

Who owns the German DAX?

The Ownership Structure of the German DAX 30 in 2019
– A joint study of IHS Markit and DIRK

Seventh Edition – June 2020

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Methodology

- In 2019, 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 sensitivity of the information used in this study. The horizon is set to 48 months between December 2016 and 2019, with a record date of the 31 December each period (the impact of the worldwide Covid-19 pandemic on the ownership structure of the DAX is not reflected in this study). The study's focus is the annual perspective and the change between 2018 and 2019. 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 on 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 2019 MTU Aero Engines AG gained entry to the DAX 30 and replaced ThyssenKrupp AG.

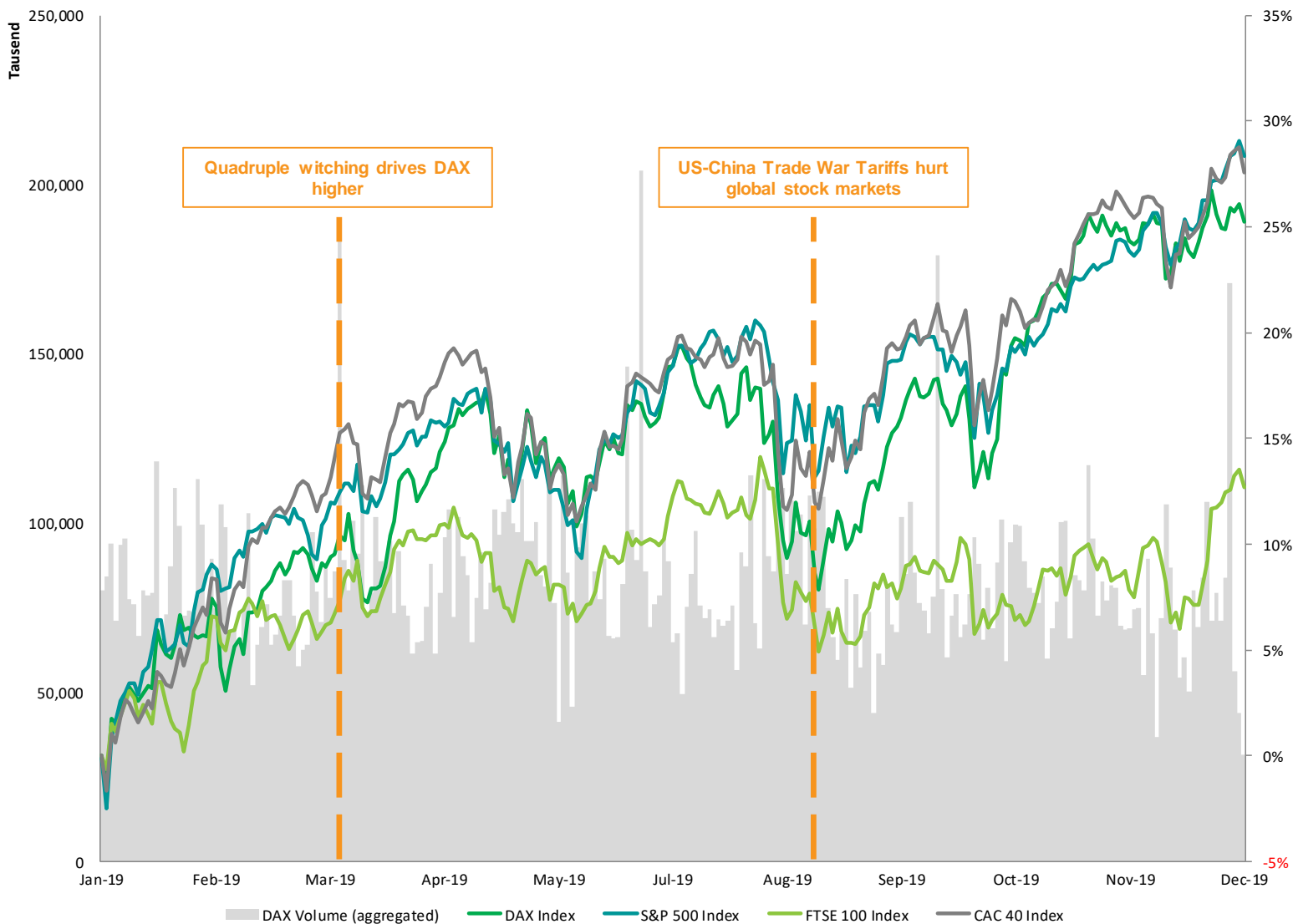
Summary

- **Institutional investors return to the DAX in 2019** after reducing their exposure to the benchmark in 2018. Institutional investments grew by 1.1 percentage points (pp) from 60.1% in 2018. North American fund managers significantly influenced the development by recording inflows of 1.6pp, primarily through ETF portfolios. Meanwhile, domestic institutions continued their divestments from the previous year. UK & Ireland maintained a stable investment despite the Brexit discussion and own nearly 20% of the institutional free float within the DAX.
- **Retail shareholders remain a strong investor group of the DAX.** Private individuals (-0.9pp) reversed their buying trend but remain important to the shareholder base of the DAX. Significant share price increases of DAX issuers contributed to the slight retreat of retail shareholders in the benchmark.
- **German fund managers continue to favour stocks outside the DAX.** Since 2016 Germany shows a reduced ownership amongst DAX issuers. While the decline in 2018 was mainly driven by passive and ETF portfolios (ca. 95% of German outflows), active funds accounted for the majority of domestic selling. Deka (-0.2pp), Flossbach von Storch (-0.2pp) and AGI Germany (-0.1pp) were all amongst the top sellers in the DAX.
- **North America invested more money in the DAX** by recording the largest inflows of 1.3pp. The region consistently increased its investment in the DAX, underlining its importance for the benchmark. In 2018 the North American increase was mainly driven by active funds. This year ETFs and other passive funds make up the majority of the buying activity in North America. BlackRock's US ETFs (+0.4pp) and Vanguard (+0.3pp) saw considerable inflows throughout 2019. Although the top sellers list features numerous large active US funds including Harris Associates (-0.4pp), Invesco Advisors (-0.3pp) and Dodge & Cox (-0.2pp), several active US funds believed in the DAX and increased their exposure: The Capital Group (+0.5pp), Jennison Associates (+0.3pp) and Fidelity Boston (+0.3pp) all bought DAX shares in the reporting period.
- **BlackRock remains the top investor in the DAX**, with increased holdings. The investment group's buying (+0.9pp) contributed to the overall growth of index funds in the DAX and the overall increased proportion of institutional shareholders. BlackRock also record money inflows in sustainable and ESG products. This underlines the mega trend of ESG integration within the investment community globally.
- **Norges Bank is still a buyer of the DAX.** The Norwegian state fund increased its investment by 0.1pp to 4.0% of the institutional free float of the index. Norges remains the largest invested Sovereign Wealth Fund (SWF), well ahead of China SAFE with a total investment of 0.8%.

