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DAX® 50 ESG – THE NEW STANDARD IN GERMAN ESG INVESTING

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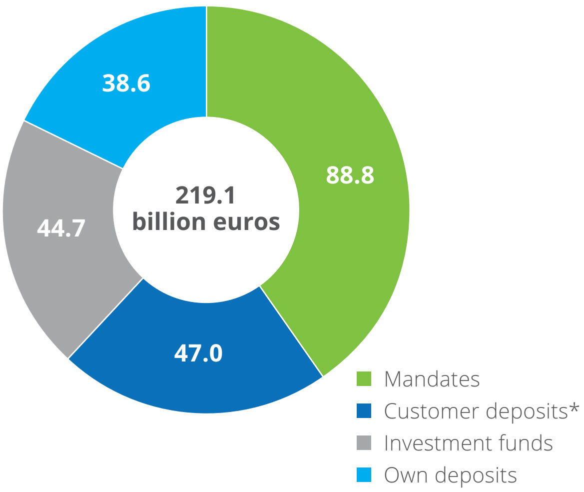
INTRODUCTION

DAX® is Germany's blue-chip index and tracks the performance of the 30 largest and most liquid companies on the German stock market. The index was first published on July 1, 1988, quickly establishing itself as the benchmark for the health of the German stock markets and the economy as a whole. Building on its success, the DAX® brand has now evolved into a family of more than 850 indices covering not just Germany, but global markets as well. It includes regional, sector and strategy indices, besides indices for equity volatility and the German fixed-income market.

For STOXX Ltd. (STOXX)[1], now part of Qontigo, maintaining and constantly revising the DAX® Index methodology – for example by holding quarterly meetings with the DAX® Advisory Board – is a top priority. These efforts ensure that the methodology continues to reflect a changing market and regulatory landscape. The DAX® is calculated and disseminated using Deutsche Börse Group's powerful calculation system, which ensures the index's precision and reliability. Over the three decades of its existence, the DAX® has not only established itself as the undisputed reference for Germany but has also become one of the most recognizable equities benchmarks in the world, and the basis for over 150,000 financial products. The comprehensive index suite also serves as the underlying for exchange-traded funds (ETFs) with assets under management in excess of EUR 20 billion.

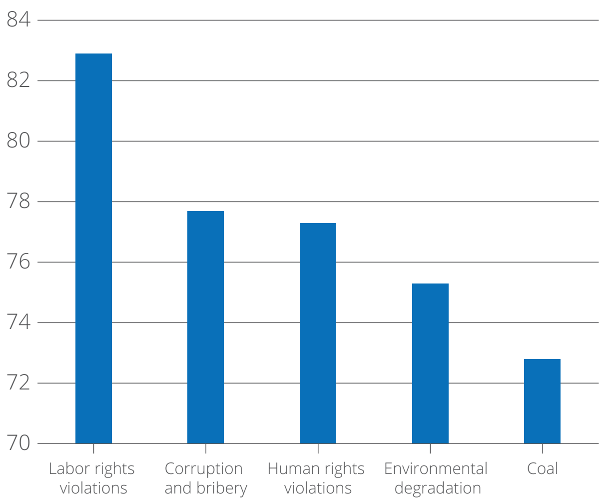
Solutions above and beyond traditional market capitalization-weighted indices are becoming the de facto choice for benchmarks, as asset owners continue performing their fiduciary role of investing responsibly amid increasing investor awareness and an evolving legislative landscape for sustainability. Continuing on its track record of innovation and expansion, Qontigo has just launched the DAX® 50 ESG, a benchmark for sustainable equity assets in Germany.

FIGURE 1: Sustainable investments in Germany in 2018



*Not including deposits managed via mandates
Source: FNG – Forum Nachhaltige Geldanlagen

FIGURE 2: Top five exclusion criteria in Germany in 2018 (in billions of euros)



Source: The Sustainable Investment Market in Germany 2019

According to the Global Sustainable Investment Alliance (GSIA), roughly USD 31 trillion is now professionally managed under sustainable investment strategies throughout the world. Europe is at the forefront of this trend, accounting for nearly half of the total global assets managed using this investment

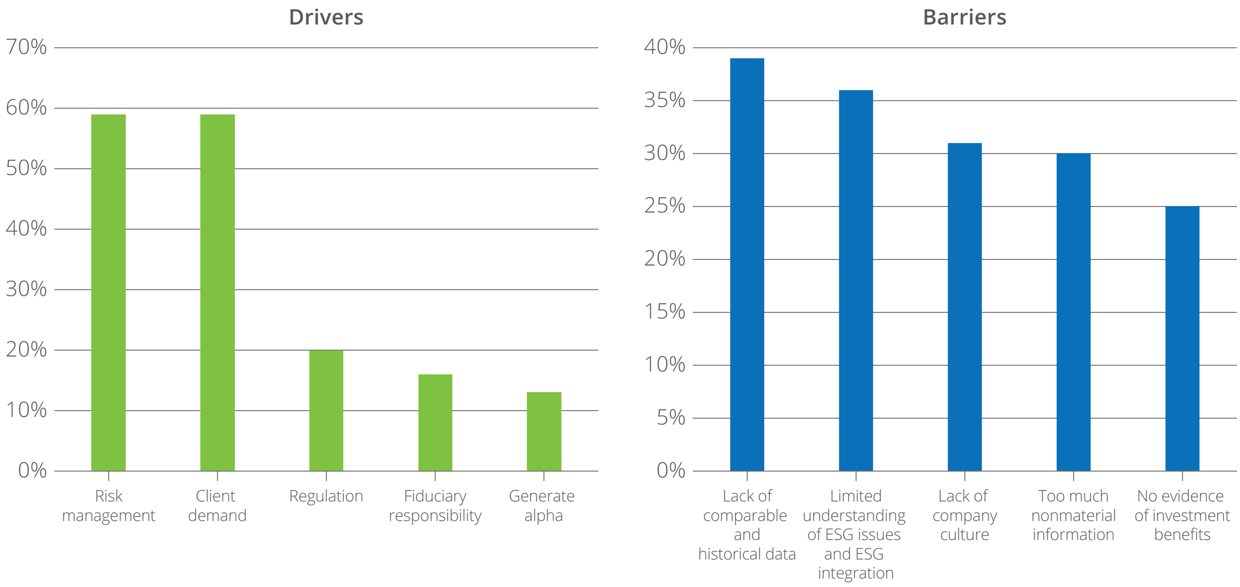
[1] Deutsche Börse AG transferred the role of administrator (as defined in the EU Benchmarks Regulation) for its indices (DAX®, eb.rexx®, etc.) to STOXX Ltd. (STOXX) on August 21, 2019.

