enormous range in terms of size. Nevertheless, the vast majority (96%) of total trading takes place at just six exchanges – CBOE Europe, Euronext, LSE, Deutsche Börse, Nasdaq Nordic & Baltics and SIX of Switzerland. CBOE Europe is the only exchange lacking an origin as the main national (primary) stock exchange of a European country. Within a relatively short period of time – it started its operations not before 2007 – it has become the most liquid trading venue on the continent. During 2023, shares worth a full EUR 4.6 tr were bought and sold through it. Over the years, it has achieved significant market share gains at the expense of most traditional exchanges. However, as a whole, aggregate nominal trading volumes in Europe do not show a clear trend.

Leaving CBOE as a supranational player aside, market liquidity is the strongest in the UK and Germany, with annual share turnover at 64% and 57% of average market cap, respectively. By contrast, Euronext, Switzerland and the Nordics & Baltics have considerably less active stock markets (only about 40% each).

Stock trading volume* on European exchanges in 2023

14



* electronic order book + OTC (negotiated deals)

** 2022, latest date available

Sources: WFE, Deutsche Bank Research

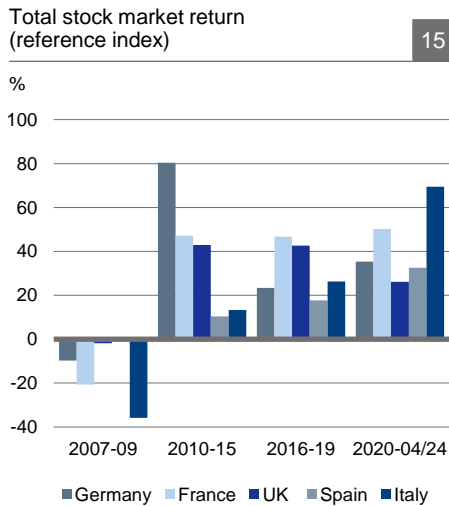
f) Performance

How successful have – well diversified – equity investments in the various European countries been in recent years? In most cases, the national reference index is a price index which only measures the performance of the share prices of its constituents, leaving out dividend payments. A total return index, such as the DAX, includes these. This matters, because market tradition varies. In some countries (e.g., the US as the most prominent, albeit not a European example), firms focus particularly on share buybacks to return capital to their shareholders, whereas in other countries, dividends play the dominant role. Yet, share

³ For a historical comparison, also see Schildbach, Jan, and Martin Waibel (2016). European exchange landscape: too fragmented. Deutsche Bank Research. Talking Point. May 2.



European stock markets – hidden champion Germany

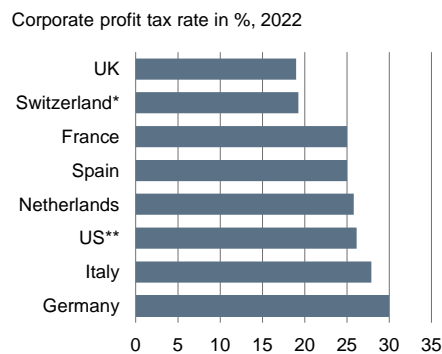


buybacks drive stock price permanently upward (by reducing the number of outstanding shares and increasing future earnings per share), and therefore also the price index, while dividend payments of the past are not reflected in such an index – hence the need to look at total return indices as a common denominator to account for different dividend and buyback cultures and truly judge stock performance.

On this basis, and for the national reference index, stock investments in Germany have been the most profitable ones among the major European markets since the beginning of 2007, before the onset of the financial crisis. On average, the DAX has returned nearly 6% per year (in nominal terms) during this period, which also includes the other major shocks of the sovereign debt crisis, the coronavirus pandemic, as well as the Russian invasion of Ukraine and the ensuing energy crisis. The DAX is followed by the French CAC and the British FTSE 100 (both about 5½% p.a.). By contrast, the Spanish IBEX (3.2%) and the Italian FTSE MIB (2.6%) registered substantially weaker performances – partly due to their debt crisis, as evidenced by poor returns in the first half of the 2010s, at a time when other markets rebounded from the losses of the financial crisis.