Summary – continued

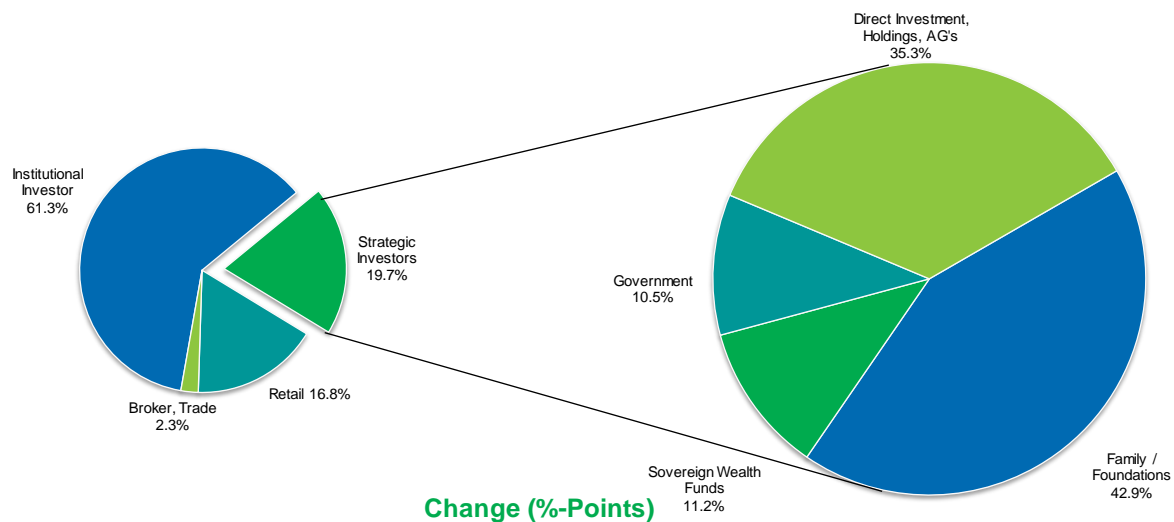
- **ETFs support the DAX, especially US-based index trackers.** Index funds bought into the benchmark growing their share to almost 24% of the institutional free float. The increase is mainly attributable to ETFs located in the USA, led by BlackRock Fund Advisors, Vanguard or Geode Capital. Value investors continue to be the largest group within the DAX despite a decrease of 0.4pp, now controlling 35.3%. Previously amongst the top buyers, Harris Associates (-0.4pp) added to the decline of value funds across the DAX in 2019. Growth investors (-1.0pp) reversed their bullish sentiment and decreased their holdings. This is mirrored in the top 15 seller list with seven out of top 15 sellers being growth-oriented fund managers.
- **London remains prime location for IR activities despite outflows and the continued Brexit discussion.** The city retains the top spot with regards to both number of investors and invested capital in the DAX despite decreased holdings (-0.4pp). Frankfurt (-0.3pp) continues to be the second largest invested city regardless of its outflows. Los Angeles (+0.6pp) saw the largest increase, which was due to The Capital Group buying into the DAX. Issuers also meet with The Capital Group in other locations including London.
- **Importance of both mega trend ESG and proactive engagement with shareholders increases significantly.** The implementation of ESG factors into the investment strategy becomes even more important to investors. Across the top 100 investors a high and medium ESG sensitivity increases by 0.5pp to 76.4%. Shareholders are becoming increasingly engaged and take their shareholder duties more seriously than ever. Amongst the 100 largest shareholders in the DAX close to 90% actively exercise their voting right at general meetings, while over 93% maintain internal voting guidelines. Proxy Advisors continue to play an important part as more than 75% of the top 100 DAX investors reference their recommendations in their internal guidelines.
- **Trades executed via Deutsche Börse increase significantly.** Official trading venues saw an overall increase in the reporting period, with Deutsche Börse extending its share by more than 8pp year-on-year. In 2018 electronic and automated trading via Systematic Internalisers (SI) went up significantly as a direct result of MiFID II and accounted for 20% of all visible trades. In 2019, SI trading decreased by more than 4pp.

Price and Trading Volume History

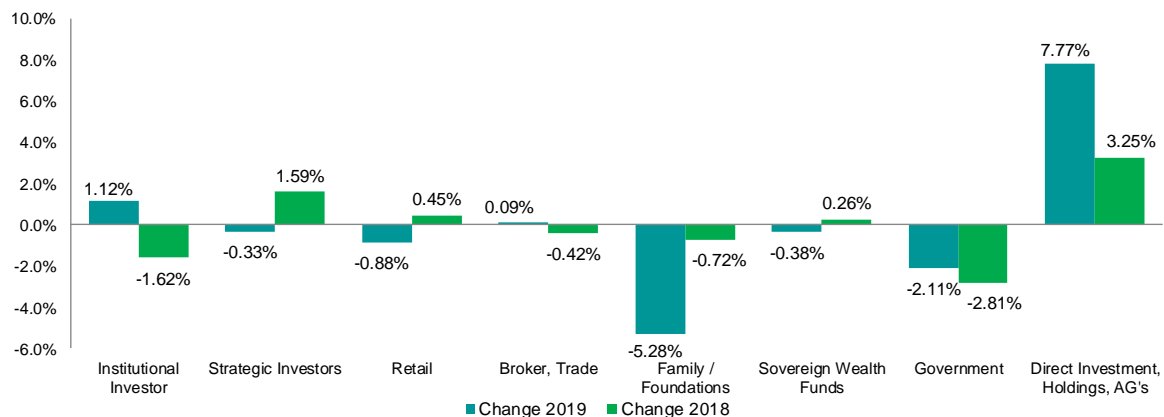


- After having its worst year in decades in 2018, the benchmark bounced back in 2019 and rose by more than 25%, the largest gain since 2013. Despite recession fears and trade wars between the US and China, the DAX benefitted from the ECB's expansive monetary policy.
- The S&P 500 and the CAC 40 indices managed to outperform the German benchmark and both rose by ca. 28%. The FTSE 100, in contrast, only increased by ca. 13% in 2019.

Shareholder Structure of the DAX 30 Constituents



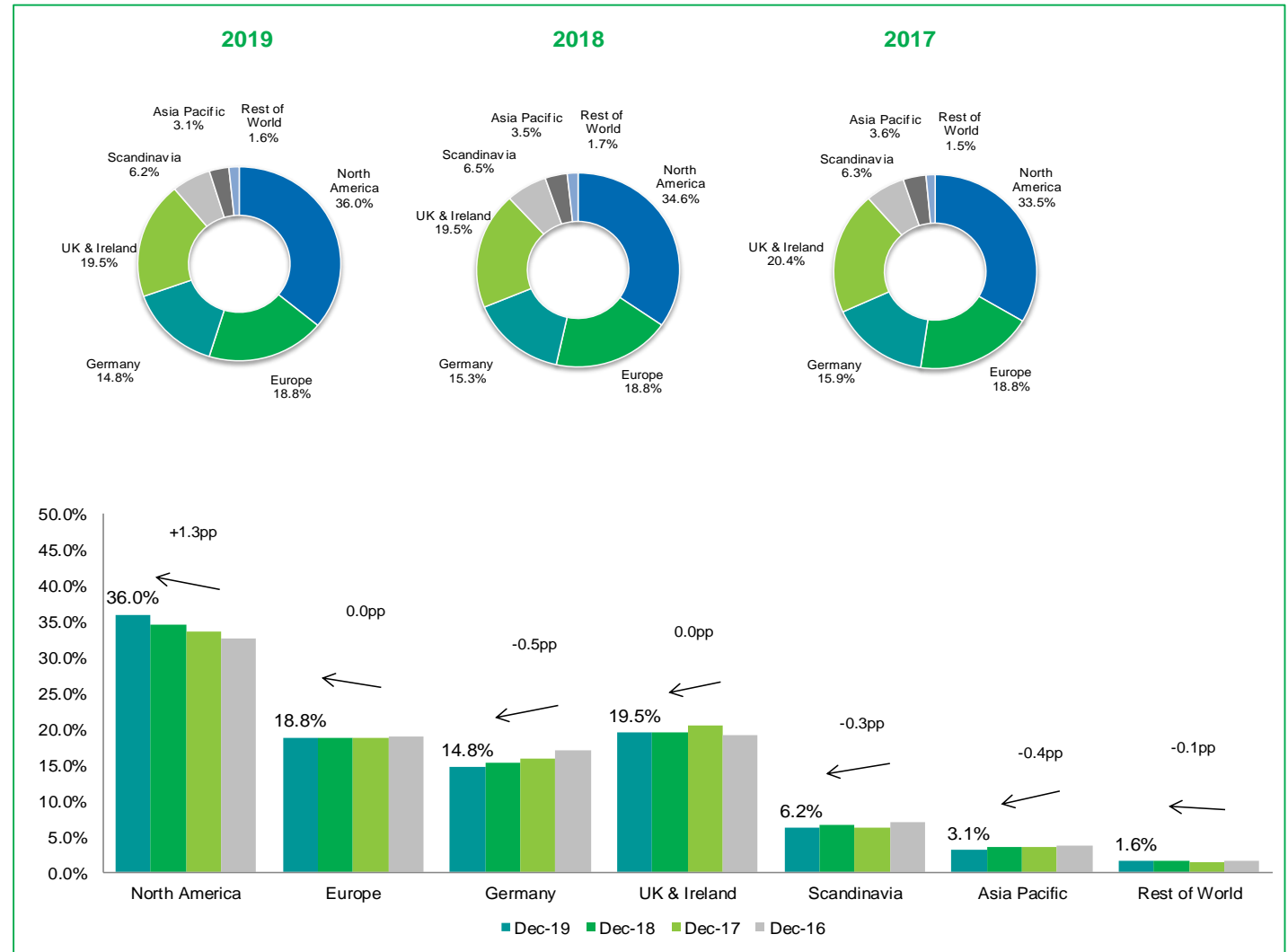
Change (%-Points)



- In-line with the bullish sentiment of the DAX index, Institutional Investment increased to 61.3% of the institutional free float (+1.1pp compared to 2018). Conversely Strategic investors (-0.3pp) are down from their previous bullish sentiment in 2018 (+1.6pp). Retail holders (-0.9pp) also decreased their investments in the DAX. This development can be seen in conjunction with the DAX rally over the course of the year and subsequent profit taking.
- Direct Investments increased the most in 2019 by almost 8pp, mainly due to Chinese companies acquiring larger stakes of DAX issuers.