approach[2]. A recent FNG Market Report[3] put the total volume of sustainable investments in Germany at a record EUR 219bn in 2018, translating into a CAGR of 14.5% over the last 4 years. Sustainable investment funds and mandates recorded the largest growth rates since the beginning of the survey, gaining EUR 41bn and currently account for almost 60% of total assets in sustainable investments (Figure 1). The growth of this market has mainly been driven by institutional investors, which account for almost 93% of all sustainable funds and mandates. The GSIA identifies the two most common global approaches to sustainable investing as:

1) **Negative/exclusionary screening:** The exclusion from a fund or portfolio of certain sectors, companies or practices based on specific ESG criteria.
2) **ESG integration:** Investment managers' systematic and explicit inclusion of environmental, social and governance factors in their financial analysis.

Negative screening is the most popular strategy in Europe and is already commonplace in the German capital markets. Labor rights violations represent the most frequently used exclusionary screen, with coal recently joining the top five (Figure 2). Although popular in other regions such as North America and Australasia, adoption of ESG integration in Europe has been slower. A lack of comparable and historical ESG data have been cited as the two main barriers to its uptake in Germany, according to a recent survey by the CFA Institute (Figure 3). Conversely, the top drivers of ESG integration are risk management and client demand.

FIGURE 3: Drivers of and barriers to ESG integration in German Capital Markets: survey data and workshop



Source: CFA Institute – ESG Integration in Europe, the Middle East, and Africa: Markets, Practices, and Data

The DAX® 50 ESG, which applies both exclusionary screens and ESG integration, is a cutting-edge solution that provides investors with an innovative investment platform incorporating the most popular sustainable investing approaches. The index extends Qontigo's collaboration with Sustainalytics, a global leader in ESG and Corporate Governance research and ratings. In this paper, we provide the rationale behind the index's construction, review its methodology and compare its performance with that of appropriate benchmarks.

[2] http://www.gsi-alliance.org/wp-content/uploads/2019/06/GSIR_Review2018F.pdf
[3] https://www.forum-ng.org/images/stories/marktbericht_2019/Factsheets/FNG_Marktbericht2019_Infosheet_DE_EN_1page.pdf

THE DAX® 50 ESG INDEX

OVERVIEW

The DAX® 50 ESG Index is the flagship index for sustainable equity investments in Germany and the most recent addition to the DAX® index offerings. It was designed and constructed in response to feedback from market participants that a suitable ESG flagship index should be liquid and diversified, and include an ESG strategy element that incorporates ESG screens that are commonly used in the German market. The DAX® 50 ESG tracks the performance of the 50 largest, most liquid eligible German market stocks screened for Global Standards Screening, involvement in controversial weapons, tobacco, thermal coal, nuclear power and military contracting. Selected index component weights are capped at 7%. This not only allows for portfolio diversification but is also intended at overcoming the market-related challenges associated with the size of the available universe of companies (market capitalization) and the liquidity of the listed securities.

RATIONALE

Based on this guidance from market participants, the initial idea was to consider a very broad universe of constituents from an index such as the Prime Standard Index[4] which the DAX® is derived from, and to apply ESG alongside other selection criteria. However, an analysis of the size distribution and liquidity of companies in the Prime Standard Index compared to the HDAX® [5] revealed some interesting findings. Nearly two-thirds of the securities in the Prime Standard segment have a market cap of less than EUR 1bn, whereas nearly half of those in the HDAX® have a market cap of EUR 5bn or more (Figure 4).

FIGURE 4: Market cap distribution of securities in Deutsche Börse's Prime Standard segment and the HDAX®

	Prime Standard		HDAX®	
Market cap	**No. of stocks**	**%**	**No. of stocks**	**%**
< EUR 1bn	205	65%	7	8%
EUR 1bn – 5bn	65	20%	45	45%
> EUR 5bn	48	15%	47	47%

Source: Qontigo, as of December 2019

Figure 5 shows the increased liquidity offered by larger-cap stocks as measured by the 3-month average daily trading volume (3M ADTV). All securities in the HDAX® selection universe have a 3M ADTV of EUR 1m or more – the minimum liquidity threshold used by other flagship blue-chip indices such as the EURO STOXX 50®. By contrast, only just half of the securities in the Prime Standard segment fall into this category.

Therefore, starting from the HDAX® universe helps to ensure that the profile of the index, from a size perspective, does not deviate excessively from that of the DAX® and that the inherent benefits from larger-cap securities (such as increased liquidity) are preserved.

[4] See the appendix for details on the DAX® selection indices.

[5] The HDAX® contains the largest and most liquid companies admitted to the Prime Standard segment of the FWB® (Frankfurt Stock Exchange). This represents approximately 95% of the Prime Standard's aggregated market cap.

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FIGURE 5: 3-month average daily trading volume (3M ADTV) of securities in the Prime Standard segment and the HDAX®

	Prime Standard		HDAX®	
Market cap	**No. of stocks**	**%**	**No. of stocks**	**%**
< EUR 100k	85	27%	0	0%
EUR 100k – 500k	57	18%	0	0%
EUR 500k – 1mn.	22	7%	0	0%
> EUR 1mn.	154	48%	99	100%

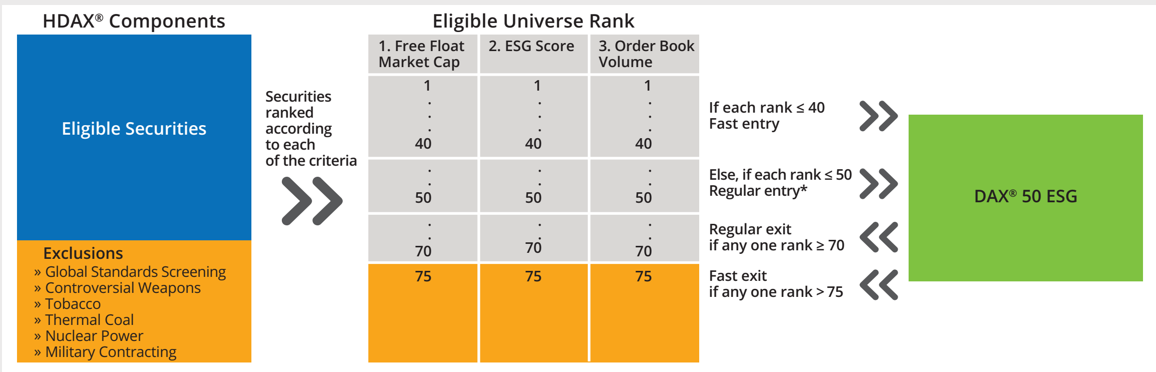
Source: Bloomberg, Qontigo, as of December 2019

The design of the DAX® 50 ESG was iterated a few times over to determine the optimum number of securities that satisfied some of the requirements; this figure turned out to be 50 stocks. This number ensures that the resulting portfolio of securities has a sufficiently large investment capacity while offering replicability from a tradability and liquidity perspective.

