



ETF TRADING ON XETRA

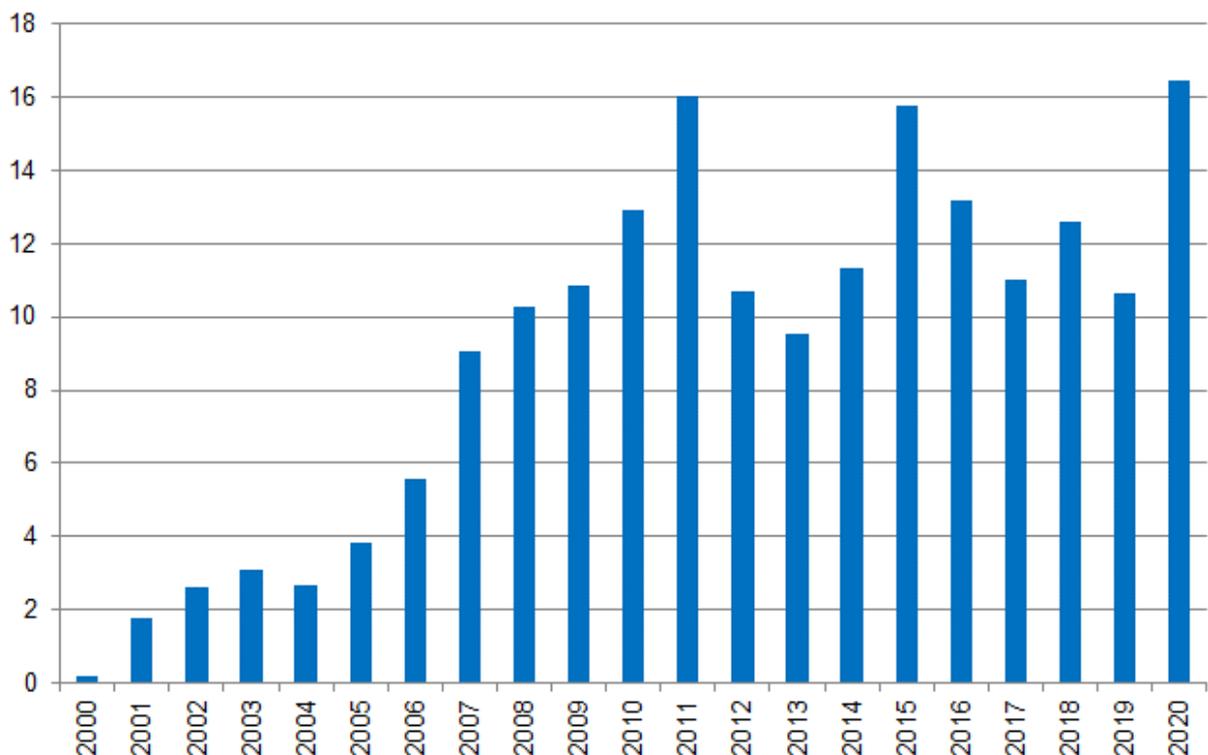
Facts & figures for the year 2020

Overview

- Deutsche Börse's XTF segment for exchange-traded index funds (ETFs) was launched on 11 April 2000. Last year, the segment was able to look back on 20 years.
- Xetra® was the first trading platform for ETFs in Europe and since then is the market leader in terms of listed ETFs (1,618) and trading turnover.
- The market share of Xetra for the on-exchange volume of ETFs in Europe was 30 per cent.
- 80 percent of the exchange-traded funds turnover in Germany is generated on Xetra.
- ETFs can be traded on Xetra every trading day from 9:00 to 17:30 and on the Börse Frankfurt trading venue from 8:00 to 20:00. All ETFs traded in euro on Xetra are also tradable through Börse Frankfurt.