Shareholder Structure by Region

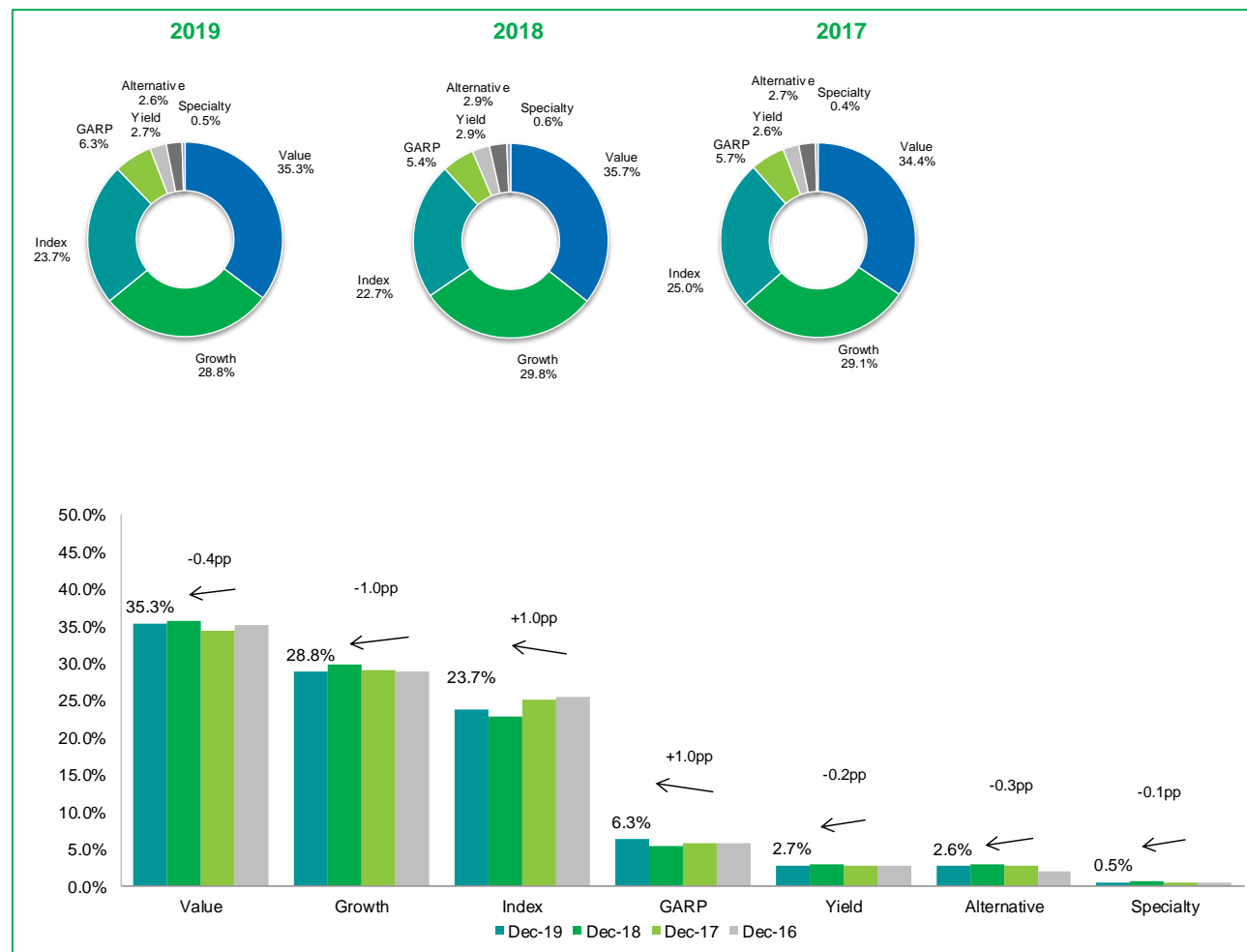
- North American institutional holders were the largest investors in the DAX with the highest increase of 1.3pp from the previous period. North America continues the buying trend from previous reporting periods. Whereas in 2018 active fund managers mainly drove the increase in the region, in 2019 the picture is reversed: particularly US ETFs are behind the increase.
- German holdings continue to decrease (-0.5pp) to now control 14.8% of the DAX and remain the third largest group. Deka (-0.2pp), Flossbach von Storch (-0.2pp) and AGI Germany (-0.1pp) were the largest sellers in the region.
- After the UK & Ireland showed the largest outflows in the previous report, investors in the regions maintained stable holdings at ca. 20% despite discussions around Brexit.



Percentage point changes relate to 2017 and 2018

Shareholder Structure by Investment Styles

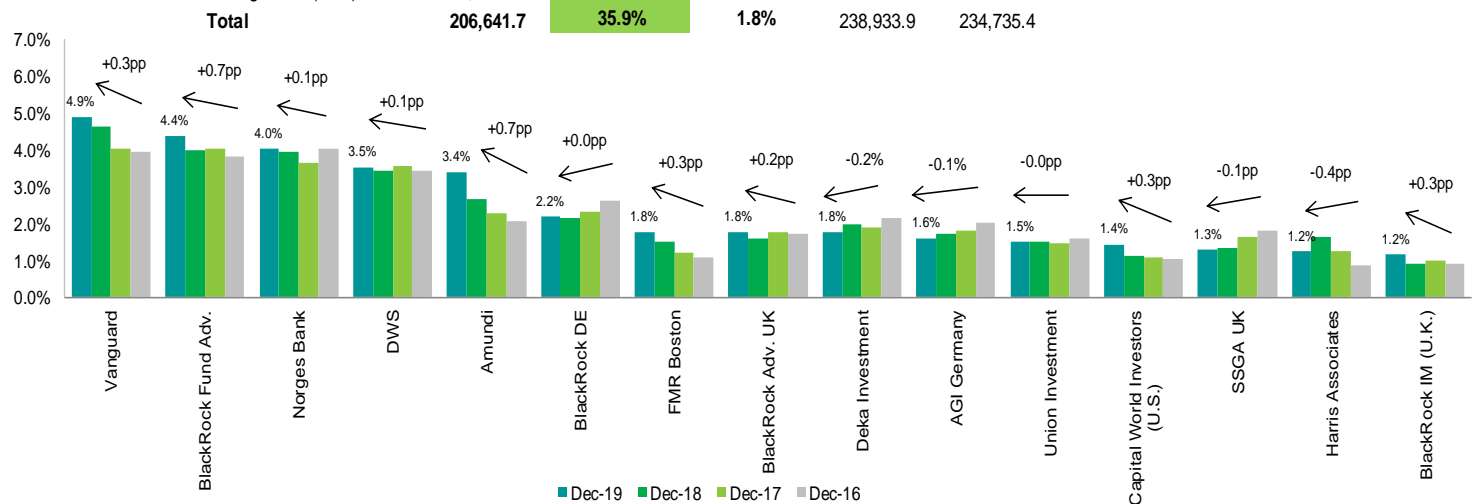
- Value investors continue to be the largest group of the DAX (35.3%), but decreased their holdings by 0.4pp, with Harris Associates (-0.4pp) being the biggest contributor.
- Growth investments decreased from the previous period by 1.0pp and remain the second largest holding. The top growth buyer in the period was Jennison Associates (+0.3pp).
- The largest movement was seen through Index investors who increased holdings by 1.0pp and remain the third largest group with a 23.7% holding. BlackRock's US ETF portfolio was the largest buyer of DAX shares across the index trackers, followed by Vanguard. Both fund managers benefitted from an inflow of assets and the positive index performance.