METHODOLOGY SUMMARY

The DAX® 50 ESG eligible universe is based on securities from the HDAX® after standardized ESG exclusion screens are applied for Controversial Weapons, Tobacco Production, Thermal Coal, Nuclear Power and Military Contracting. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions. The index then selects the 50 largest and most liquid securities that have comparably good ESG performance as based on the quantitative criteria of free float market capitalization, order book volume and ESG score respectively. Components are then weighted by free float market capitalization with a 7% cap.

FIGURE 6: DAX® 50 ESG methodology illustration[6]



* If there are no companies that meet these conditions, the successor is determined by relaxing order book volume and ESG score criterion twice gradually, each time by five ranks. No rank must be > 70

Source: Qontigo

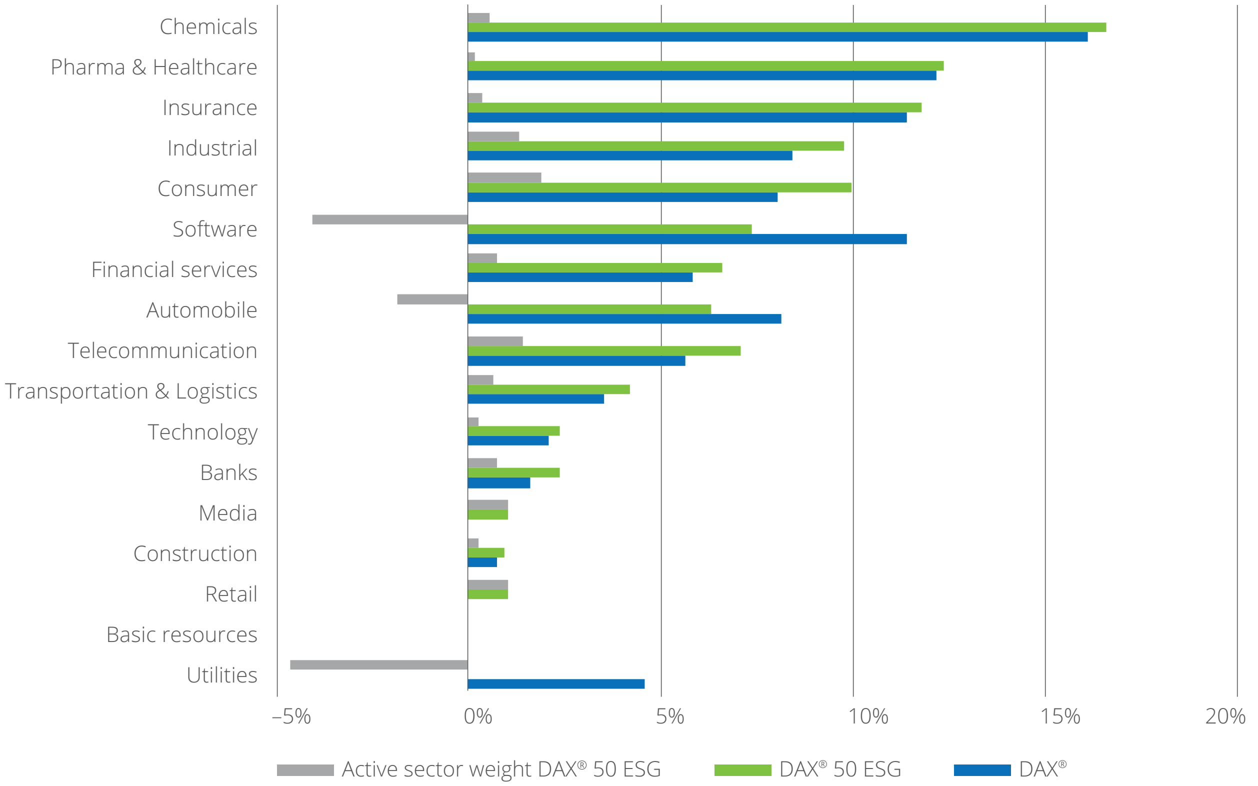
[6] Refer to full index methodology: https://www.dax-indices.com/document/Resources/Guides/DAX_Equity_Indices.pdf

The exclusions and ESG scores are based on individual company data and information sourced from Sustainalytics, a global leader in ESG and Corporate Governance research and ratings.

INDEX PROFILE

The largest sector in both the DAX® 50 ESG and DAX® as of March 20, 2020 was Chemicals which had a weight of 16.63% and 16.09% respectively. With an underweight of –4.03%, the Software sector ranks in 6th place in the DAX 50 ESG compared to 2nd in the DAX, driven by a lower component cap of 7% vs 10%.

FIGURE 7: Sector allocations across the DAX® 50 ESG, DAX® and active sector weight DAX® 50 ESG



Source: DAX® sector classification, as of March 20, 2020

The application of exclusionary screens for nuclear power and thermal coal has resulted in the elimination of the Utilities sector within the DAX® 50 ESG since September 2019 (Figure 8). The Utilities sector was originally absent from the index at the inception date (September 2012) but featured from March 2018 until its recent removal, during which time its weight peaked at 0.54%. Conversely, the Utilities sector currently has a weight of 4.64% in the DAX®. Prior to March 2019, the Basic Resources sector had been a regular fixture in the DAX® 50 ESG, but has since also been eliminated following the removal of the only security in its category.

