



Who owns the German DAX?

The Ownership Structure of the German DAX 30 in 2020 – A joint study of IHS Markit and DIRK

Eighth Edition - June 2021



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Methodology

- In 2020, IHS Markit and DIRK German Investor Relations Association, analysed the changes within the shareholder structure of the 30 listed DAX companies during the course of 12 months. In particular, the institutional free float of the DAX 30 issuers was considered. Subsequently, trend analyses of institutional investors and benchmarking data will also be included in the study.
- The data was collected and prepared by IHS Markit from public and proprietary data, with all data used in this study being anonymised and aggregated. This is to ensure the confidentiality and preserve the sensitive nature of the information used in this study. Since the Shareholder Rights Directive II (SRD II) was only introduced towards the end of 2020, its impact on data granularity has been somewhat limited in this study. The full effect will therefore be visible in the next study.
- The horizon is set to 48 months between December 2017 and 2020, with a record date of the 31 December each period. The results this year include the impact of the global COVID-19 pandemic on the ownership structure of the DAX. The study's focus is the annual perspective and the change between 2019 and 2020. Priority will be given to the relative changes from the previous year, as this study showed an increase in transparency and improvement in data quality. The information collected was analysed with regard to the shares held by institutional investors and prepared according to the following parameters:
 - > Distribution of free float and strategic shareholdings, the latter being analysed according to investor classifications
 - > Geographical distribution of shareholdings (regions, cities).
 - Distribution by investment style of institutional investors.
 - ➤ Influence of the institutional investors on the DAX: consideration of the largest investors as well as the largest buyers and sellers including the ESG sensitivity and voting behaviour of the largest investors.
 - > Shareholdings by investor group, whereby the overall share of a particular group of investors is shown globally. In this sense, BlackRock, Inc. is a separate focus due of its importance to the DAX.
 - > Investments and the influence of sovereign wealth funds were also prominent.
 - > Distribution of invested funds and mandates, which have the greatest influence on the capital invested in the DAX.



Methodology – continued

- An analysis of trading venues for German equities is also included to reflect the growing importance of alternative platforms.
- The respective investments of the institutional investors are presented in US dollars for better comparability, based on the number of shares held at the respective reporting date, the share price at the respective reporting date and the currency conversion rate at the respective reporting date. As a result of currency and share price fluctuations as well as due date-related deviations, there is a fluctuation range in value-based changes which IHS Markit has largely eliminated. Nevertheless, the value comparison is technically not completely possible due to the different release periods.
- In 2020, Delivery Hero SE and Deutsche Wohnen SE replaced Deutsche Lufthansa AG and Wirecard AG in the DAX 30.



Summary

- North America once again supported the DAX. Buying in the region came from both active and passive portfolios. The opposite was true for Europe and Germany where large outflows were recorded. The majority of the outflows were driven by the selloff in the early part of 2020. Institutional investors recovered slightly but over the course of the year there has been no complete recovery. We expect to see a complete recovery throughout 2021.
- Institutional investors continue to increase their DAX exposure in 2020. Institutional investors grew by nearly one percentage point (pp), now holding above 62.0% of the DAX's total market capitalization. Similar to the previous year North American investors continue to rank first amongst the institutional holders and increased their holdings by roughly 1.7pp. On the domestic front, German investors continued their divestment from the previous year whilst UK & Ireland investors increased their investment in the DAX mostly through actively managed funds, despite the ongoing Brexit negotiations.
- Retail investors remain an important investor group of the DAX, making up roughly 17.0% of the total market capitalisation despite a small reduction in holdings of 0.1pp. Retail holdings primarily increased within the first half of 2020 and decreased throughout the second half due to increased investment by institutional investors.
- German investors continue their divestment from the DAX through both passively and actively managed funds which fell by 1.0pp and 0.6pp, respectively and now make up 13.3% of the DAX's shareholder base. This is the fifth consecutive year of reduced German ownership since 2016. DWS Investment was the biggest domestic seller, followed by BlackRock Asset Management (Deutschland) where both decreased their percentage share by 0.5pp and 0.3pp, respectively.
- North American investment continued to grow and now accounts for 37.6% of the regional DAX holdings. Similar to the previous year(s) the region continued to increase its exposure to the DAX and accounts for the largest passive and ETF portfolios. This passive sentiment was mainly driven by Vanguard (+0.4pp), Geode (+0.2pp) and Northern Trust Investments (+0.2pp). North American institutions also bought into the DAX via active funds including The Capital Group (+0.6pp), MFS and Wellington (both +0.2pp). Several active funds and stock pickers entered the index during the second half of 2020.
- The mega trend ESG becomes significantly more important and investors put an even higher focus on the implementation of ESG factors into their investment decision and strategy. Across the top 100 DAX shareholders the percentage of investors with a high ESG sensitivity doubles in 2020 and now account for almost half the money invested in the index. This development shows that ESG integration into investment decisions is not just a temporary trend.