Percentage point changes relate to 2018 and 2019

Top 15 DAX Investors

Rank	Firm Name	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	Total Managed Assets in \$M	Style	City
1	The Vanguard Group, Inc.	28,116.1	4.9%	0.3%	32,377.9	28,804.3	3,466,250.1	Index	USA - Malvern, PA
2	BlackRock Fund Advisors	25,207.2	4.4%	0.4%	28,026.8	28,667.7	2,207,500.2	Index	USA - San Francisco, CA
3	Norges Bank Investment Management (Norway)	23,128.2	4.0%	0.1%	27,638.6	25,905.0	712,638.0	Value	NOR - Oslo
4	DWS Investment GmbH	20,362.1	3.5%	0.1%	24,104.8	25,391.7	106,425.9	Value	DEU - Frankfurt
5	Amundi Asset Management S.A.	19,489.9	3.4%	0.7%	18,524.6	16,314.7	113,217.2	Value	FRA - Paris
6	BlackRock Asset Management (Deutschland) AG	12,574.9	2.2%	0.0%	15,103.6	16,583.3	29,547.7	Index	DEU - Munich
7	Fidelity Management & Research Company	10,235.5	1.8%	0.3%	10,527.2	8,454.1	978,330.0	Growth	USA - Boston, MA
8	BlackRock Advisors (U.K.), LTD	10,207.5	1.8%	0.2%	11,147.8	12,569.0	124,108.0	Index	GBR - London
9	Deka Investment GmbH	10,136.1	1.8%	-0.2%	13,745.8	13,481.7	48,589.5	Value	DEU - Frankfurt
10	Allianz Global Investors GmbH	9,165.4	1.6%	-0.1%	11,914.5	12,944.6	62,162.7	Growth	DEU - Frankfurt
11	Union Investment Privatfonds GmbH	8,620.8	1.5%	-0.0%	10,700.1	10,296.0	61,371.8	GARP	DEU - Frankfurt
12	Capital World Investors (U.S.)	8,260.0	1.4%	0.3%	7,815.7	7,813.2	651,759.3	Value	USA - Los Angeles, CA
13	State Street Global Advisors, LTD	7,416.1	1.3%	-0.1%	9,456.5	11,500.4	79,270.4	Index	GBR - London
14	Harris Associates, L.P.	7,079.6	1.2%	-0.4%	11,522.3	8,954.6	80,334.9	Value	USA - Chicago, IL
15	BlackRock Investment Management (U.K.), LTD	6,642.4	1.2%	0.3%	6,327.6	7,055.3	467,776.0	Growth	GBR - London
Total		206,641.7	35.9%	1.8%	238,933.9	234,735.4			



Percentage point changes relate to 2018 and 2019

- Vanguard remains the largest investor in the DAX, while continuing to show increased holdings by 0.3pp.
- After increasing its exposure to the DAX in 2019 by 0.4pp, BlackRock Fund Advisors regained the second rank from Norges Bank, who was also bullish on the DAX this year.
- Harris Associates (-0.4pp) dropped five places and now ranks 14 after significant divestments in 2019. The investor maintains a concentrated portfolio, with significant values for each investment.
- The top 15 investor list remains very stable with two new entries: Capital World Investors (+0.3pp) and BlackRock IM UK (+0.3pp).

Top 15 Buyers & Sellers

Rank	Firm Name	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	Total Equity Assets in \$M	Style	City
1	Amundi Asset Management S.A.	19,489.9	3.38%	0.7%	18,524.6	16,314.7	113,217.2	Value	FRA - Paris
2	Pictet Asset Management S.A.	3,882.0	0.67%	0.4%	1,835.8	1,552.0	85,712.1	GARP	CHE - Zürich
3	BlackRock Fund Advisors	25,207.2	4.38%	0.4%	28,026.8	28,667.7	2,207,500.2	Index	USA - San Francisco, CA
4	Jennison Associates, LLC	2,180.6	0.38%	0.3%	225.3	127.6	104,648.1	Growth	USA - New York, NY
5	Capital World Investors (U.S.)	8,260.0	1.43%	0.3%	7,815.7	7,813.2	651,759.3	Value	USA - Los Angeles, CA
6	Fidelity Management & Research Company	10,235.5	1.78%	0.3%	10,527.2	8,454.1	978,330.0	Growth	USA - Boston, MA
7	The Vanguard Group, Inc.	28,116.1	4.88%	0.3%	32,377.9	28,804.3	3,466,250.1	Index	USA - Malvern, PA
8	BlackRock Investment Management (U.K.), LTD	6,642.4	1.15%	0.3%	6,327.9	7,055.3	467,776.0	Growth	GBR - London
9	Aberdeen Standard Investments (U.K.)	3,709.7	0.64%	0.2%	2,769.5	5,134.2	98,846.8	Growth	GBR - Edinburgh
10	Schroder Investment Management, LTD	3,744.6	0.65%	0.2%	3,071.7	5,397.5	98,443.9	GARP	GBR - London
11	Capital Research Global Investors (U.S.)	4,080.3	0.71%	0.2%	3,661.6	4,312.1	435,993.9	GARP	USA - Los Angeles, CA
12	BlackRock Advisors (U.K.), LTD	10,207.5	1.77%	0.2%	11,147.8	12,569.0	124,108.0	Index	GBR - London
13	Geode Capital Management, LLC	3,891.7	0.68%	0.2%	3,567.9	2,703.0	539,123.0	Index	USA - Boston, MA
14	TIAA-CREF Investment Management, LLC	3,586.0	0.62%	0.2%	3,234.0	3,463.6	315,856.0	Growth	USA - New York, NY
15	Fidelity International Limited - FIL Investment Services (U.K.), LTD	5,282.2	0.92%	0.1%	5,422.8	4,839.6	89,586.7	Growth	GBR - London
	Total	138,515.8	24.04%	4.3%	138,536.5	137,207.8			

Top 15 Sellers

Rank	Firm Name	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	Total Equity Assets in \$M	Style	City
1	Harris Associates, L.P.	7,079.6	1.23%	-0.41%	11,522.3	8,954.6	80,334.9	Value	USA - Chicago, IL
2	Invesco Advisers, Inc.	3,908.4	0.68%	-0.34%	7,126.4	6,826.8	284,544.1	Growth	USA - Atlanta, GA
3	Jupiter Asset Management, LTD (U.K.)	1,347.3	0.23%	-0.33%	3,989.4	1,813.0	23,847.8	Growth	GBR - London
4	Lansdowne Partners (UK) LLP	507.1	0.09%	-0.20%	2,050.5	2,493.7	6,725.3	Alternative	GBR - London
5	BNP Paribas Asset Management France	5,438.0	0.94%	-0.20%	8,038.0	4,037.4	46,658.7	Growth	FRA - Paris
6	Deka Investment GmbH	10,136.1	1.76%	-0.20%	13,745.8	13,481.7	48,589.5	Value	DEU - Frankfurt
7	Dodge & Cox	2,368.0	0.41%	-0.20%	4,270.2	4,961.6	158,875.4	Deep Value	USA - San Francisco, CA
8	UBS Asset Management (U.K.), LTD	5,383.9	0.93%	-0.19%	7,872.3	7,312.4	91,630.2	Value	GBR - London
9	Viking Global Investors, L.P.	148.4	0.03%	-0.19%	1,489.9	865.9	21,599.0	Alternative	USA - Greenwich, CT
10	SAFE (China)	2,725.2	0.47%	-0.18%	4,604.3	6,757.8	309.6	Growth	CHN - Beijing
11	Flossbach von Storch AG	1,370.2	0.24%	-0.18%	2,919.4	1,745.9	24,687.0	Growth	DEU - Cologne
12	Lyxor Asset Management SAS	6,304.6	1.09%	-0.16%	8,806.1	15,813.5	48,616.7	Index	FRA - Paris
13	INVESCO Asset Management, LTD (U.K.)	1,663.5	0.29%	-0.15%	3,091.6	2,590.6	39,705.3	Value	GBR - London
14	Allianz Global Investors GmbH	9,165.4	1.59%	-0.11%	11,914.5	12,944.6	62,162.7	Growth	DEU - Frankfurt
15	MFS International (U.K.), LTD	2,156.3	0.37%	-0.10%	3,314.4	3,190.3	42,299.9	Growth	GBR - London
	Total	59,702.1	10.36%	-9.82%	94,755.1	93,789.7			