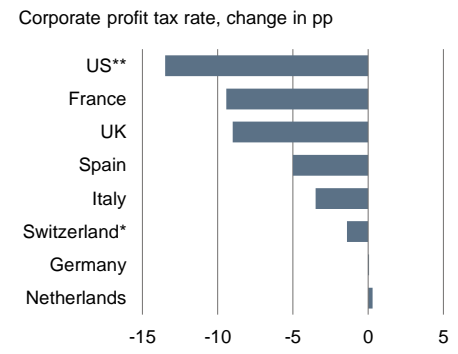
The strength of the DAX is all the more remarkable, given that German companies are heavily taxed and increasingly at a disadvantage compared to their peers. The average tax burden on profits of German corporations remains at 30%, the second-highest level of all major industrialised countries globally, behind Japan. Even more, almost every main international competitor – from the US to France, the UK, Italy and Spain – has reduced corporate tax rates since 2010, in many cases substantially, by several percentage points. It is only Germany (and the Netherlands) where tax rates have not fallen.

Corporate taxation internationally 16



* Zurich
** State of New York
Source: German Federal Ministry of Finance

Corporate tax relief since 2010 17



* Zurich
** State of New York
Sources: German Federal Ministry of Finance, Deutsche Bank Research

g) Sectoral composition

With regard to longer-term stock market returns in Italy and Spain, however, a crisis of a decade ago is probably not the only reason for the performance gap to the other main European markets. Structural factors may also contribute to it. One is diversification across different industries. Greater diversification should reduce the volatility of returns, and it could foster steadier index development in the long run. The UK's FTSE 100 benefits from being the most diversified of the major indices. Its top 3 sectors weighted by market cap – financials, consumer staples and industrials – make up just 49% of the entire index. The indices in Italy and Spain are much less diversified, these markets are considerably more concentrated. The top 3 industries in the two countries account for 76% and 71% of the total, respectively, leaving limited space for other sectors.



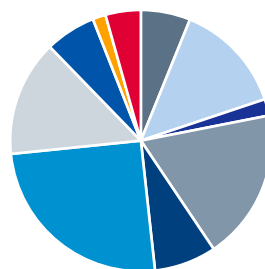
European stock markets – hidden champion Germany

Furthermore, industry-specific drivers may have resulted in out- or underperformance of an index. The outperformance of the DAX versus the CAC, for example, is probably not least due to the larger weight of growth stocks (i.e., technology) in the DAX, while the CAC has a larger share of energy firms and banks whose total stock market returns have been subdued during the past decade.⁴ In the case of Italy and Spain, this effect may be particularly pronounced: both have an outsized share (roughly 35%) of financial firms in their prime stock index. Yet, commercial banks had been especially battered for many years, adversely affected by the zero and negative interest rate environment in the euro area. On the other hand, overall, tech firms have a very low share across Europe.

DAX - sectoral composition

18

%, as of March 14, 2024



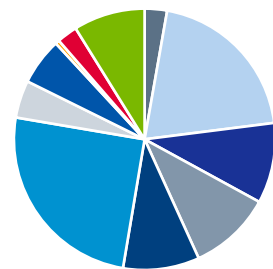
- Communication Services
- Consumer Staples
- Health Care
- Information Technology
- Real Estate
- Consumer Discretionary
- Financials
- Industrials
- Materials
- Utilities

Sources: Stoxx, Deutsche Bank Research

CAC - sectoral composition

19

%, as of May 24, 2024



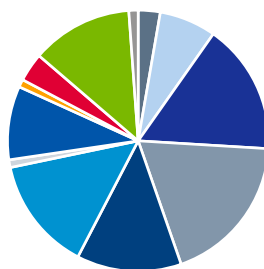
- Communication Services
- Consumer Staples
- Health Care
- Information Technology
- Real Estate
- Energy
- Consumer Discretionary
- Financials
- Industrials
- Materials
- Utilities