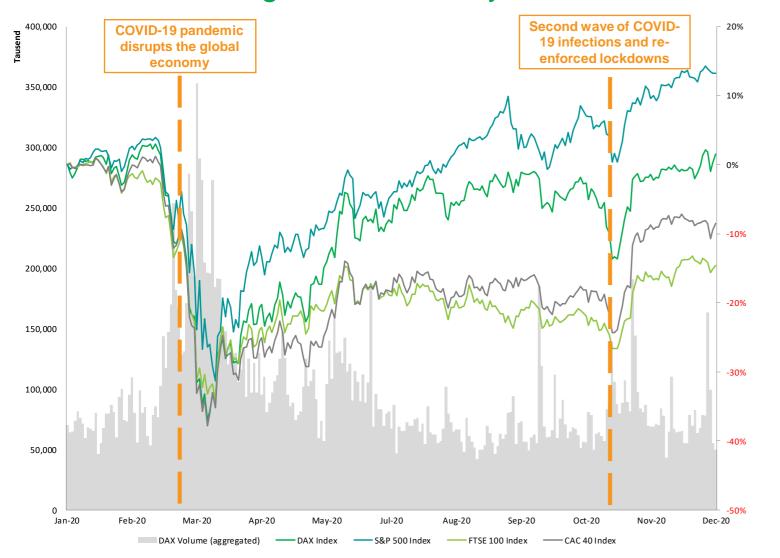


Summary – continued

- Investors from Continental European (excl. Germany) reduced their ownership by 1.9pp of which most of the selling was attributable to France (-1.7pp) followed by Switzerland and Italy (both -0.2pp). French fund manager Amundi Asset Management decreased holdings by 1.2pp which made it the biggest seller for the period. In Switzerland Pictet AM saw its DAX investment decline by 0.3pp, while Italian exposure to the index was negatively influenced by Anima divesting German large caps (-0.1pp).
- BlackRock continues to be the largest investor in the DAX, despite reducing their holdings by 0.4pp. The group exhibited a reduction in its index funds, going against the overall trend of inflows by North American ETFs observed in this study, and a slight increase in its actively managed funds.
- Norges Bank remains a top holder within the DAX. The institution has, however, only exhibited a subtle bullish sentiment to the DAX since the previous period but nonetheless remains the largest Sovereign Wealth Fund by quite some margin above SAFE (China). Overall, Sovereign Wealth Funds (SWF) were buyers of the DAX, particularly during the first half of 2020. SWF from the Middle East and Asia were amongst the top buyers in an environment most long-only funds sold DAX issuers.
- ETFs have changed course from their 2019 trend and now account for 0.5pp less. ETFs from Continental Europe and UK & Ireland fell whilst North American ETFs increased quite significantly. Moreover, throughout the first quarter of 2020 ETF investments generally fell by a relatively lower amount than actively managed portfolios.
- Value investors continue to lead the ownership by style although their holdings decreased from 35.3% to 33.8% of the identified free float. This marks the third consecutive year that the group expressed a bearish sentiment towards the DAX. Growth investors increased their exposure and now account for 30.4%.
- London remains the number one location for IR activities. As in the previous years the city remains on top, both in terms of capital invested in the DAX as well as number of investors, despite the city decreasing its holdings by 0.1pp. Regardless of Frankfurt's outflows of 0.9pp the city ranks second in terms of capital invested. Edinburgh (+0.6pp) saw the largest increase, which was due to Baillie Gifford & Company being the top buyer for the period.
- Deutsche Börse remains the most important trading venue for the DAX. The official stock exchange accounts for more than 43% of all DAX trades, up 0.4pp compared to 2019. Over-The-Counter (OTC) trades gained market share in 2020, with a quarter of all DAX trades being executed via unofficial venues. Visible trades in Dark Pools stayed flat at 4% of all DAX trades while electronic, automated trading (Systematic Internalisers) saw declining numbers.



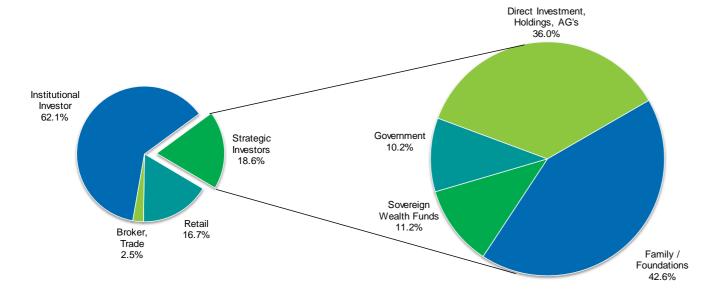
Price and Trading Volume History



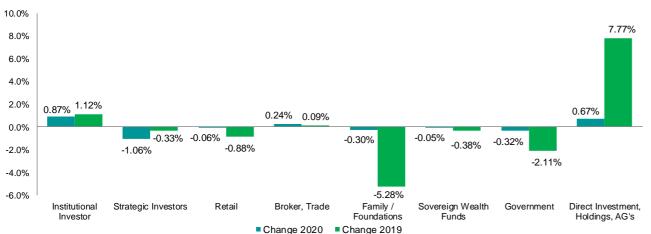
- In the first quarter of 2020 the DAX took a strong hit and fell by nearly 40.0% as the global economy was struck by the Corona virus pandemic.
- Although the index experienced a strong recovery since its low in March 2020, the DAX is yet to rise to pre-pandemic levels and as of December 2020 rose back into positive territory.
- Looking at major indices, the only index outperforming the DAX over the period was the S&P 500 index which rose by about 13.0%. The FTSE 100 and CAC 40 indices underperformed the DAX over the period and fell by 15.0% and 9.0%, respectively.



Shareholder Structure of the DAX 30 Constituents



Change (% - Points)

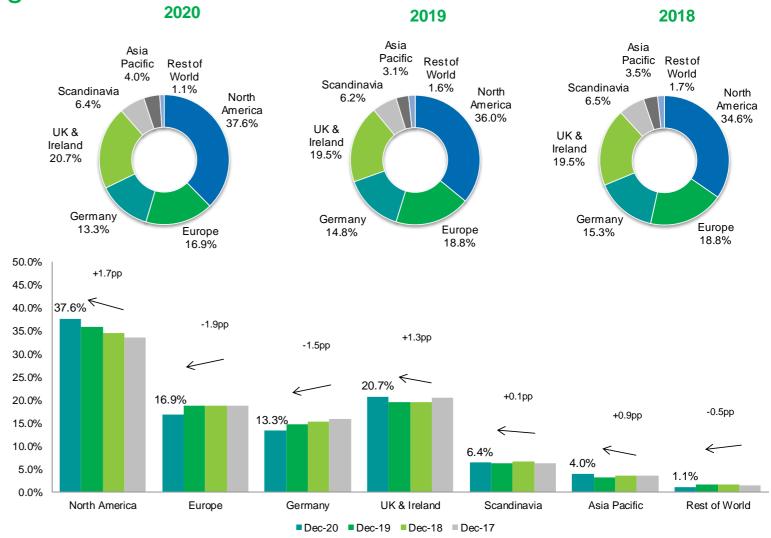


- Institutional investment increased slightly to 62.1% of the institutional free float (+0.9pp compared to 2019). This is in line with the positive performance of the DAX.
- Similar to the trend observed in the previous year, Strategic investors continued to see their investments in the DAX decrease by 1.1pp, now holding 18.6%.
- Retail investors also decreased their holdings by 0.1pp but a lower amount overall than recorded previously.
- Direct investment increased slightly by 0.7pp, largely due to the addition of Delivery Hero to the DAX.