- Looking at individual fund managers, Amundi Asset Management showed the largest inflows in 2019. The increase is also related to the investor's synthetic ETF portfolio.
- US and UK fund managers account for the majority of the top 15 buyers of the DAX in 2019. Amongst the top buyers from the USA were several ETFs, driving the overall trend of increased ETF money.
- The top 15 sellers list predominantly features active fund managers located in the USA and UK.
- Selling by the Invesco Advisers and Invesco AM UK is a general trend and a result of the acquisition of the OppenheimerFunds portfolio after which the Invesco group (-0.4pp) suffered redemptions.
- German fund managers are also well-represented in the top 15 sellers list, namely Deka (-0.2pp), Flossbach von Storch (-0.2pp) and AGI DE (-0.1pp).

Top 20 DAX Investors at a Group Level

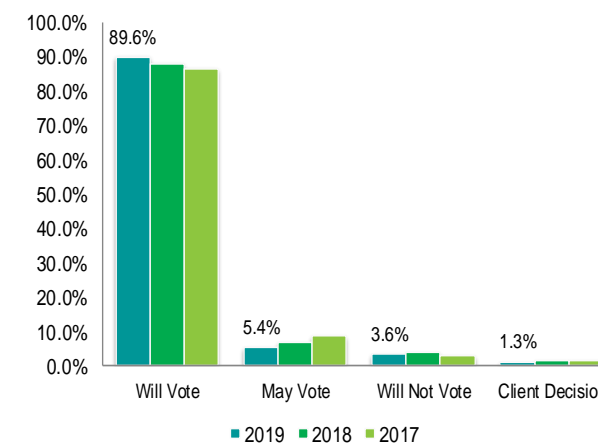
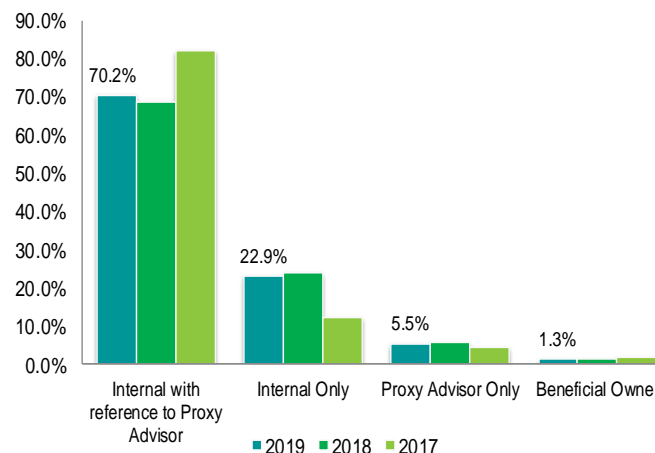
- The top 20 investor group composition remained very stable, with only one new entry: Fidelity International replaced China SAFE after the SWF saw significant outflows in 2019.
- BlackRock (+0.9pp) showed the largest increase with the DAX, mainly through its ETF portfolios which contributed to the overall increase of index funds in 2019.
- Credit Agricole with its asset manager Amundi (+0.7pp) and The Capital Group (+0.5pp) also recorded large inflows, while BCPE with Harris Associates (-0.5pp) experienced the largest reduction within the DAX.
- Please note that Invesco, LTD contains the historic assets of OppenheimerFunds following the acquisition in 2019.

Rank	Firm Name	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	Orientation	Country
1	BlackRock, Inc.	59,477.7	10.3%	0.9%	66,325.5	72,152.0	Active & Passive	USA
2	The Vanguard Group, Inc.	29,186.8	5.1%	0.3%	33,443.1	29,802.5	Passive	USA
3	Norges Bank (Norway)	23,128.2	4.0%	0.1%	27,624.6	25,905.0	Active & Passive	Norway
4	Credit Agricole (Amundi)	22,332.5	3.9%	0.7%	22,127.5	17,529.8	Active & Passive	France
5	Deutsche Bank AG	21,977.8	3.8%	0.2%	25,384.4	29,254.2	Active & Passive	Germany
6	State Street Corporation	15,960.2	2.8%	0.1%	18,778.9	23,417.8	Passive	USA
7	The Capital Group Companies, Inc.	13,584.7	2.4%	0.5%	12,737.1	12,838.2	Active	USA
8	BPCE S.A. (Harris Associates)	12,412.7	2.2%	-0.5%	18,326.0	15,541.2	Active	France
9	FMR, LLC	11,648.8	2.0%	0.3%	12,097.9	9,773.4	Active	USA
10	UBS AG	11,069.5	1.9%	-0.3%	15,500.5	15,470.6	Active & Passive	Switzerland
11	Allianz SE	10,455.0	1.8%	-0.1%	13,498.6	14,826.7	Active	Germany
12	DekaBank Deutsche Girozentrale	10,276.2	1.8%	-0.2%	13,800.0	13,536.3	Active & Passive	Germany
13	Union Asset Management Holding AG	9,106.0	1.6%	-0.0%	11,253.7	10,778.1	Active & Passive	Germany
14	Franklin Resources, Inc.	7,142.4	1.2%	0.1%	7,676.2	6,847.9	Active & Passive	USA
15	BNP Paribas S.A.	7,105.6	1.2%	-0.2%	10,177.2	11,180.9	Active & Passive	France
16	Invesco, LTD	6,777.5	1.2%	-0.4%	11,411.7	10,907.4	Active & Passive	USA
17	Northern Trust Corporation	6,543.2	1.1%	-0.0%	8,057.2	8,342.7	Passive	USA
18	Sun Life Financial, Inc. (MFS)	6,496.9	1.1%	0.0%	7,703.3	9,930.1	Active	Canada
19	Societe Generale (Lyxor)	6,391.2	1.1%	-0.2%	8,921.3	15,904.6	Passive	France
20	Fidelity International Limited	6,140.1	1.1%	0.2%	5,983.7	5,615.8	Active	United Kingdom
	Total	297,212.7	51.6%	1.6%	350,828.4	359,555.3		

Focus: Voting Behaviour of the Top Investors in the DAX

- Generally fund managers show more engagement and take their shareholder duties more seriously. With regards to exercising voting rights an increased number of investors attend general meetings and follow internal guideline and reference proxy advisors.
- Almost 90% of the top 100 DAX investors actively vote their portion of managed equities at German general meetings – an increase of 1.8pp compared to 2018.
- 70.2% of top 100 investors obtain advice from at least one proxy advisor, showing an increase, while the percentages of investors following in-house-guidelines-only considerably decreases.