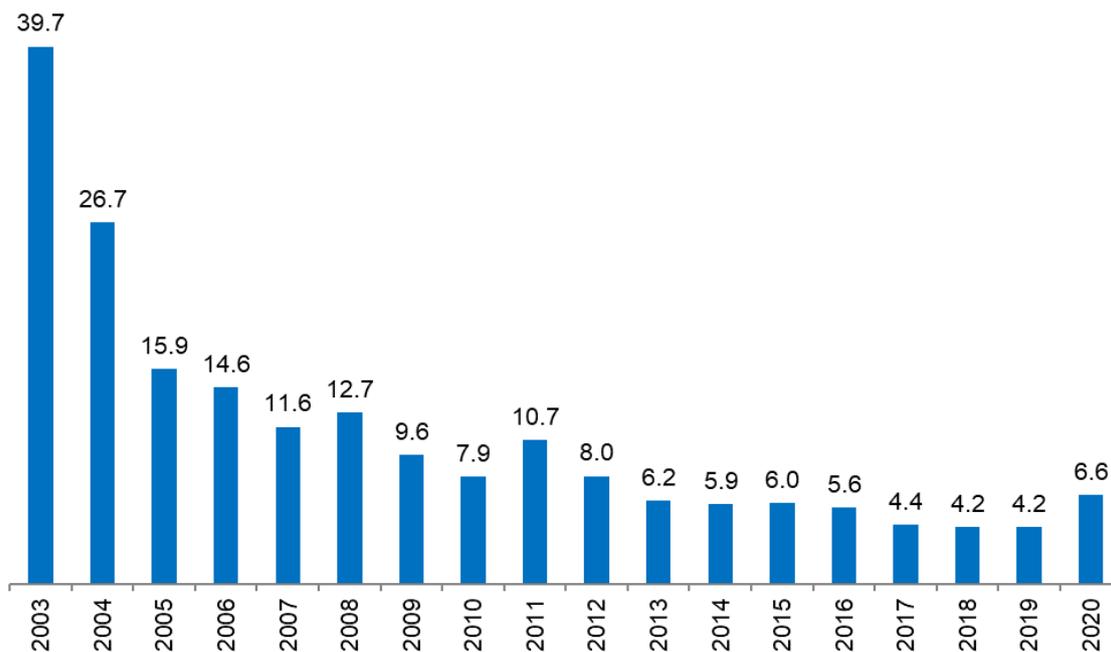
Development of trading turnover and liquidity

Xetra turnover in € billions (monthly average)



- The average monthly order book volume in 2020 was €16.5 billion.
- In general, the trading turnover correlates strongly with the volatility on the stock market. The higher the volatility, the higher the trading turnover.
- On average, the Xetra Liquidity measure (average spread for a roundtrip order of €100k) for the 20 most liquid equity index ETFs on Xetra was around 6.6 basis points in 2020.

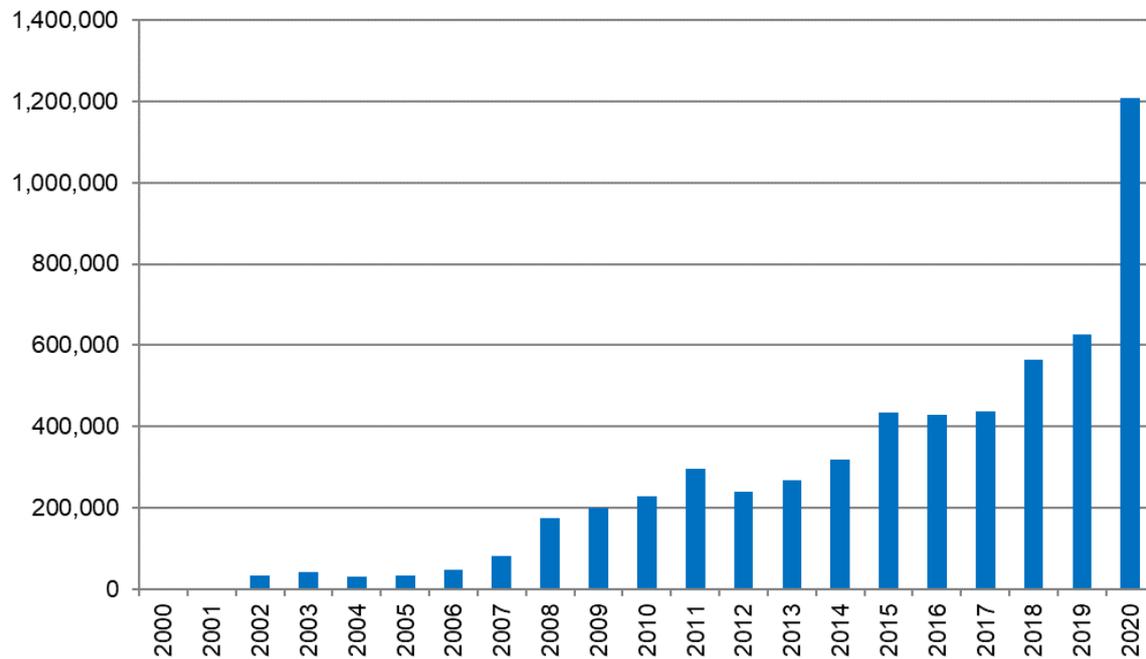
XLM (€100k) of the 20 most liquid equity ETFs on Xetra



- Each ETF is supported by at least one Designated Sponsor as liquidity provider. Designated Sponsors are obliged to post firm bid and offer prices. Currently, more than 75 per cent of ETFs are supported by more than one Designated Sponsor. 15 Designated Sponsors provide liquidity in ETF trading on Xetra.
- Measured by ETF trading volume in 2020, the share of private investors¹ was 9 per cent; measured by the number of transactions, it was 38 per cent.
- The average order size for ETFs on Xetra was €28,000 in 2020, it amounted to €34,000 in 2019.