Shareholder Structure by Region

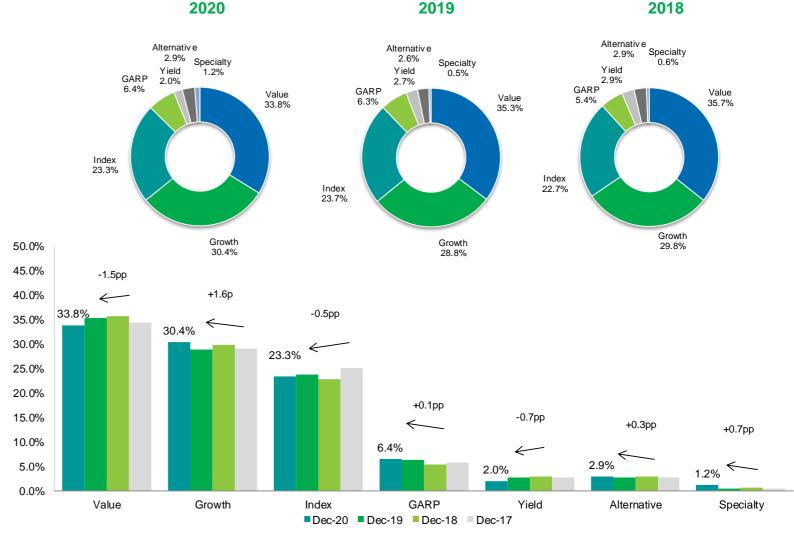
- North American investors once again were confident in the German stock market by being the largest investors in the DAX. Their holdings increased by 1.7pp which exceeds the increase in 2019 by 0.3pp, despite the global market downturn experienced in early 2020. The increases where not only driven by ETFs in the region but also by active fund managers buying into the benchmark.
- European holdings decreased by 1.9pp after a sideways trend observed over the previous three years.
- UK & Ireland investors increased to hold 20.7% which was driven by the period's overall top DAX buyer, Baillie Gifford (+0.7pp), which keeps the region in third place.
- German investors continued to express the bearish sentiment exhibited over the past years but still remain the fourth largest holder of the DAX. Selling was driven by DWS (-0.5pp) and BlackRock Deutschland (-0.3pp).





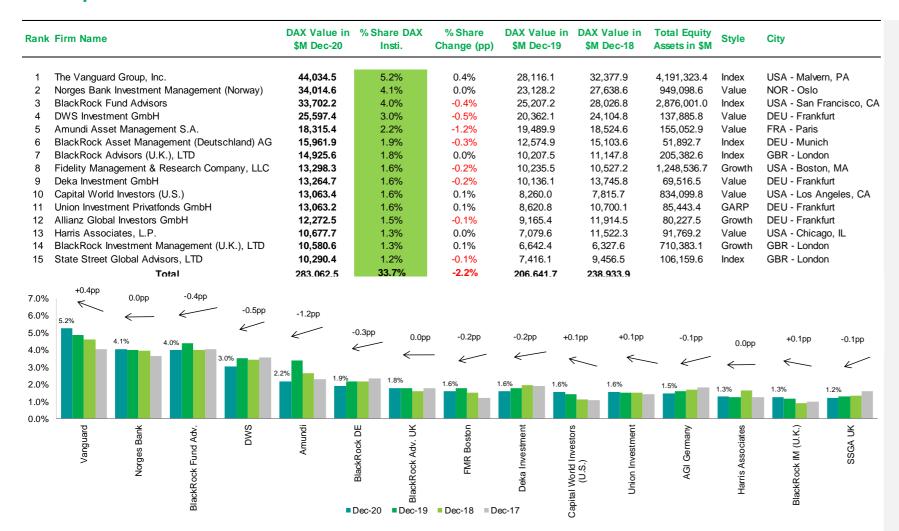
Shareholder Structure by Investment Styles

- Value investors continue to be the largest holder of the DAX, despite their overall share having decreased from 35.3% to 33.8%. Amundi (-1.2pp) is the main contributor to this development and the biggest seller for the period. This marks the third consecutive year of Value investors decreasing their overall ownership in the DAX.
- Growth investors reversed the trend exhibited in the previous year and increased their representation in the DAX by 1.6pp and retain their second rank in institutional ownership by style. This was the largest movement by style over the reporting period. The increase was mainly attributable to top Growth investor, Baillie Gifford.
- Index investors remain at the third place with their holdings decreasing slightly by 0.5pp.
 The overall net decrease was attributable towards UK and European ETF holdings dropping, whilst US ETFs were rising.





Top 15 DAX Investors



- Vanguard remains at the top of institutional holdings and increased their exposure by 0.4pp.
- Norges ranks second and maintained relatively flat holdings. With BlackRock Fund Advisor's bearish sentiment expressed towards the DAX (-0.4pp) the institution subsequently dropped below Norges to now rank third amongst the top holders.
- Despite being the largest domestic seller (-0.5pp), DWS remains at rank four and thus continues to be the most important domestic investor.
- After continuously increasing its holdings in the DAX over the past three years, Amundi Asset Management changed course and expressed the strongest bearish sentiment amongst the top holders (-1.2pp).

Percentage point changes relate to 2019 and 2020



Top 15 Buyers & Sellers

Top 15 Buvers

Rank	Firm Name	DAX Value in \$M Dec-20	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-19	DAX Value in \$M Dec-18	Total Equity Assets in \$M	Style	City
1	Baillie Gifford & Company	8,020.3	0.96%	0.7%	1,583.9	1,686.0	298,252.0	Growth	GBR - Edinburgh
2	The Vanguard Group, Inc.	44,034.5	5.25%	0.4%	28,116.1	32,377.9	4,191,323.4	Index	USA - Malvern, PA
3	Capital Research Global Investors (U.S.)	8,402.7	1.00%	0.3%	4,080.3	3,661.6	538,431.6	GARP	USA - Los Angeles, CA
4	GIC Asset Management Pte., LTD	3,978.0	0.47%	0.2%	1,438.4	1,782.7	82,914.3	Value	SGP - Singapore
5	Geode Capital Management, LLC	7,533.4	0.90%	0.2%	3,891.7	3,567.9	693,328.2	Index	USA - Boston, MA
6	Northern Trust Investments, Inc.	6,020.3	0.72%	0.2%	2,953.8	3,248.9	481,699.8	Index	USA - Chicago
7	MFS Investment Management	6,981.6	0.83%	0.2%	3,718.6	3,704.3	370,240.2	Value	USA - Boston, MA
8	Wellington Management Company, LLP	4,385.1	0.52%	0.2%	2,057.0	3,063.1	609,943.2	Value	USA - Boston, MA
9	Marathon Asset Management, LLP	2,392.2	0.28%	0.1%	789.8	854.6	24,155.6	Value	GBR - London
10	Kuwait Investment Office	5,232.5	0.62%	0.1%	2,781.4	3,605.3	844.5	Growth	GBR - London
11	T. Rowe Price Associates, Inc.	4,282.6	0.51%	0.1%	2,160.5	2,769.2	1,055,629.9	Growth	USA - Baltimore
12	Orbis Investment Advisory, LTD	1,636.9	0.19%	0.1%	394.9	594.8	1,558.3	Value	GBR - London
13	APG Asset Management N.V.	5,138.5	0.61%	0.1%	2,811.2	3,188.4	198,653.3	Specialty	NLD - Amsterdam
14	Capital World Investors (U.S.)	13,063.4	1.56%	0.1%	8,260.0	7,815.7	834,099.8	Value	USA - Los Angeles
15	Flossbach von Storch AG	2,995.3	0.36%	0.1%	1,370.2	2,919.4	45,882.4	Growth	DEU - Cologne
	Total	124,097.3	14.78%	3.3%	66,407.8	74,839.8			