Rank	Firm Name	Voting Status	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	Total Managed Assets in \$M	Style	City
1	The Vanguard Group, Inc.	Will Vote	28,116.1	4.9%	0.3%	32,377.9	28,804.3	3,466,250.1	Index	USA - Malvern, PA
2	BlackRock Fund Advisors	Will Vote	25,207.2	4.4%	0.4%	28,026.8	28,667.7	2,207,500.2	Index	USA - San Francisco, CA
3	Norges Bank Investment Management (Norway)	Will Vote	23,128.2	4.0%	0.1%	27,638.6	25,905.0	712,638.0	Value	NOR - Oslo
4	DWS Investment GmbH	Will Vote	20,362.1	3.5%	0.1%	24,104.8	25,391.7	106,425.9	Value	DEU - Frankfurt
5	Amundi Asset Management S.A.	Will Vote	19,489.9	3.4%	0.7%	18,524.6	16,314.7	113,217.2	Value	FRA - Paris
6	BlackRock Asset Management (Deutschland) AG	Will Vote	12,574.9	2.2%	0.0%	15,103.6	16,583.3	29,547.7	Index	DEU - Munich
7	Fidelity Management & Research Company	Will Vote	10,235.5	1.8%	0.3%	10,527.2	8,454.1	978,330.0	Growth	USA - Boston, MA
8	BlackRock Advisors (U.K.), LTD	Will Vote	10,207.5	1.8%	0.2%	11,147.8	12,569.0	124,108.0	Index	GBR - London
9	Deka Investment GmbH	Will Vote	10,136.1	1.8%	-0.2%	13,745.8	13,481.7	48,589.5	Value	DEU - Frankfurt
10	Allianz Global Investors GmbH	Will Vote	9,165.4	1.6%	-0.1%	11,914.5	12,944.6	62,162.7	Growth	DEU - Frankfurt
Total			168,622.8	29.3%	1.8%	193,111.7	189,116.0			

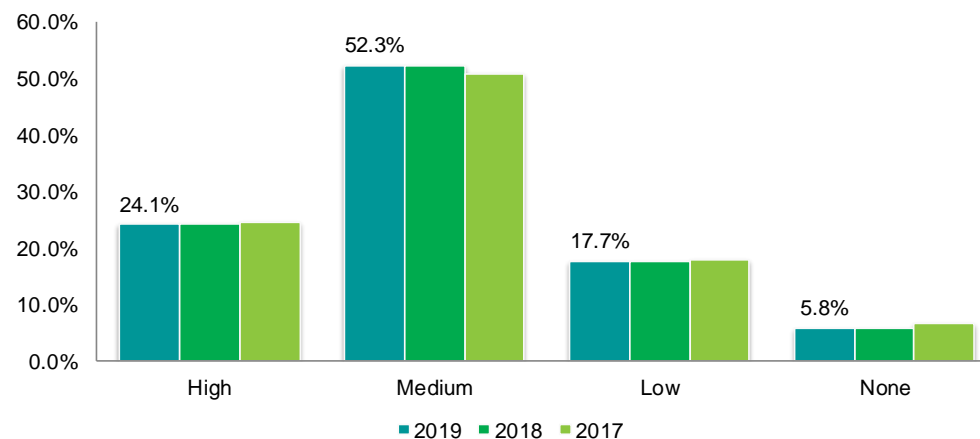


Focus: ESG Sensitivity of the Top Investors in the DAX

- The topic of ESG, the integration of environment, social and governance criteria into investment strategy, continues to be a major focal point for investors. Large numbers of investors now integrate ESG criteria into their investment decisions, causing the importance of ESG to rise.
- Although passive and ETF investors usually do not engage with issuers regarding their investment decisions many of these funds show a high sensitivity to ESG integration.
- Within the top 100 investors of the DAX, 24.1% now indicates a high importance on ESG integration across their entire portfolio.

Rank	Firm Name	ESG Sensitivity	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	Total Equity Assets in \$M	Style	City
1	The Vanguard Group, Inc.	High	28,116.1	4.9%	0.3%	32,377.9	28,804.3	3,466,250.1	Index	USA - Malvern, PA
2	BlackRock Fund Advisors	Medium	25,207.2	4.4%	0.4%	28,026.8	28,667.7	2,207,500.2	Index	USA - San Francisco, CA
3	Norges Bank Investment Management (Norway)	High	23,128.2	4.0%	0.1%	27,638.6	25,905.0	712,638.0	Value	NOR - Oslo
4	DWS Investment GmbH	Medium	20,362.1	3.5%	0.1%	24,104.8	25,391.7	106,425.9	Value	DEU - Frankfurt
5	Amundi Asset Management S.A.	High	19,489.9	3.4%	0.7%	18,524.6	16,314.7	113,217.2	Value	FRA - Paris
6	BlackRock Asset Management (Deutschland) AG	Medium	12,574.9	2.2%	0.0%	15,103.6	16,583.3	29,547.7	Index	DEU - Munich
7	Fidelity Management & Research Company	Medium	10,235.5	1.8%	0.3%	10,527.2	8,454.1	978,330.0	Growth	USA - Boston, MA
8	BlackRock Advisors (U.K.), LTD	Medium	10,207.5	1.8%	0.2%	11,147.8	12,569.0	124,108.0	Index	GBR - London
9	Deka Investment GmbH	Medium	10,136.1	1.8%	-0.2%	13,745.8	13,481.7	48,589.5	Value	DEU - Frankfurt
10	Allianz Global Investors GmbH	High	9,165.4	1.6%	-0.1%	11,914.5	12,944.6	62,162.7	Growth	DEU - Frankfurt
Total			168,622.8	29.3%	1.8%	193,111.7	189,116.0			

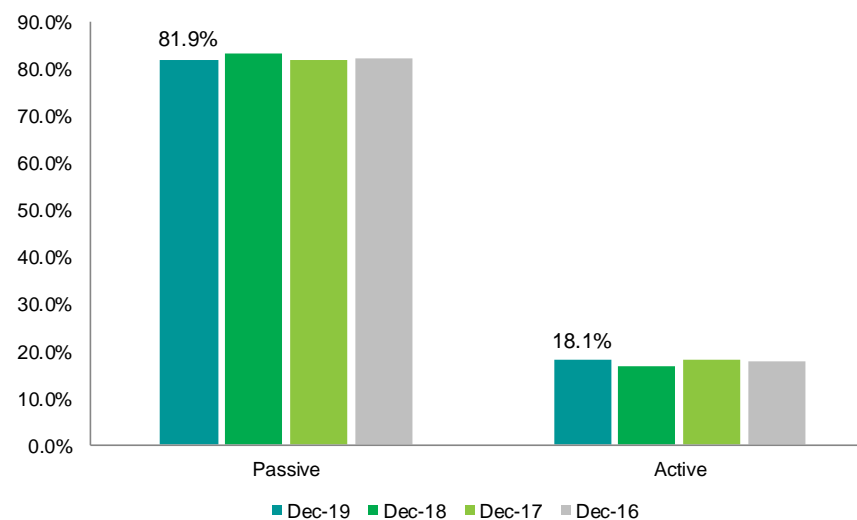
ESG Sensitivity: Top 100 DAX Investors



Focus: Investor Group BlackRock, Inc.

- After the BlackRock Group recorded outflows across its entire fund range in 2018, the world's largest investor by assets bounced back in 2019 and significantly contributed to increased proportion of ETF investments.
- In his 2019 annual Letter to CEOs, BlackRock's CEO Larry Fink calls on company leaders to take a more active role in addressing societal issues, from retirement to infrastructure. Larry Fink said that profit and purpose are inextricably linked. Companies with a sense of purpose attract better talent and position themselves well for the coming \$24 trillion wealth transfer between baby boomers and millennials.