Sources: Bloomberg Finance LP, Deutsche Bank Research

FTSE 100 - sectoral composition

20

%, as of May 24, 2024



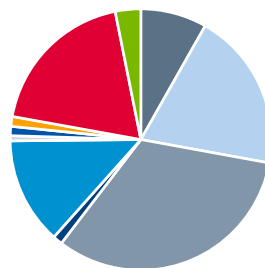
- Communication Services
- Consumer Staples
- Health Care
- Information Technology
- Real Estate
- Energy
- Consumer Discretionary
- Financials
- Industrials
- Materials
- Utilities
- Other

Sources: Bloomberg Finance LP, Deutsche Bank Research

IBEX - sectoral composition

21

%, as of May 24, 2024



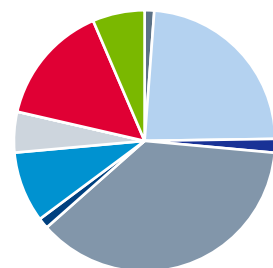
- Communication Services
- Financials
- Industrials
- Materials
- Utilities
- Consumer Discretionary
- Health Care
- Information Technology
- Real Estate
- Energy

Sources: Bloomberg Finance LP, Deutsche Bank Research

FTSE MIB - sectoral composition

22

%, as of March 28, 2024



- Communication Services
- Consumer Staples
- Health Care
- Information Technology
- Energy
- Consumer Discretionary
- Financials
- Industrials
- Utilities

Sources: FTSE Russell, Deutsche Bank Research

Hence, national peculiarities, such as strength in structural growth sectors, market concentration and existence of large players, the presence of family-owned businesses and the attractiveness of listing rules all play a meaningful role in shaping the composition and determining the performance of benchmark indices in the longer term. Of course, this is equally true for Europe and the US.

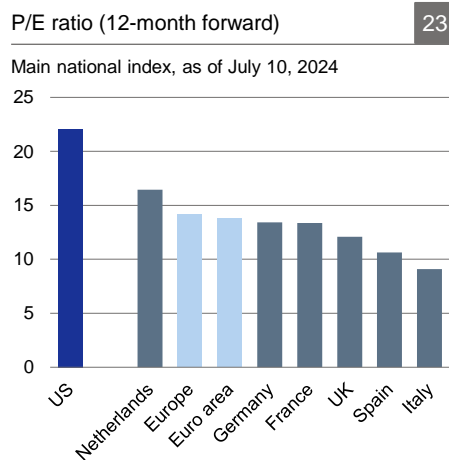
⁴ Note: there is some overlap because of "double entries" of a few companies in more than one national index. For example, Airbus is a constituent of both DAX and CAC, while Stellantis and STMicroelectronics are included in both the CAC and the FTSE MIB.



European stock markets – hidden champion Germany

In the latter case, giant tech companies – primarily the "Magnificent 7" – have become the prime growth driver, and they dominate stock indices like the S&P 500 (let alone the Nasdaq 100). They have led to an impressive outperformance of the US. However, market dynamics can change. At some point in time, the tech boom could come to an end (in the same way that other sectors might regain investors' favour). European bank shares are a case in point. Only recently have they staged a comeback, when interest rates started to surge in early 2022. In a reversal of fortunes, during this relatively short period, bank-heavy stock indices in Italy and Spain have therefore left behind the other major European benchmarks. Indeed, this proves the old caveat of asset management: past performance is no guide to future returns.

h) Valuation



Source: Bloomberg Finance LP

European stock markets face a substantial discount to the US. The price-earnings (P/E) ratio based on expected earnings for the next 12 months amounts to 14 for the pan-European Stoxx 600 index, but 22 for the S&P 500. In the US, this is mostly due to the prominent role of highly valued tech stocks. Within Europe, the range is fairly narrow for the three largest economies – Germany, the UK and France – with a P/E ratio of between 12 and 14 for the respective national reference index. By contrast, Southern European markets (such as Italy and Spain) lag somewhat behind, with ratios of only 9 to 11. On the other hand, the Netherlands clearly stands out with a P/E of about 16½. Overall, in the case of Germany, this demonstrates that there is no particular discount – or premium – for the narrowest of the large European equity markets.⁵

Conclusion

Stock markets in Europe are quite a diverse bunch. Fragmentation remains high, even though some multi-country exchanges have emerged. Europe's share of global market cap is shrinking, IPO numbers and volumes are declining, and there is a heavy valuation gap to the US. Growth stocks, particularly in the tech industry, are few and far between in comparison. Many of the structural issues have been there for years. Yet, progress on the EU's Capital Markets Union has proven elusive so far, despite growing political determination to get it done. Corporate funding continues to be centred around bank lending.