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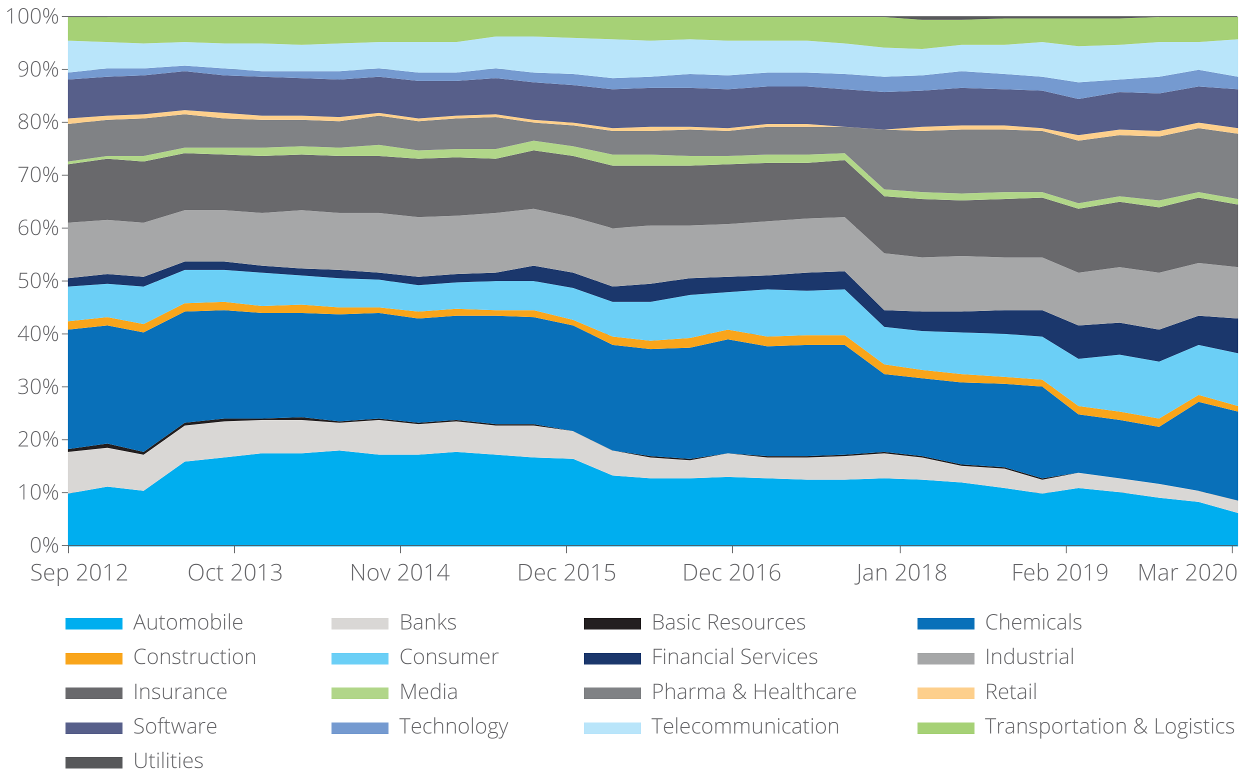
FIGURE 8: Evolution of sector weights in the DAX® 50 ESG



Source: DAX® sector classification, as of March 20, 2020

The most commonly occurring reason for exclusions applied to the HDAX® universe since 2012 as part of the DAX® 50 ESG selection process, has been military contracting with 120 instances (Figure 9). At the other end of the spectrum, there were zero exclusions on account of involvement in tobacco-related products.

FIGURE 9: DAX® 50 ESG exclusion instances by type; exclusions are not mutually exclusive

	Exclusion instances	2020	2019	2018	2017	2016	2015	2014	2013	2012
Military contracting	120	4	16	14	14	16	16	16	12	12
Nuclear power	80	3	12	12	12	9	8	8	8	8
Thermal coal	72	2	8	8	12	10	8	8	8	8
Controversial weapons	42	1	4	6	6	4	4	4	5	8
Global Standard Screening	17	1	4	4	4	4	0	0	0	0
Tobacco	0	0	0	0	0	0	0	0	0	0
No data	1	0	1	0	0	0	0	0	0	0

Source: Qontigo, as of March 20, 2020

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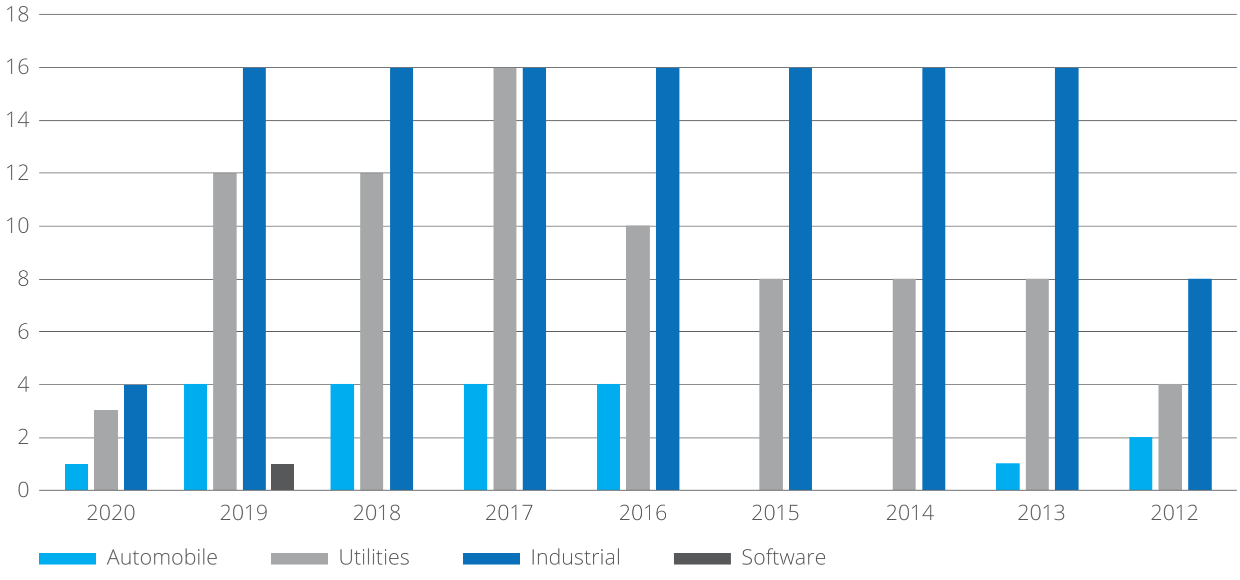
Only four sectors in the HDAX have had securities removed due to preliminary ESG exclusion screens, Automobiles, Industrial, Software and Utilities. Whereas exclusions have been a recurring theme within the Utilities and Industrial sectors, 2015 and 2014 saw a reprieve for Automobiles. With a total of 124 exclusion instances since 2012, the Industrial sector has been impacted the most (Figure 10).