Top 15 Sellers

Rank	Firm Name	DAX Value in \$M Dec-20	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-19	DAX Value in \$M Dec-18	Total Equity Assets in \$M	Style	City
		10.045.4	0.400/	4.000/	40.400.0	10 501 0	455.050.0		5D4 D :
1	Amundi Asset Management S.A.	18,315.4	2.18%	-1.20%	19,489.9	18,524.6	155,052.9	Value	FRA - Paris
2	DWS Investment GmbH	25,597.4	3.05%	-0.49%	20,362.1	24,104.8	137,885.8	Value	DEU - Frankfurt
3	BlackRock Fund Advisors	33,702.2	4.01%	-0.36%	25,207.2	28,026.8	2,876,001.0	Index	USA - San Francisco, CA
4	Jennison Associates, LLC	430.7	0.05%	-0.33%	2,180.6	225.3	152,633.3	Growth	USA - New York
5	Pictet Asset Management S.A.	2,953.3	0.35%	-0.32%	3,882.0	1,835.8	121,187.4	GARP	CHE - Zürich
6	Artisan Partners, L.P.	3,374.5	0.40%	-0.30%	4,019.4	5,086.5	124,805.3	Growth	USA - Milwaukee
7	BlackRock Asset Management (Deutschland) AG	15,961.9	1.90%	-0.28%	12,574.9	15,103.6	51,892.7	Index	DEU - Munich
8	Dodge & Cox	1,606.7	0.19%	-0.22%	2,368.0	4,270.2	168,106.8	Value	USA - San Francisco, CA
9	Aberdeen Standard Investments (U.K.)	3,573.2	0.43%	-0.22%	3,709.7	2,769.5	112,790.5	Growth	GBR - Edinburgh
10	Invesco Advisers, Inc.	4,004.4	0.48%	-0.20%	3,908.4	7,126.4	313,910.2	Growth	USA - Atlanta
11	Assenagon GmbH	2,753.2	0.33%	-0.20%	3,029.9	3,512.5	28,080.0	Index	DEU - Munich
12	Alken Asset Management, LTD	3.9	0.00%	-0.20%	1,132.5	648.1	1,228.3	Deep Value	GBR - London
13	Fidelity Management & Research Company, LLC	13,298.3	1.58%	-0.19%	10,235.5	10,527.2	1,248,536.7	Growth	USA - Boston, MA
14	J.P. Morgan Asset Management (UK), LTD	5,354.2	0.64%	-0.19%	4,774.5	5,543.1	132,819.0	Growth	GBR - London
15	Deka Investment GmbH	13,264.7	1.58%	-0.18%	10,136.1	13,745.8	69,516.5	Value	DEU - Frankfurt
	Total	144,194.1	17.18%	-3.01%	127,010.8	141,050.2			

- German and European fund managers accounted for the majority of the top 15 sellers, whilst North American investors picked up most of the selling amongst the top 15 buyers, led by the Vanguard Group and Capital Research Global investors. In addition to Baillie Gifford being the largest buyer, the above nearly mirrors the previous period's results, where the top sellers were mostly located in the USA and UK.
- The three largest buyers in 2019 are now all amongst the largest sellers:
 - After showing the largest inflows in 2019, Amundi AM was, as mentioned, the biggest seller for the period (-1.2pp).
 - > Pictet AM ranked second amongst the top buyers previously but now formed part of the biggest sellers (-0.3pp).
 - Similarly, BlackRock Fund Advisors ranked third previously amongst the buyers previously and now holds the same rank amongst the sellers (-0.4pp).



Top 20 DAX Investors at a Group Level

- On a group level, BlackRock remains the top investor in the DAX by far with an investment of 10.0% of the institutional free float of the benchmark, despite showing outflows mainly in their ETF portfolios.
- Overall, the top 20 DAX investors at a group level were net sellers and decreased their holdings by 1.2pp. The group composition remained relatively stable amongst the top three investors, with notable reshuffling below.
- Although Deutsche Bank was a net seller (-0.3pp), the group climbed up to rank four due to significant selling by Amundi (-1.2pp) which pushed SAS Rue la Boetie down from rank four to rank seven.
- The majority of selling within the top 20 parent groups comes from investors located in Europe and Germany.