Against this European backdrop, the German equity market is a relatively small (yet strong) pillar. It lacks breadth. It has comparatively few listed firms, resulting in a low aggregate market cap in relation to German GDP. However, those firms which are publicly traded are, on average, large-cap stocks with solid valuations and no discounts to European peers. And in terms of total returns, despite a hefty corporate tax burden, the German reference index, the DAX, has outperformed all other major European markets over the longer run. Perhaps most importantly, the market in Germany is also more liquid than in many other European countries. This is not only the case for trading volumes. Volumes of new IPOs and capital increases are the highest in the EU. In conclusion, we view the German equity market as a bit of a hidden champion.

Jan Schildbach (+49 69 910-31717, jan.schildbach@db.com)

⁵ For more details, see, for example, Deutsche Bank Research (2024). Cross Asset Outlook – Goldilocks with grey streaks. June 7.



EU Monitor

- ▶ European stock markets – hidden champion Germany July 22, 2024
- ▶ European banks – back for good? May 2, 2024
- ▶ All you need to know six weeks ahead of the EU parliament election April 25, 2024
- ▶ European banks make some progress in diversifying their sovereign exposures March 26, 2024
- ▶ Strong risk capital markets: Vital for unlocking green & digital innovations January 29, 2024
- ▶ Sovereign exposures of European banks – revisited May 12, 2023
- ▶ Climate stress tests: Are banks fit for the green transition? January 12, 2023
- ▶ Sustainable finance – coming of age September 2, 2022
- ▶ Stablecoins: DeFi, Libra and beyond March 25, 2022
- ▶ Payment choices in Europe in 2020: Convergence at the till, reinforcement of national differences at the online checkout Dec. 15, 2021
- ▶ The digital euro: Political ambitions and economic realities July 12, 2021

Our publications can be accessed, free of charge, on our website www.dbresearch.com. You can also register there to receive our publications regularly by E-mail.

Ordering address for the print version:
Deutsche Bank Research
Marketing
60262 Frankfurt am Main
Fax: +49 69 910-31877
E-mail: marketing.dbr@db.com

Available faster by E-mail:
marketing.dbr@db.com

© Copyright 2024. Deutsche Bank AG, Deutsche Bank Research, 60262 Frankfurt am Main, Germany. All rights reserved. When quoting please cite "Deutsche Bank Research".

The above information does not constitute the provision of investment, legal or tax advice. Any views expressed reflect the current views of the author, which do not necessarily correspond to the opinions of Deutsche Bank AG or its affiliates. Opinions expressed may change without notice. Opinions expressed may differ from views set out in other documents, including research, published by Deutsche Bank. The above information is provided for informational purposes only and without any obligation, whether contractual or otherwise. No warranty or representation is made as to the correctness, completeness and accuracy of the information given or the assessments made.

In Germany this information is approved and/or communicated by Deutsche Bank AG Frankfurt, licensed to carry on banking business and to provide financial services under the supervision of the European Central Bank (ECB) and the German Federal Financial Supervisory Authority (BaFin). In the United Kingdom this information is approved and/or communicated by Deutsche Bank AG, London Branch, a member of the London Stock Exchange, authorized by UK's Prudential Regulation Authority (PRA) and subject to limited regulation by the UK's Financial Conduct Authority (FCA) (under number 150018) and by the PRA. This information is distributed in Hong Kong by Deutsche Bank AG, Hong Kong Branch, in Korea by Deutsche Securities Korea Co. and in Singapore by Deutsche Bank AG, Singapore Branch. In Japan this information is approved and/or distributed by Deutsche Securities Inc. In Australia, retail clients should obtain a copy of a Product Disclosure Statement (PDS) relating to any financial product referred to in this report and consider the PDS before making any decision about whether to acquire the product.