FIGURE 10: DAX® 50 ESG exclusion instances by sector



Source: Qontigo, as of March 23, 2020

Industry level ESG scores in the DAX® 50 ESG have generally trended upwards since 2012, which may be indicative of companies taking more positive ESG measures. The Telecommunications industry currently has the highest ESG score, a position that it has retained in all but the first two years since index inception. In this timeframe, the most improved industry has been Pharma & Healthcare, which registered an increase in score of 8, while Consumer Goods experienced the biggest decline in score of 5.

FIGURE 11: DAX® 50 ESG Industry-level ESG scores*

	2020	2019	2018	2017	2016	2015	2014	2013	2012
Basic Materials	71	72	71	72	74	74	74	72	71
Consumer Goods	72	73	74	73	75	76	77	75	77
Consumer Services	63	64	62	61	60	61	60	59	62
Finance, Insurance & Real Estate	74	77	77	78	78	76	75	72	71
Industrials	74	73	73	71	68	67	69	68	67
Information Technology	75	76	76	76	77	79	76	73	74
Pharma & Healthcare	66	65	65	60	64	64	62	58	58
Telecommunications	81	84	84	83	81	81	79	73	75

* Note: Darker shades represent better ESG scores and are relative across years within an industry.

Source: Qontigo, as of March 20, 2020

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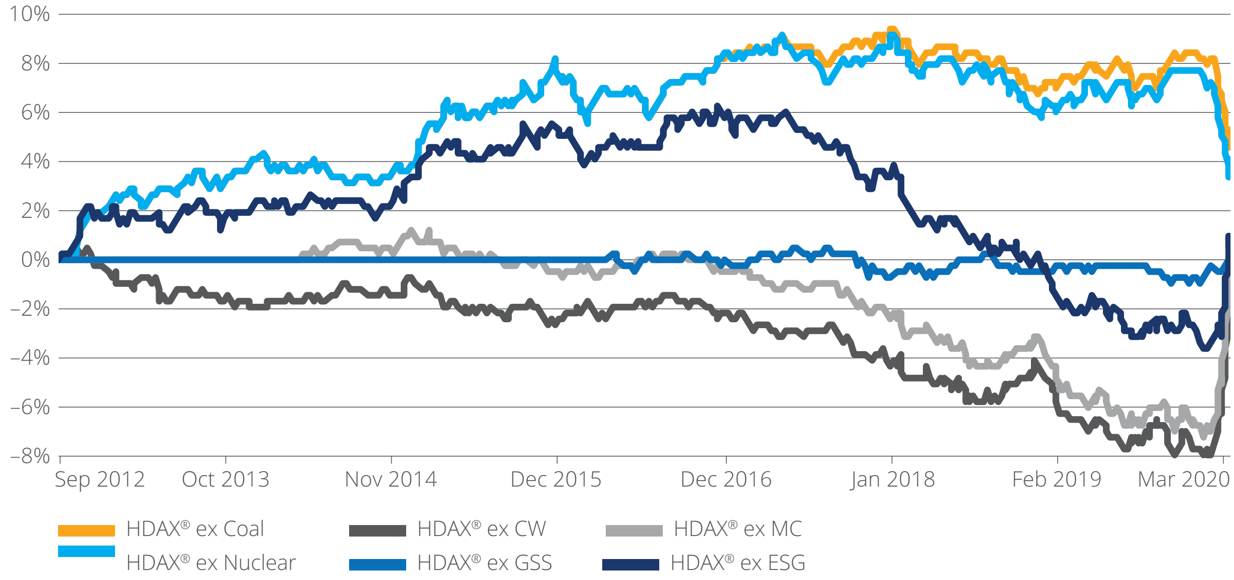
IMPACT OF ESG EXLUSIONS

Since index inception, the exclusion of securities issued by companies associated with controversial weapons (CW) and military contracting (MC) has resulted in a drag on performance relative to the HDAX® of –3.07% and –1.92% respectively. Conversely, exclusions related to coal, nuclear power and Global Standards Screening have increased returns by 5.19%, 4.12% and 0.12% respectively.

FIGURE 12: Impact of exclusions on the HDAX®[7]



Source: Axioma Portfolio Analytics, Qontigo, returns in EUR, data from September 21, 2012, to March 20, 2020. Note that between Sep 2012 and Dec 2016 the exclusions resulting from screening for Coal and Nuclear are identical, thereby having the same impact on returns during the period.

FIGURE 13: Performance analysis across indices

March 20, 2020	HDAX®	HDAX® ex Coal	HDAX® ex CW	HDAX® ex MC	HDAX® ex Nuclear	HDAX® ex GSS	HDAX® ex ESG
Cumulative return since inception*	31.77%	36.96%	28.70%	29.85%	35.90%	31.90%	32.17%
Return since inception	3.75%	4.29%	3.43%	3.55%	4.18%	3.77%	3.80%
5y return	–4.53%	–4.49%	–4.77%	–4.86%	–4.64%	–4.51%	–5.00%
3y return	–8.26%	–8.57%	–8.48%	–8.55%	–8.80%	–8.24%	–9.17%
1y return	–23.36%	23.67%	–22.13%	–21.91%	–23.87%	–23.19%	22.22%
Volatility since inception	17.68%	17.70%	17.54%	17.55%	17.76%	17.61%	17.55%
5y volatility	18.80%	18.81%	18.63%	18.62%	18.88%	18.71%	18.60%
3y volatility	17.27%	17.33%	17.00%	16.97%	17.46%	17.17%	17.04%
1y volatility	22.89%	22.96%	22.37%	22.34%	23.17%	22.74%	22.44%
Sharpe ratio since inception	0.31	0.34	0.29	0.30	0.33	0.31	0.31
5y Sharpe ratio	–0.13	–0.13	–0.15	–0.16	–0.14	–0.13	–0.16
Max. drawdown since inception	–39.39%	–39.51%	–38.09%	–37.81%	–39.80%	–39.18%	–37.97%
5y max. drawdown	–39.39%	–39.51%	–38.09%	–37.81%	–39.80%	–39.18%	–37.97%
Tracking error (TE)	0.0%	0.6%	0.9%	0.9%	0.7%	0.3%	1.2%

*All returns and volatilities are annualized except where indicated.
Source: Axioma Portfolio Analytics, Qontigo, returns in EUR

[7] Please note that the analyses are based on simulated portfolios that incorporate each exclusion separately and are currently not available as official indices. These analyses are based on portfolio returns from Axioma Portfolio Analytics and differ slightly from actual index returns. We believe that this return differential may be the result of a difference in the treatment of corporate actions between Axioma Portfolio Analytics and the official DAX® methodology.