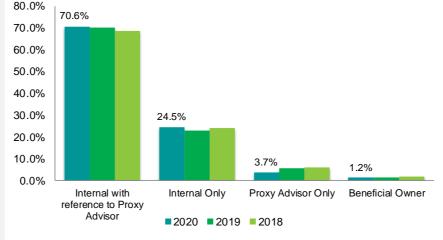
Rank	Firm Name	DAX Value in \$M Dec-20	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-19	DAX Value in \$M Dec-18	Orientation	Country
1	BlackRock, Inc.	83,590.9	10.0%	-0.4%	59,477.7	66,325.5	Active & Passive	USA
2	The Vanguard Group, Inc.	45,283.8	5.4%	0.3%	29,186.8	33,443.1	Passive	USA
3	Norges Bank (Norway)	34,014.6	4.1%	0.0%	23,128.2	27,624.6	Active & Passive	Norway
4	Deutsche Bank AG	29,712.3	3.5%	-0.3%	21,977.8	25,384.4	Active & Passive	Germany
5	The Capital Group Companies, Inc.	24,437.9	2.9%	0.6%	13,584.7	12,737.1	Active	USA
6	State Street Corporation	23,426.6	2.8%	0.0%	15,960.2	18,778.9	Passive	USA
7	SAS Rue la Boetie (Amundi)	22,380.3	2.7%	-1.2%	22,332.5	22,127.5	Active & Passive	France
8	BPCE S.A. (Harris Associates)	17,454.8	2.1%	-0.1%	12,412.7	18,326.0	Active	France
9	FMR, LLC	15,588.7	1.9%	-0.2%	11,648.8	12,097.9	Active	USA
10	UBS Group AG	14,638.5	1.7%	-0.2%	11,069.5	15,500.5	Active & Passive	Switzerland
11	DZ Bank (Union)	13,915.0	1.7%	0.1%	9,106.0	11,253.7	Active & Passive	Germany
12	Allianz SE	13,881.8	1.7%	-0.2%	10,455.0	13,498.6	Active	Germany
13	DekaBank Deutsche Girozentrale	13,392.6	1.6%	-0.2%	10,276.2	13,800.0	Active & Passive	Germany
14	Sun Life Financial, Inc. (MFS)	11,457.8	1.4%	0.2%	6,496.9	7,703.3	Active	Canada
15	Northern Trust Corporation	11,362.2	1.4%	0.2%	6,543.2	8,057.2	Passive	USA
16	Franklin Resources, Inc.	10,117.0	1.2%	-0.0%	7,142.4	7,676.2	Active & Passive	USA
17	Societe Generale (Lyxor)	9,017.1	1.1%	-0.0%	6,391.2	8,921.3	Passive	France
18	BNP Paribas S.A.	8,916.1	1.1%	-0.2%	7,105.6	10,177.2	Active & Passive	France
19	China SAFE	8,570.8	1.0%	0.2%	4,733.5	7,942.3	Active	Mainland China
20	FIL, LTD	8,567.5	1.0%	-0.0%	6,140.1	5,983.7	Active	UK
	Total	419,726.1	50.0%	-1.2%	295,168.7	347,359.0		

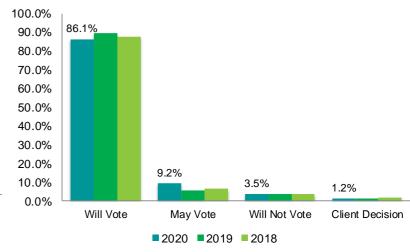


Focus: Voting Behaviour of the Top Investors in the DAX

- Internal voting guidelines become increasingly important within the investment community. A total 95.1% of the top 100 DAX investors maintain their own voting policies, an increase of 2pp compared to 2019.
- Nonetheless, Proxy Advisors play an important role to investors' internal guidelines as almost three quarters of the top 100 investors pay close attention to the voting recommendations.
- In 2020 fewer investors indicated that they will vote compared to the previous year whilst more investors indicated that they may vote.

Rank	Firm Name	Voting Status	DAX Value in \$M Dec-20	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-19	DAX Value in \$M Dec-18	Total Managed	Style	City
1	The Vanguard Group, Inc.	Will Vote	44,034.5	5.2%	0.4%	28,116.1	32,377.9	4,191,323.4	Index	USA - Malvern, PA
2	Norges Bank Investment Management (Norway)	Will Vote	34,014.6	4.1%	0.0%	23,128.2	27,638.6	949,098.6	Value	NOR - Oslo
3	BlackRock Fund Advisors	Will Vote	33,702.2	4.0%	-0.4%	25,207.2	28,026.8	2,876,001.0	Index	USA - San Francisco, CA
4	DWS Investment GmbH	Will Vote	25,597.4	3.0%	-0.5%	20,362.1	24,104.8	137,885.8	Value	DEU - Frankfurt
5	Amundi Asset Management S.A.	Will Vote	18,315.4	2.2%	-1.2%	19,489.9	18,524.6	155,052.9	Value	FRA - Paris
6	BlackRock Asset Management (Deutschland) AG	Will Vote	15,961.9	1.9%	-0.3%	12,574.9	15,103.6	51,892.7	Index	DEU - Munich
7	BlackRock Advisors (U.K.), LTD	Will Vote	14,925.6	1.8%	0.0%	10,207.5	11,147.8	205,382.6	Index	GBR - London
8	Fidelity Management & Research Company, LLC	Will Vote	13,298.3	1.6%	-0.2%	10,235.5	10,527.2	1,248,536.7	Growth	USA - Boston, MA
9	Deka Investment GmbH	Will Vote	13,264.7	1.6%	-0.2%	10,136.1	13,745.8	69,516.5	Value	DEU - Frankfurt
10	Capital World Investors (U.S.)	Will Vote	13,063.4	1.6%	0.1%	8,260.0	7,815.7	834,099.8	Value	USA - Los Angeles, CA
	Total		226,178.1	26.9%	-2.2%	167,717.5	189,012.9			





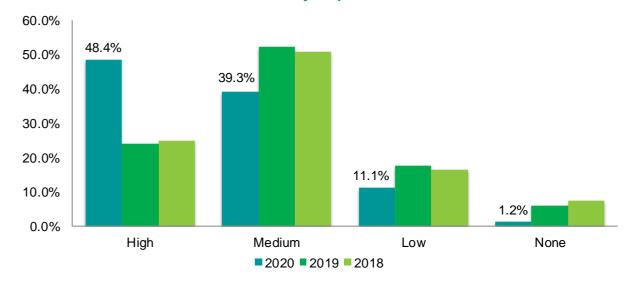


Focus: ESG Sensitivity of the Top Investors in the DAX

- The increasing importance ESG investing plays in today's markets was clearly visible in the results of the analysis. The strategy of integrating environment, social and governance criteria into the investment strategy has become an ever increasingly important factor for investors.
- This trend is reflected in the significant jump observed amongst the top 100 DAX investors who have a high ESG sensitivity, a metric that expresses the importance that ESGrelated criteria in the asset allocation process. It shows that 48.4% now indicate a high importance on ESG integration, a jump of 24.3pp or ca. 100% compared to 2019.