Rank	Firm Name	DAX Value in \$M Dec-19	% Share DAX F/F	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	Style	Orientation	Country
1	BlackRock Fund Advisors	25,207.2	2.4%	4.4%	0.38%	28,026.8	28,669.7	Index	Passive	USA
2	BlackRock Asset Management (Deutschland) AG	12,574.9	1.2%	2.2%	0.03%	15,103.6	16,583.3	Index	Passive	Germany
3	BlackRock Advisors (U.K.), LTD	10,207.5	1.0%	1.8%	0.18%	11,147.8	12,615.0	Index	Passive	UK
4	BlackRock Investment Management (U.K.), LTD	6,642.4	0.6%	1.2%	0.25%	6,327.9	7,055.3	Growth	Active	UK
5	BlackRock Advisors, LLC	3,346.8	0.3%	0.6%	0.01%	3,981.7	5,044.9	Value	Active	USA
6	BlackRock International, LTD	751.6	0.1%	0.1%	0.01%	863.6	1,008.9	Value	Active	UK
7	BlackRock Japan Company, LTD	476.7	0.0%	0.1%	-0.01%	628.0	834.9	Index	Passive	Japan
8	BlackRock Asset Management Canada, LTD	168.7	0.0%	0.0%	0.01%	150.9	239.7	Index	Passive	Canada
9	BlackRock Asset Management (Australia), LTD	101.8	0.0%	0.0%	0.00%	95.2	100.3	Index	Passive	Australia
Total BlackRock, Inc.		59,477.7	5.8%	10.3%	0.88%	66,325.5	72,152.0			



Focus: Top 10 Sovereign Wealth Funds in the DAX

Rank	Sovereign Wealth Fund	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	Management	Country
1	Norges Bank (Norway)	23,128.2	4.0%	0.08%	27,638.6	25,905.0	Internal & External	Norway
2	China SAFE	4,704.3	0.8%	-0.31%	7,939.2	10,688.0	Internal & External	China
3	Kuwait Investment Office/Authority	3,645.2	0.6%	-0.06%	4,832.0	5,204.0	Internal & External	Kuwait
4	GIC Singapore/UK	2,809.2	0.5%	0.03%	3,191.4	3,080.0	Internal & External	Singapore
5	Qatar Investment Authority	2,574.0	0.4%	-0.05%	3,478.9	3,100.0	Internal & External	Qatar
6	Abu Dhabi Investment Authority	2,036.1	0.4%	-0.00%	2,505.8	2,746.0	Internal & External	UAE
7	Libyan Investment Authority	1,199.3	0.2%	-0.03%	1,650.7	1,607.0	Internal & External	Libya
8	AP 1-7 Fonds	1,192.0	0.2%	0.03%	1,273.6	1,083.0	Internal & External	Sweden
9	Saudi Arabian Monetary Agency	281.6	0.0%	-0.02%	478.9	586.0	Internal & External	Saudi Arabia
10	Brunei Investment Agency	26.9	0.0%	-0.00%	36.8	48.0	Internal & External	Brunei
	Total	41,596.8	7.2%	-0.33%	53,026.1	54,047.0		

- Norges Bank remains the largest invested SWF, which was slightly bullish in 2019 (+0.1pp).
- The Norwegian state fund accounts for almost 56% of DAX investments made by the ten largest SWFs. This shows how important the fund is for DAX companies and highlights the necessity to proactively engage with Norges Bank. The investor has a very strong focus on ESG and Corporate Governance.
- With the exception of China SAFE, the top ten SWFs invested in the DAX show a very stable investment, underlining the importance of state-owned funds for DAX issuers.

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, holdings discrepancies compared to other slides in this study may be possible.
- The top two investment funds by Norges and Vanguard remain unchanged in ranking. Norges shows significant inflows.
- There were seven new entries into the top 25 fund list in 2019. The Capital Group increased their overall investment and is now represented with three actively managed funds of its American Fund family in the top 25 fund list (up from one fund in 2018). All funds focus on growth- and dividend-oriented investment approach.
- The top 25 funds accounted for an overall outflow (-1.9pp).

Rank	Fund Name	Investor name	DAX Value in \$M Dec-19 *	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18 *	Number of DAX Equities	Orientation	Type	Country
1	The Government Pension Fund - Global	Norges Bank Investment Management (Norway)	22,611.7	3.9%	0.5%	24,097.6	28	Active & Passive	Pension	Norway
2	Vanguard Total International Stock Index Fund	The Vanguard Group, Inc.	10,992.6	1.9%	-0.3%	15,623.0	29	Passive	ETF	USA
3	iShares Core DAX UCITS ETF (DE)	BlackRock Asset Management (Deutschland) AG	4,408.4	0.8%	-0.3%	7,630.1	30	Passive	ETF	Germany
4	American Funds EuroPacific Growth Fund	Capital World Investors (U.S.)	4,309.8	0.7%	0.0%	4,954.1	17	Active	Mutual Fund	USA
5	Vanguard Developed Markets Index Fund	The Vanguard Group, Inc.	4,049.4	0.7%	-0.2%	6,182.2	29	Passive	ETF	USA
6	iShares Core MSCI EAFE ETF	BlackRock Fund Advisors	2,953.3	0.5%	-0.0%	3,919.6	29	Passive	ETF	USA
7	Stichting Pensioenfonds ABP (Global Equity Portfolio)	APG Asset Management N.V.	2,839.4	0.5%	0.1%	3,079.1	22	Active	Pension	Netherlands
8	California Public Employees' Retirement System	California Public Employees Retirement System	2,760.7	0.5%	0.0%	3,061.4	29	Active & Passive	Pension	USA
9	Xtrackers DAX UCITS ETF	DWS Investment GmbH	2,598.5	0.5%	-0.2%	4,316.5	30	Passive	ETF	Germany
10	Oakmark International Fund	Harris Associates, L.P.	2,460.8	0.4%	-0.4%	5,528.1	6	Active	Mutual Fund	USA
11	iShares Trust - MSCI EAFE ETF	BlackRock Fund Advisors	2,423.7	0.4%	-0.2%	4,498.8	29	Passive	ETF	USA
12	Legal & General Pension PMC Europe(Ex UK) Index	Legal & General Investment Management, LTD	2,279.9	0.4%	-0.1%	3,138.2	28	Passive	ETF	UK
13	DekaFonds CF	Deka Investment GmbH	2,158.3	0.4%	-0.1%	3,544.5	26	Active	Mutual Fund	Germany
14	DWS Deutschland	DWS Investment GmbH	1,887.9	0.3%	-0.3%	4,691.6	20	Active	Mutual Fund	Germany
15	American Funds Capital World Growth and Income Fund	Capital Research Global Investors (U.S.)	1,460.9	0.3%	0.1%	1,235.2	9	Active	Mutual Fund	USA
16	Xtrackers Euro Stoxx 50 UCITS ETF	DWS Investment GmbH	1,378.7	0.2%	0.0%	1,411.2	15	Passive	ETF	Germany
17	Artisan International Fund	Artisan Partners, L.P.	1,364.5	0.2%	-0.1%	2,625.3	8	Active	Mutual Fund	USA
18	Dodge & Cox Funds - International Stock Fund	Dodge & Cox	1,360.9	0.2%	-0.2%	3,033.1	3	Active	Mutual Fund	USA
19	Canada Pension Plan	CPP Investment Board	1,341.2	0.2%	-0.1%	2,451.2	13	Active	Pension	Canada
20	DWS Investa	DWS Investment GmbH	1,318.8	0.2%	-0.1%	2,595.4	26	Active	Mutual Fund	Germany
21	iShares EURO STOXX 50 UCITS ETF (DE)	BlackRock Asset Management (Deutschland) AG	1,265.0	0.2%	-0.1%	2,271.1	15	Passive	ETF	USA
22	American Funds Capital Income Builder Fund	Capital Research Global Investors (U.S.)	1,235.7	0.2%	0.1%	1,067.0	4	Active	Mutual Fund	USA
23	Fidelity International Index Fund	Geode Capital Management, LLC	1,228.4	0.2%	0.0%	1,151.7	29	Passive	ETF	USA
24	Lyxor EURO STOXX 50 (DR) UCITS ETF	Lyxor Asset Management SAS	1,221.2	0.2%	0.0%	1,457.1	15	Passive	ETF	France
25	Vanguard FTSE All-World Ex-US Index Fund	The Vanguard Group, Inc.	1,153.6	0.2%	0.0%	1,177.5	29	Passive	ETF	USA
			83,063.4	14.4%	-1.9%	114,740.8				