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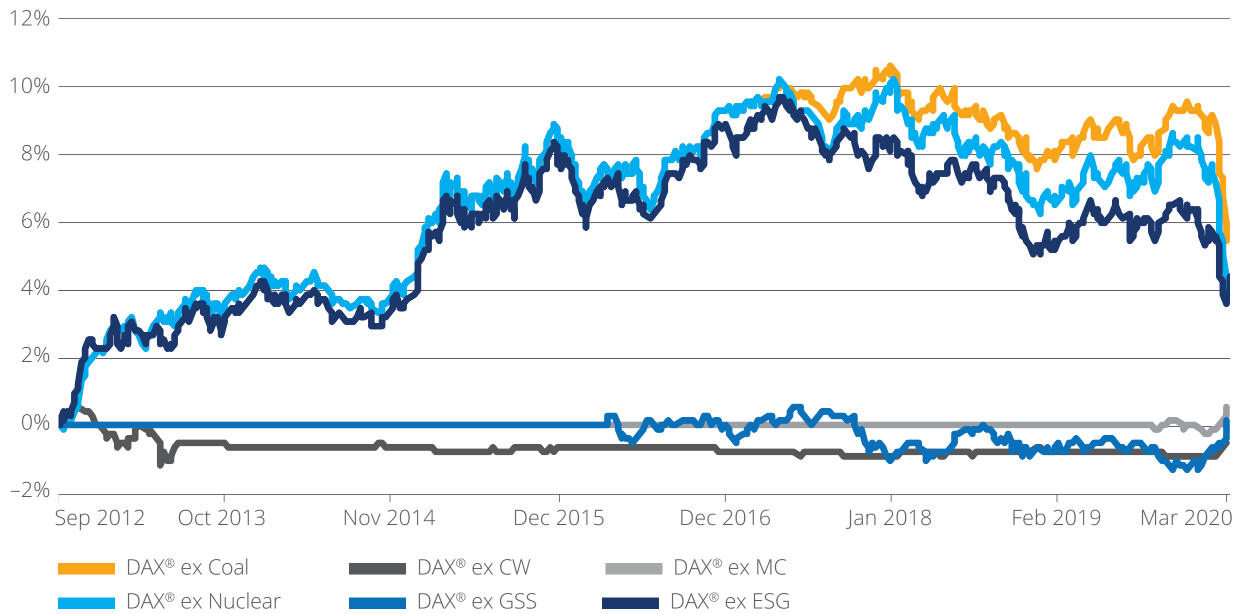
The same exclusionary screens as the HDAX® were simulated with the DAX® in order to assess the impact that this would have had on performance had they been applied. Exclusions related to controversial weapons were the only drag on performance (–0.59%) with the rest contributing positively to returns and the largest of which was coal (5.87%).

FIGURE 14: Impact of exclusions on the DAX®[8]



Source: Axioma Portfolio Analytics, Qontigo, returns in EUR, data from September 21, 2012, to March 20, 2020. Note that between Sep 2012 and Dec 2016 the exclusions resulting from screening for Coal and Nuclear are identical, thereby having the same impact on returns during the period.

FIGURE 15: Performance analysis across indices

March 20, 2020	DAX®	DAX® ex Coal	DAX® ex CW	DAX® ex MC	DAX® ex Nuclear	DAX® ex GSS	DAX® ex ESG
Cumulative return since inception*	20.00%	25.87%	19.40%	20.34%	24.39%	20.04%	24.35%
Return since inception	2.46%	3.12%	2.40%	2.50%	2.96%	2.47%	2.95%
5y return	–5.81%	–5.71%	–5.81%	–5.76%	–5.93%	–5.80%	–5.87%
3y return	–9.58%	–9.87%	–9.58%	–9.49%	–10.21%	–9.59%	–10.15%
1y return	–22.83%	–23.15%	–22.83%	–22.61%	–23.41%	–22.56%	–22.91%
Volatility since inception	18.12%	18.16%	18.11%	18.12%	18.22%	18.04%	18.12%
5y volatility	19.19%	19.18%	19.19%	19.18%	19.28%	19.07%	19.15%
3y volatility	17.42%	17.45%	17.42%	17.41%	17.63%	17.29%	17.48%
1y volatility	23.01%	23.04%	23.01%	22.97%	23.32%	22.81%	23.08%
Sharpe ratio since inception	0.24	0.27	0.23	0.24	0.26	0.24	0.26
5y Sharpe ratio	–0.20	–0.19	–0.20	–0.20	–0.20	–0.20	–0.20
Max. drawdown since inception	–38.64%	–38.70%	–38.64%	–38.35%	–39.09%	–38.34%	–38.47%
5y max. drawdown	–38.64%	–38.70%	–38.64%	–38.35%	–39.09%	–38.34%	–38.47%
Tracking error (TE)	0.0%	0.8%	0.3%	0.1%	0.9%	0.4%	1.0%

*All returns and volatilities are annualized except where indicated.
Source: Axioma Portfolio Analytics, Qontigo, returns in EUR

[8] Please note that the analyses are based on simulated portfolios that incorporate each exclusion separately and are currently not available as official indices. These analyses are based on portfolio returns from Axioma Portfolio Analytics and differ slightly from actual index returns. We believe that this return differential may be the result of a difference in the treatment of corporate actions between Axioma Portfolio Analytics and the official DAX® methodology.