Rank	ank Firm Name		Sensitivity \$M Dec-20	% Share DAX Insti.	% Share Change (pp)	\$M Dec-19	\$M Dec-18	Assets in \$M	Style	City
1	The Vanguard Group, Inc.	High	44,034.5	5.2%	0.4%	28,116.1	32,377.9	4,191,323.4	Index	USA - Malvern, PA
2	Norges Bank Investment Management (Norway)	High	34,014.6	4.1%	0.0%	23,128.2	27,638.6	949,098.6	Value	NOR - Oslo
3	BlackRock Fund Advisors	High	33,702.2	4.0%	-0.4%	25,207.2	28,026.8	2,876,001.0	Index	USA - San Francisco, CA
4	DWS Investment GmbH	Medium	25,597.4	3.0%	-0.5%	20,362.1	24,104.8	137,885.8	Value	DEU - Frankfurt
5	Amundi Asset Management S.A.	High	18,315.4	2.2%	-1.2%	19,489.9	18,524.6	155,052.9	Value	FRA - Paris
6	BlackRock Asset Management (Deutschland) AG	High	15,961.9	1.9%	-0.3%	12,574.9	15,103.6	51,892.7	Index	DEU - Munich
7	BlackRock Advisors (U.K.), LTD	High	14,925.6	1.8%	0.0%	10,207.5	11,147.8	205,382.6	Index	GBR - London
8	Fidelity Management & Research Company, LLC	Medium	13,298.3	1.6%	-0.2%	10,235.5	10,527.2	1,248,536.7	Growth	USA - Boston, MA
9	Deka Investment GmbH	Medium	13,264.7	1.6%	-0.2%	10,136.1	13,745.8	69,516.5	Value	DEU - Frankfurt
10	Capital World Investors (U.S.)	Medium	13,063.4	1.6%	0.1%	8,260.0	7,815.7	834,099.8	Value	USA - Los Angeles, CA
	Total		226.178.1	26.9%	-2.2%	167.717.5	189.012.9			

ESG Sensitivity: Top 100 DAX Investors

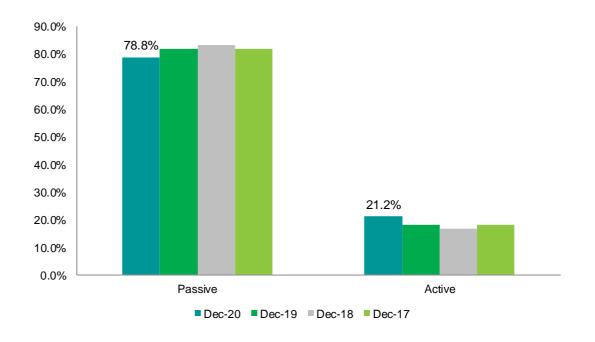




Focus: Investor Group BlackRock, Inc.

- BlackRock remains the most important investor within the DAX with the group holding 10.0% of the institutional holdings and 6.4% of the DAX's free float.
- Passive subsidiaries were net sellers which led to an overall decrease in holdings of 0.4pp on a group level and overall passive holdings to 78.8%, down from 81.9%. This observation was opposite to the general trend that North American ETF holdings increased overall.
- Actively managed funds of the Group on the other hand saw money inflows and increased to 21.2% (+2.1pp).
- In his 2020 annual Letter to CEOs, BlackRock's Larry Fink said the asset manager will focus on climate risks when making investment decisions and avoid investments in companies that "present a high sustainability-related risk."

Rank	Firm Name	DAX Value in \$M Dec-20	% Share DAX F/F	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-19	DAX Value in \$M Dec-18	Style	Orientation	Country
4	Disability of Addisons	22.700.0	0.50/	4.00/	0.000/	05 007 0	00.000.0	la da	D	110 4
1	BlackRock Fund Advisors	33,702.2	2.5%	4.0%	-0.36%	25,207.2	28,026.8	Index	Passive	USA
2	BlackRock Asset Management (Deutschland) AG	15,961.9	1.2%	1.9%	-0.28%	12,574.9	15,103.6	Index	Passive	Germany
3	BlackRock Advisors (U.K.), LTD	14,925.6	1.1%	1.8%	0.01%	10,207.5	11,147.8	Index	Passive	UK
4	BlackRock Investment Management (U.K.), LTD	10,580.6	0.8%	1.3%	0.11%	6,642.4	6,327.9	Growth	Active	UK
5	BlackRock Advisors, LLC	5,805.0	0.4%	0.7%	0.11%	3,346.8	3,981.7	Value	Active	USA
6	BlackRock International, LTD	1,299.8	0.1%	0.2%	0.02%	751.6	863.6	Value	Active	UK
7	BlackRock Japan Company, LTD	808.1	0.1%	0.1%	0.01%	476.7	628.0	Index	Passive	Japan
8	BlackRock Asset Management Canada, LTD	310.7	0.0%	0.0%	0.01%	168.7	150.9	Index	Passive	Canada
9	BlackRock Investment Management (Australia), LTD	197.1	0.0%	0.0%	0.01%	101.8	95.2	Index	Passive	Australia
	Total BlackRock, Inc.	83,590.9	6.3%	10.0%	-0.37%	59,477.7	66,325.5			





Focus: Top 10 Sovereign Wealth Funds in the DAX

Rank	Sovereign Wealth Fund	DAX Value in \$M Dec-20	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-19	DAX Value in \$M Dec-18	Management	Country
1	Norges Bank (Norway)	34.014.6	4.1%	0.04%	23,128.2	27,638.6	Internal & External	Norway
2	SAFE (China)	8,570.8	1.0%	0.19%	4,790.7	7,939.2	Internal & External	Mainland China
3	Kuwait Investment Office/Authority	6,776.8	0.8%	0.17%	3,645.4	4,832.0	Internal & External	Kuwait
4	GIC Singapore/UK	5,518.7	0.7%	0.17%	2,809.2	3,191.4	Internal & External	Singapore
5	Qatar Investment Authority	3,605.2	0.4%	-0.02%	2,574.0	3,478.9	Internal & External	Qatar
6	Abu Dhabi Investment Authority	2,664.7	0.3%	-0.04%	2,036.1	2,505.8	Internal & External	UAE
7	AP 1-7 Fonds	1,880.3	0.2%	0.02%	1,192.0	1,273.6	Internal & External	Sweden
8	Libyan Investment Authority	1,588.1	0.2%	-0.02%	1,199.3	1,650.7	Internal & External	Libya
9	Saudi Arabian Monetary Authority	391.5	0.0%	-0.00%	281.6	478.9	Internal & External	Saudi Arabia
10	Brunei Investment Agency	45.9	0.0%	0.00%	26.9	36.8	Internal & External	Brunei
	Total	65,056.5	7.7%	0.51%	41,683.4	53,025.9		

- Overall, the top 10 SWFs invested in the DAX held a relatively stable investment with minor fluctuations and an overall increase of 0.51pp. This shows that during periods where investors where selling in the first half of 2020, SWFs were net buyers. The buying was predominantly driven by Asia and the Middle East.
- The ranking composition amongst the top 10 SWFs has remained almost unchanged, with the exception of AP 1-7 Fonds taking rank seven (+0.02pp).
- Norges continues to hold the title of the largest invested SWF and remained bullish on the DAX (+0.04pp), accounting for almost 53.0% of DAX investments made by the ten largest SWFs. Along with the previously mentioned increased importance of ESG investing, it is important to know that Norges places great value and focus on ESG and Corporate Governance.