Focus: Top Roadshow Destinations in the DAX

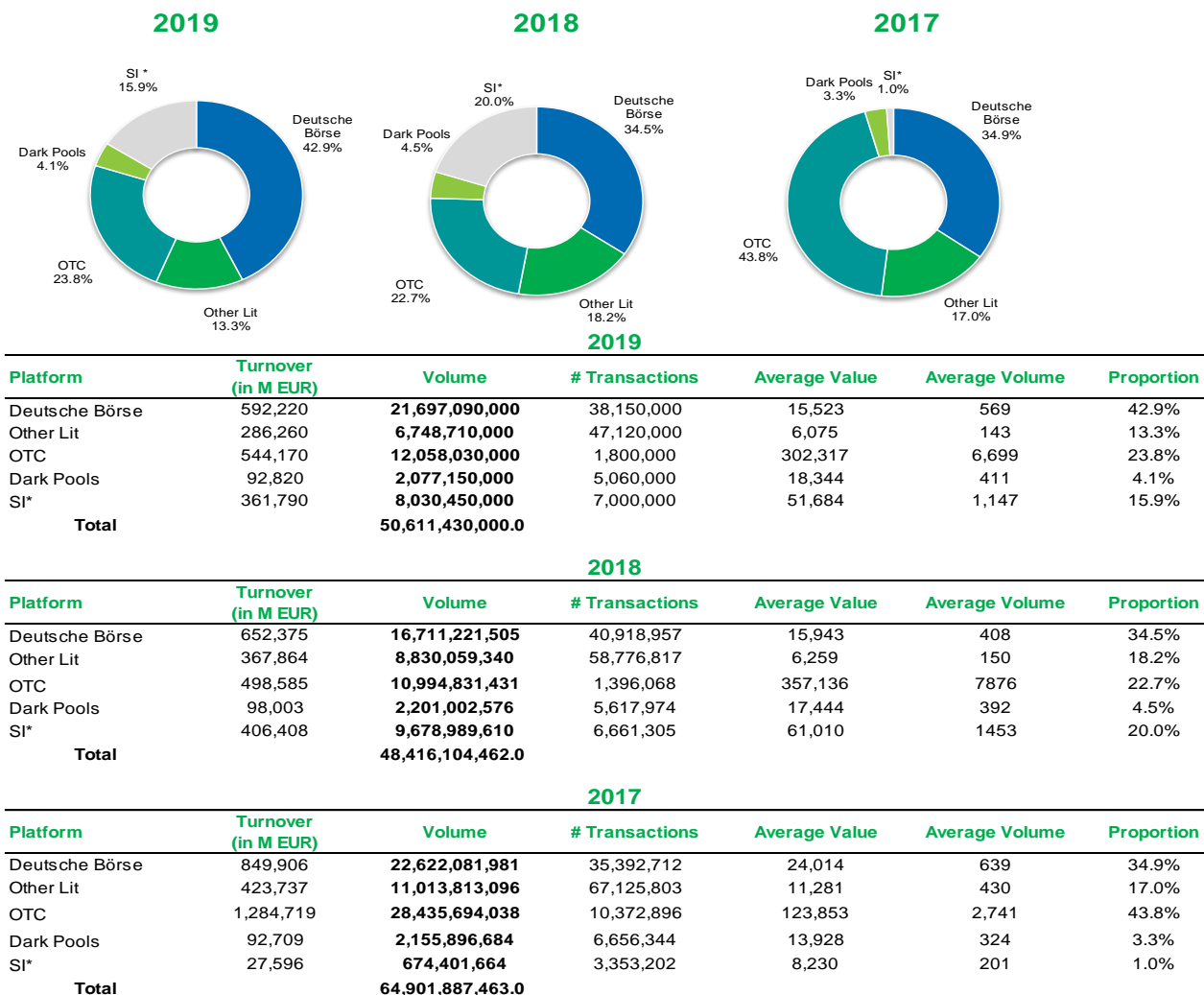
City	Total Equity Assets in \$M	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	# Firms
London	2,102,786.0	69,874.7	12.1%	-0.4%	88,037.2	88,818.5	266
Frankfurt	310,326.0	52,719.8	9.2%	-0.3%	66,134.5	70,095.6	57
Paris	420,766.3	45,737.7	7.9%	0.3%	53,621.2	48,028.1	185
Oslo	749,599.9	23,972.2	4.2%	0.1%	28,622.3	26,813.2	17
New York, NY	3,226,756.5	21,743.1	3.8%	-0.0%	26,822.4	26,294.3	153
Boston, MA	2,490,222.4	21,669.9	3.8%	0.2%	25,305.7	26,139.8	37
Los Angeles, CA	1,311,520.4	15,106.6	2.6%	0.6%	14,458.5	14,294.3	23
Zürich	294,757.0	12,363.4	2.1%	-0.2%	16,368.9	13,225.3	76
Chicago, IL	504,555.4	10,610.1	1.8%	-0.4%	16,046.9	13,891.7	35
Edinburgh	368,733.0	7,941.8	1.4%	0.3%	7,398.4	10,630.8	20
Brussels	81,399.0	7,773.5	1.3%	-0.0%	9,776.8	8,596.7	18
Toronto, ON	828,306.7	7,621.9	1.3%	0.1%	8,532.5	6,706.4	46
Geneva	124,621.3	5,959.7	1.0%	0.4%	4,520.5	4,643.1	52
Tokyo	949,298.5	4,921.2	0.9%	-0.1%	6,837.6	6,580.1	50
Stockholm	305,887.8	4,724.4	0.8%	-0.4%	8,549.2	8,686.4	46
Total	14,069,536.2	312,740.1	54.3%	0.0%	381,032.6	373,444.4	1081

City	Total Equity Assets in \$M	DAX Value in \$M Dec-19	% Share DAX Insti.	% Share Change (pp)	DAX Value in \$M Dec-18	DAX Value in \$M Dec-17	# Firms
London	2,102,786.0	69,874.7	12.1%	-0.4%	88,037.2	88,818.5	266
Paris	420,766.3	45,737.7	7.9%	0.3%	53,621.2	48,028.1	185
New York, NY	3,226,756.5	21,743.1	3.8%	-0.0%	26,822.4	26,294.3	153
Madrid	70,331.6	2,777.5	0.5%	-0.1%	4,327.1	4,055.2	87
Zürich	294,757.0	12,363.4	2.1%	-0.2%	16,368.9	13,225.3	76
Frankfurt	310,326.0	52,719.8	9.2%	-0.3%	66,134.5	70,095.6	57
Geneva	124,621.3	5,959.7	1.0%	0.4%	4,520.5	4,643.1	52
Tokyo	949,298.5	4,921.2	0.9%	-0.1%	6,837.6	6,580.1	50
Toronto, ON	828,306.7	7,621.9	1.3%	0.1%	8,532.5	6,706.4	46
Stockholm	305,887.8	4,724.4	0.8%	-0.4%	8,549.2	8,686.4	46
Boston, MA	2,490,222.4	21,669.9	3.8%	0.2%	25,305.7	26,139.8	37
Milan	62,784.0	4,105.8	0.7%	0.1%	4,227.4	3,749.2	36
Hong Kong	130,506.5	1,446.7	0.3%	0.2%	277.5	2,432.1	36
Chicago, IL	504,555.4	10,610.1	1.8%	-0.4%	16,046.9	13,891.7	35
Singapore	133,996.2	2,086.3	0.4%	-0.0%	2,552.7	2,334.7	33
Total	11,955,902.2	268,362.1	46.6%	-0.7%	324,301.1	280,301.6	1195

- Despite the ongoing Brexit discussion and outflows in 2019 London (-0.4pp) remains the top roadshow destination for another period, both with regards to invested capital in the DAX as well as number of investment firms currently holding shares of DAX issuers.
- Overall the top Roadshow destinations remained fairly stable, mainly due to positive sentiment from Los Angeles (The Capital Group; +0.6pp), Geneva (+0.4pp) as well as Paris and Edinburgh (both +0.3pp).
- Chicago and Stockholm (both -0.4pp) showed the largest money outflows, but remained amongst the largest cities in terms of fund managers currently invested in the DAX.

Focus: Trading Venues of German Shares

- In 2019, trades via Deutsche Börse showed a significant increase of more than 8pp and accounted for almost 43% of all trades (ca. 35% in 2018).
- Other official trading venues lost market share versus Deutsche Börse by nearly 5pp.
- Systematic Internaliser (electronic and automated trading; SI) decreased by 4pp. Last year SI-traded shares went up considerably as a result of MiFID II.
- Dark pools saw a slight decrease of 0.4pp year-on-year.
- The data excludes trades without visibility.



* Systematic Internaliser refers to frequent, systematic trading on behalf of clients outside the regulated market. Sources: IHS Markit, Fidessa, FactSet

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