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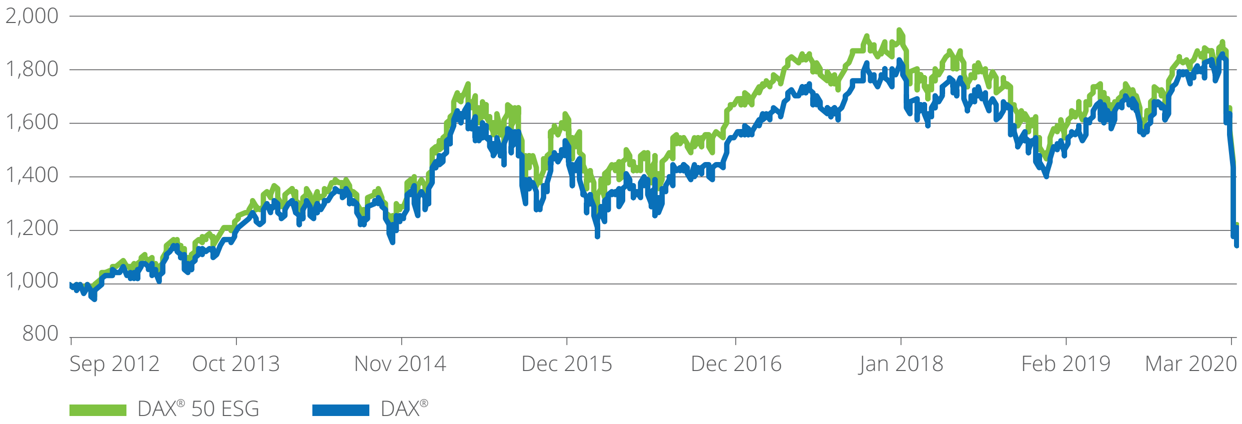
INDEX PERFORMANCE

Since its inception (September 2012), the DAX® 50 ESG has returned 22.16% on a cumulative basis and has outperformed the DAX® by 1.71 percentage points, while its volatility has been 0.36 percentage points lower (Figure 16).

FIGURE 16: Performance of the DAX® 50 ESG and DAX®



Source: Qontigo, EUR GR returns from September 21, 2012, to March 20, 2020

FIGURE 17: Performance analysis across indices

March 20, 2020	DAX® 50 ESG	DAX®
Cumulative return since inception*	22.16%	20.45%
Return since inception	2.79%	2.59%
5y return	–6.53%	–5.97%
3y return	–11.59%	–9.82%
1y return	–26.26%	–23.69%
Volatility since inception	18.09%	18.45%
5y volatility	19.22%	19.53%
3y volatility	17.68%	17.76%
1y volatility	23.58%	23.52%
Sharpe ratio since inception	0.25	0.24
5y Sharpe ratio	–0.24	–0.20
Max. drawdown since inception	–40.99%	–38.78%
5y max. drawdown	–40.99%	–38.78%
Tracking error (TE)	0.0%	1.7%

*All returns and volatilities are annualized except where indicated.
Source: Axioma Portfolio Analytics, Qontigo, returns in EUR

Performance attribution was used to understand the drivers of the return and any biases introduced in the construction of the index. Nearly two-thirds of the active return comes from specific return and it is not statistically significant (95% confidence levels). Factor contributions account for one-third of the active return, with most of this coming from deviations in industry allocations. Style factors contribute very little, and any notion that size bias (towards larger-cap securities in the DAX® 50 ESG compared to the HDAX®) might be impacting returns may also be dispelled.

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FIGURE 18: Performance attribution[9] of DAX® 50 ESG relative to HDAX®

Source of return	Contribution	Risk	IR	T–stat
DAX® 50 ESG	2.43%	17.53%		
HDAX®	3.60%	17.44%		
Active	–1.17%	1.66%	–0.70	–1.95
Specific Return	–0.78%	1.49%	–0.52	–1.46
Factor Contribution	–0.39%	0.72%	–0.54	–1.50
Style	–0.07%	0.32%	–0.21	–0.58
Growth	–0.07%	0.05%	–1.54	–4.28
Leverage	–0.04%	0.03%	–1.25	–3.47
Liquidity	–0.01%	0.03%	–0.26	–0.74
Size	0.01%	0.13%	0.08	0.22
Value	0.02%	0.06%	0.29	0.79
Volatility	0.31%	0.17%	1.83	5.07
Country	–0.04%	0.18%	–0.22	–0.62
Industry	–0.28%	0.54%	–0.52	–1.43

Source: Axioma Portfolio Analytics, Qontigo, returns in EUR, data between September 21, 2012 and March 20, 2020

We also carried out attribution relative to the DAX®, which showed that the active return is not statistically significant. It may therefore be interpreted that the risk and return profile of the DAX® 50 ESG is similar to the DAX®.

FIGURE 19: Performance attribution of DAX® 50 ESG relative to DAX®

Source of return	Contribution	Risk	IR	T–stat
DAX® 50 ESG	2.43%	17.53%		
DAX®	2.34%	17.89%		
Active	0.09%	1.66%	0.05	0.14
Specific Return	0.27%	1.51%	0.18	0.49
Factor Contribution	–0.18%	0.60%	–0.30	–0.84
Style	–0.23%	0.40%	–0.59	–1.64
Growth	–0.03%	0.04%	–0.69	–1.93
Leverage	–0.01%	0.03%	–0.40	–1.11
Liquidity	0.02%	0.05%	0.37	1.02
Size	–0.10%	0.28%	–0.38	–1.05
Value	–0.04%	0.04%	–0.88	–2.45
Volatility	0.04%	0.11%	0.36	1.00
Country	0.00%	0.01%	–0.33	–0.92
Industry	0.05%	0.50%	0.10	0.29

Source: Axioma Portfolio Analytics, Qontigo, returns in EUR, data between September 21, 2012 and March 20, 2020

9 Factor-based performance attribution was performed using Axioma Portfolio Analytics. The annualized active returns (the difference between the DAX® 50 ESG Index return and the benchmark return in each case) obtained from Axioma Portfolio Analytics differ slightly from those derived from the official index returns. We believe that this return differential may be the result of a difference in the treatment of corporate actions in Axioma Portfolio Analytics compared to the official DAX® methodology. However, we consider the difference and its likely impact on the performance attribution to be minimal.

DAX® 50 ESG – THE NEW STANDARD IN GERMAN ESG INVESTING

CONCLUSION

The launch of the DAX® 50 ESG Index has added a flagship index for sustainable equity investing to the DAX® index family, which already includes regional, sector, strategy and fixed-income gauges. With Europe driving the growth of assets allocated to sustainable strategies and the DAX® already synonymous with the largest equities market in the region, the introduction of the DAX® 50 ESG Index offers a compelling choice for investors.

The DAX® 50 ESG Index has been developed from the outset with investors in mind. Its design and construction were tailored to the feedback received from market participants, right down to the suggested number of index constituents.