Focus: Top 25 Investment Funds and Managers of the DAX

- The table shows the largest invested funds in the DAX according to recent public information. Hence, there may be possible holdings discrepancies when compared to other slides in this study.
- The top three funds listed remain in the same ranking order.
- There were four new additions to the top 25 funds compared to the previous report, namely DWS Aktion Strategie Deutschland, iShares MSCI Germany ETF, Vanguard European Stock Index Fund, and DWS Concept Kaldemorgen.
- Notably, the Oakmark International Fund by Harris Associates (+0.3pp) climbed up to rank seven from previously ranking ten. The actively managed fund achieved this with a concentrated DAX investment of only eight stocks – the second lowest holding by number of DAX companies after the Capital Income Builder Fund with only five stocks.
- Overall, the top 25 funds account for an overall inflow of 1.8pp.

Rank	Fund Name	Investor name	DAX Value in \$M Dec-20 *	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-19 *	Number of DAX Equities	Orientation	Туре	Country
1	The Government Pension Fund - Global	Norges Bank Investment Management (Norway)	32,365.7	3.9%	-0.1%	22,611.7	27	Active & Passive	Pension	Norway
2	Vanguard Total International Stock Index Fund	The Vanguard Group, Inc.	15,585.9	1.9%	-0.1%	10,992.6	29	Passive	ETF	USA
3	iShares Core DAX UCITS ETF (DE)	BlackRock Asset Management (Deutschland) AG	8,387.1	1.0%	-0.3%	7,630.1	29	Passive	ETF	Germany
4	Vanguard Developed Markets Index Fund	The Vanguard Group, Inc.	8,113.7	1.0%	0.3%	4,049.4	29	Passive	ETF	USA
5	American Funds EuroPacific Growth Fund	Capital World Investors (U.S.)	7,544.4	0.9%	0.2%	4,309.8	12	Active	Mutual Fund	USA
6	iShares Core MSCI EAFE ETF	BlackRock Fund Advisors	5,995.6	0.7%	0.2%	2,953.3	29	Passive	ETF	USA
7	Oakmark International Fund	Harris Associates, L.P.	5,991.7	0.7%	0.3%	2,460.8	8	Active	Mutual Fund	USA
8	Stichting Pensioenfonds ABP (Global Equity Portfolio)	APG Asset Management N.V.	4,837.6	0.6%	0.1%	2,839.4	27	Active	Pension	Netherlands
9	Xtrackers DAX UCITS ETF	DWS Investment GmbH	4,797.9	0.6%	0.1%	2,598.5	29	Passive	ETF	Germany
10	iShares Trust - MSCI EAFE ETF	BlackRock Fund Advisors	4,362.3	0.5%	0.1%	2,423.7	29	Passive	ETF	USA
11	California Public Employees' Retirement System	California Public Employees Retirement System	4,114.9	0.5%	0.0%	2,760.7	30	Active & Passive	Pension	USA
12	DekaFonds CF	Deka Investment GmbH	3,987.1	0.5%	0.1%	2,158.3	28	Active	Mutual Fund	Germany
13	DWS Deutschland	DWS Investment GmbH	3,825.8	0.5%	0.1%	1,887.9	25	Active	Mutual Fund	Germany
14	DWS ESG Investa	DWS Investment GmbH	3,390.6	0.4%	0.2%	1,318.8	25	Active	Mutual Fund	Germany
15	Xtrackers Euro Stoxx 50 UCITS ETF	DWS Investment GmbH	2,857.7	0.3%	0.1%	1,378.7	16	Passive	ETF	Germany
16	DWS Aktien Strategie Deutschland	DWS Investment GmbH	2,754.2	0.3%	0.1%	1,330.6	17	Active	Mutual Fund	Germany
17	Fidelity International Index Fund	Geode Capital Management, LLC	2,515.7	0.3%	0.1%	1,228.4	29	Passive	ETF	USA
18	iShares EURO STOXX 50 UCITS ETF (DE)	BlackRock Asset Management (Deutschland) AG	2,366.4	0.3%	0.1%	1,265.0	16	Passive	ETF	Germany
19	iShares MSCI Germany ETF	BlackRock Fund Advisors	2,364.3	0.3%	0.1%	1,278.7	29	Passive	ETF	USA
20	American Funds Capital Income Builder Fund	Capital Research Global Investors (U.S.)	2,354.1	0.3%	0.1%	1,235.7	5	Active	Mutual Fund	USA
21	Vanguard FTSE All-World Ex-US Index Fund	The Vanguard Group, Inc.	2,312.7	0.3%	0.1%	1,153.6	29	Passive	ETF	USA
22	Vanguard European Stock Index Fund	The Vanguard Group, Inc.	2,263.7	0.3%	0.0%	1,328.9	29	Passive	ETF	USA
23	Canada Pension Plan	CPP Investment Board	2,151.1	0.3%	0.0%	1,341.2	21	Active	Pension	Canada
24	Artisan International Fund	Artisan Partners, L.P.	2,095.7	0.2%	0.0%	1,364.5	10	Active	Mutual Fund	USA
25	DWS Concept Kaldemorgen	DWS Investment GmbH	2,015.9 139,351.6	0.2% 16.6%	0.0% 1.8%	1,260.5 85,160.8	10	Active	Mutual Fund	Germany