Since its inception, the DAX® 50 ESG has outperformed the DAX® by a cumulative 1.71 percentage points, while its volatility has been 0.36 percentage points lower. With its similar risk-return characteristics (as evidenced by a performance attribution) and enhanced ESG profile, the DAX® 50 ESG Index provides investors with a more sustainable flagship version of the DAX®. Given the size of the securities included and their inherent liquidity, this index is also suitable for use as the underlying for derivatives, structured products and exchange traded funds.

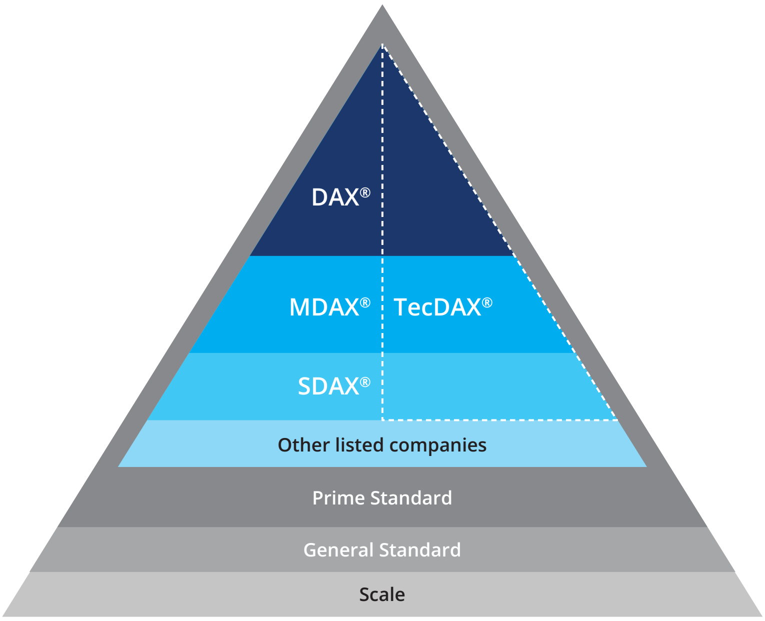
The DAX® 50 ESG complements the existing EURO STOXX 50® ESG Index and the ESG-X family, building on their simplicity and transparent rules-based approach. The launch of this new index helps to ensure that Qontigo's range of ESG investment solutions keeps pace with current growth in demand and with the evolving regulatory landscape in the field of sustainability. The launch of cutting-edge solution provides investors with an innovative investment solution incorporating the most popular sustainable investing approaches. We expect this index to meet the strong and ever increasing demand for an ESG variant of DAX®, and become the new standard in German ESG investing, thereby strengthening and complementing the DAX® brand.

APPENDIX

DAX® SELECTION INDICES

The DAX® selection indices represent the largest companies with the highest turnovers in their respective segments. The diagram below provides an overview of the most important selection indices:

FIGURE 20: DAX® selection indices



Source: Deutsche Börse Group

DAX®
The DAX® tracks the blue chips listed on the Prime Standard. It comprises the 30 largest companies with the highest turnover on the FWB® (Frankfurt Stock Exchange).

The DAX® has continued the Börsen-Zeitung index, which historically extended back to 1959, since its introduction.

MDAX®
The MDAX® comprises the 60 next-largest companies after the DAX® in terms of market capitalization and turnover.

SDAX®
The SDAX® consists of the 70 largest companies after those in the MDAX® in terms of market capitalization and turnover.

TecDAX®
The TecDAX® includes the 30 largest and most liquid tech companies in terms of market capitalization and turnover. Tech is defined here in line with the sector classification detailed in the Guide to the DAX® Equity Indices.

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HDAX®

The HDAX® combines the DAX®, MDAX® and TecDAX® indices, and its composition changes in line with these underlying indices.

The HDAX®'s index portfolio features the 30 companies from the DAX®, the 60 companies from the MDAX® and the 30 companies from the TecDAX®. Companies that are included in both the TecDAX® and the DAX® or MDAX® are only counted once. As a result, this index comprises the large and medium-sized companies in the Prime Standard without any sector restrictions.

Detailed admission criteria for each of the above indices and further index details are available in the Guide to the DAX® Equity Indices.

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About Us

STOXX Ltd., now part of Qontigo, is a global index provide that currently calculates a global, comprehensive index family of over 10,000 strictly rules-based and transparent indices. Best known for the leading European equity indices EURO STOXX 50®, STOXX® Europe 50 and STOXX® Europe 600, Qontigo maintains and calculates the STOXX Global index family which consists of total market, broad and blue-chip indices for the Americas, Europe and Asia/Pacific regions and the Latin America and BRIC (Brazil, Russia, India and China) sub-regions, as well as global markets.

To provide market participants with optimal transparency, STOXX indices are classified into four categories. Regular “STOXX” indices include all standard, theme and strategy indices that are part of STOXX’s integrated index family and follow a strict rules-based methodology. The “iSTOXX” brand typically comprises less standardized index concepts that are not integrated in the STOXX Global index family, but are nevertheless strictly rules-based. While “STOXX” and “iSTOXX” brand indices are developed by STOXX for a broad range of market participants, the “STOXX Customized” brand covers indices that are specifically developed for clients and do not include the STOXX brand in the index name. STOXX uses the Omnient brand to offer custom indices from its existing index universe.

STOXX indices are licensed to more than 600 companies around the world as underlyings for Exchange Traded Funds (ETFs), futures and options, structured products and passively managed investment funds. Three of the top ETFs in Europe and approximately 25% of all assets under management are based on STOXX indices. Qontigo holds Europe's number one and the world's number two position in the derivatives segment.

Since September 2019 STOXX is part of Qontigo.

Qontigo is a financial intelligence innovator and a leader in the modernization of investment management, from risk to return. The combination of the company’s world-class indices and best-of-breed analytics, with its technological expertise and customer-driven innovation enables its clients to achieve competitive advantage in a rapidly changing marketplace. Qontigo’s global client base includes the world’s largest financial products issuers, capital owners and asset managers. Created in 2019 through the combination of STOXX, DAX and Axioma, Qontigo is part of Deutsche Börse Group, headquartered in Eschborn with key locations in New York, Zug and London.

Qontigo’s index provider STOXX is part of Deutsche Börse Group, and the administrator of the DAX indices under the European Benchmark Regulation.

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