^{*} Based on recent public information



Focus: Top Roadshow Destinations in the DAX

City	Total Equity	DAX Value in	% Share DAX	% Share	DAX Value in	DAX Value in	# Firms
City	Assets in \$M	\$M Dec-20	Insti.	Change (pp)	\$M Dec-19	\$M Dec-18	# FIIIIIS
London	2,959,414.5	100,976.6	12.0%	-0.1%	69,874.7	88,037.2	265
Frankfurt	418,811.9	69,215.4	8.2%	-0.9%	52,719.8	66,134.5	58
Paris	634,981.4	54,745.2	6.5%	-1.4%	45,737.7	53,621.2	182
Oslo	1,020,190.3	35,669.4	4.2%	0.1%	23,972.2	28,622.3	18
New York, NY	4,231,473.7	35,562.1	4.2%	0.5%	21,743.1	26,822.4	168
Boston, MA	3,007,186.4	30,299.4	3.6%	-0.2%	21,669.9	25,305.7	42
Los Angeles, CA	1,574,436.5	25,373.3	3.0%	0.4%	15,106.6	14,458.5	23
Zürich	563,570.1	20,238.6	2.4%	0.3%	12,363.4	16,368.9	76
Edinburgh	540,452.0	16,802.4	2.0%	0.6%	7,941.8	7,398.4	20
Chicago, IL	568,532.1	15,949.8	1.9%	0.1%	10,610.1	16,046.9	39
Toronto, ON	1,047,237.3	12,788.8	1.5%	0.2%	7,621.9	8,532.5	50
Brussels	123,167.0	10,879.2	1.3%	-0.1%	7,773.5	9,776.8	17
Tokyo	1,317,199.1	6,924.2	0.8%	-0.0%	4,921.2	6,837.6	47
Stockholm	494,378.8	6,867.0	0.8%	-0.0%	4,724.4	8,549.2	46
Amsterdam	216,017.2	6,669.4	0.8%	0.2%	3,691.3	4,302.1	17
Total	18,717,048.2	448,960.9	53.5%	-0.4%	310,471.7	380,814.2	1,068

City	Total Equity	DAX Value in	% Share DAX	% Share	DAX Value in	DAX Value in	# Firms
Oity	Assets in \$M	\$M Dec-20	Insti.	Change (pp)	\$M Dec-19	\$M Dec-18	#111113
London	2,959,414.5	100,976.6	12.0%	-0.1%	69,874.7	88,037.2	265
Paris	634,981.4	54,745.2	6.5%	-1.4%	45,737.7	53,621.2	182
New York, NY	4,231,473.7	35,562.1	4.2%	0.5%	21,743.1	26,822.4	168
Madrid	94,310.8	3,757.2	0.4%	-0.0%	2,777.5	4,327.1	84
Zürich	563,570.1	20,238.6	2.4%	0.3%	12,363.4	16,368.9	76
Frankfurt	418,811.9	69,215.4	8.2%	-0.9%	52,719.8	66,134.5	58
Geneva	49,922.5	3,702.0	0.4%	-0.6%	5,959.7	4,520.5	51
Toronto, ON	1,047,237.3	12,788.8	1.5%	0.2%	7,621.9	8,532.5	50
Tokyo	1,317,199.1	6,924.2	0.8%	-0.0%	4,921.2	6,837.6	47
Stockholm	494,378.8	6,867.0	0.8%	-0.0%	4,724.4	8,549.2	46
Boston, MA	3,007,186.4	30,299.4	3.6%	-0.2%	21,669.9	25,305.7	42
Chicago, IL	568,532.1	15,949.8	1.9%	0.1%	10,610.1	16,046.9	39
Hong Kong	248,219.1	3,561.4	0.4%	0.2%	1,446.7	277.5	37
Milan	105,296.3	4,891.5	0.6%	-0.1%	4,105.8	4,227.4	35
Singapore	192,227.5	4,895.8	0.6%	0.2%	2,086.3	2,552.7	32
Te	otal 15.932.761.5	374.375.2	44.6%	-2.0%	268.362.1	332,161,2	1.212

- Despite the Brexit discussions continuing throughout 2020, London (-0.1pp) remains the top roadshow destination for yet another period. This relates to both invested capital in the DAX as well as the number of investment firms that currently hold shares of members listed on the DAX.
- Overall, the top roadshow destinations remained relatively stable.
- Amongst the top destinations based on firms invested in DAX members there were no new additions but a slight reshuffle in the lower end of the spectrum.
- Paris (-1.4pp) and Frankfurt (-0.9pp) were the cities that accounted for the biggest outflows over the period. This was driven by the selling of Amundi (Paris), DWS and Deka (Frankfurt).

2018



Focus: Trading Venues of German Shares

- · Similar to the trend observed previously, the Deutsche Börse remains the biggest platform in terms of trading volume in 2020, accounting for 43.0% of all trades, staying relatively stable compared to 2019.
- Other official trading venues continued to lose market share and declined by 0.5pp.
- Dark pools stayed flat at 4% of all recorded trades within the DAX.
- SI (Systematic Internaliser electronic and automated trading) declined by 0.9pp to 15% of all trades in the index.
- The data excludes trades without visibility.



2020

Platform	Turnover (in M EUR)	Volume	# Transactions	Average Value	Average Volume	Proportion
Deutsche Börse	1,057,540	25,676	58,880,000	17,961	436	43.2%
Other Lit	321,420	7,594	68,800,000	4,672	110	12.8%
OTC	652,020	14,901	2,830,000	230,396	5,265	25.1%
Dark Pools	109,100	2,347	6,430,000	16,967	365	4.0%
SI*	410,170	8,895	9,830,000	41,726	905	15.0%
Total		59.413.2				

2019

Platform	Turnover (in M EUR)	Volume	# Transactions	Average Value	Average Volume	Proportion
Deutsche Börse	592,220	21,697	38,150,000	15,523	569	42.9%
Other Lit	286,260	6,749	47,120,000	6,075	143	13.3%
OTC	544,170	12,058	1,800,000	302,317	6,699	23.8%
Dark Pools	92,820	2,077	5,060,000	18,344	411	4.1%
SI*	361,790	8,030	7,000,000	51,684	1,147	15.9%
Total		50,611.0				

2018

Platform	Turnover (in M EUR)	Volume	# Transactions	Average Value	Average Volume	Proportion
Deutsche Börse	652,375	16,711	40,918,957	15,943	408	34.5%
Other Lit	367,864	8,830	58,776,817	6,259	150	18.2%
OTC	498,585	10,995	1,396,068	357,136	7,876	22.7%
Dark Pools	98,003	2,201	5,617,974	17,444	392	4.5%
SI*	406,408	9,679	6,661,305	61,010	1,453	20.0%
Total		48,416.0				

^{*} Systematic Internaliser refers to frequent, systematic trading on behalf of clients outside the regulated market. Sources: IHS Markit, Fidessa, FactSet © 2021 IHS Markit®. All Rights Reserved.



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