¹ Assuming that all customer orders in an amount of up to €25,000 were placed by private investors.

Number of executed orders (monthly average) on Xetra

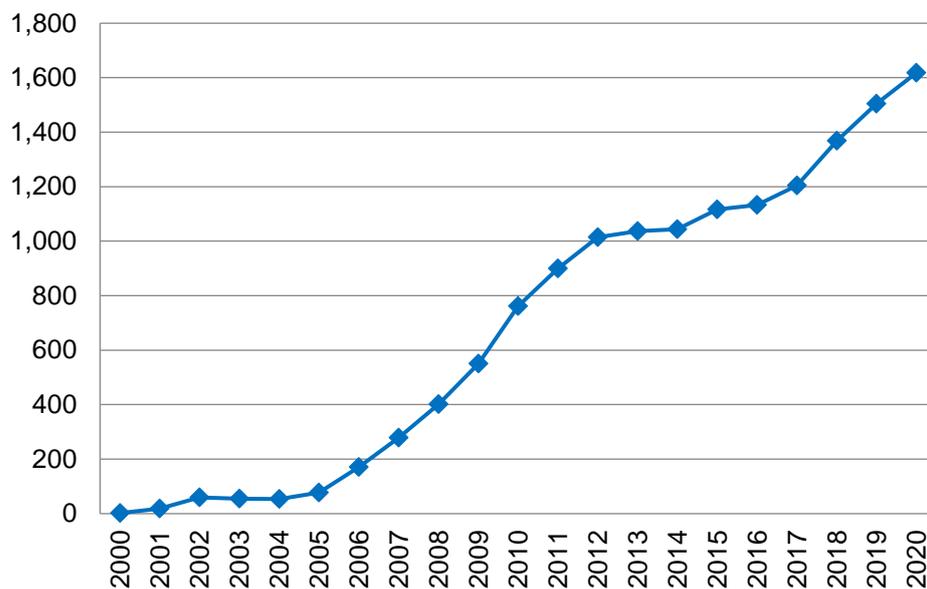


- The average number per month of orders executed in 2020 was a record 1,209,636 (2019: 627,000 orders per month).

Top 10 reference indices 2020

Benchmark	Turnover in €bn	Highest Volume ETF	Turnover in €bn
DAX Index	22.89	iShares Core DAX UCITS ETF (DE)	13.24
MSCI World Index	13.65	iShares Core MSCI World UCITS ETF	5.13
EURO STOXX 50 Index	12.97	iShares Core EURO STOXX 50 UCITS ETF (DE)	4.89
S&P 500 Index	9.54	iShares Core S&P 500 UCITS ETF USD (Acc)	2.79
Nasdaq 100 Index	5.66	iShares Nasdaq-100 UCITS ETF (DE)	1.99
STOXX Europe 600 Index	5.27	iShares STOXX Europe 600 UCITS ETF (DE)	3.98
MSCI EM Index	3.66	Xtrackers MSCI Emerging Markets UCITS ETF 1C	0.73
ShortDAX x2 Index	2.67	Xtrackers ShortDAX x2 Daily Swap UCITS ETF 1C	1.83
ShortDAX Index	2.63	Xtrackers ShortDAX Daily Swap UCITS ETF 1C	2.18
LevDAX Index	2.12	Xtrackers LevDAX Daily Swap UCITS ETF 1C	0.98

Development of tradable products on Xetra since the year 200



- At the end of 2020, 1,618 ETFs were listed on Xetra. Compared to the previous year, the range of tradable ETFs increased by 113.
- ETFs available on Xetra comprise six categories: equities (909), pension products (369), commodities (23), strategies (261), Active ETFs (52) and other (4). The category "other" includes volatility and mixed funds. Active ETFs pursue an active investment strategy to surpass the performance of a reference index.
- The 1,566 index ETFs facilitate trading of 943 different reference indices²
- In 2020, 169 new ETFs were listed and 56 ETFs were delisted. During the past 20 years, 583 ETFs have been delisted due to market exits of individual issuers as well as due to consolidation or closing of individual funds. It is a sign of healthy market development when issuers close products without sustainable market demand

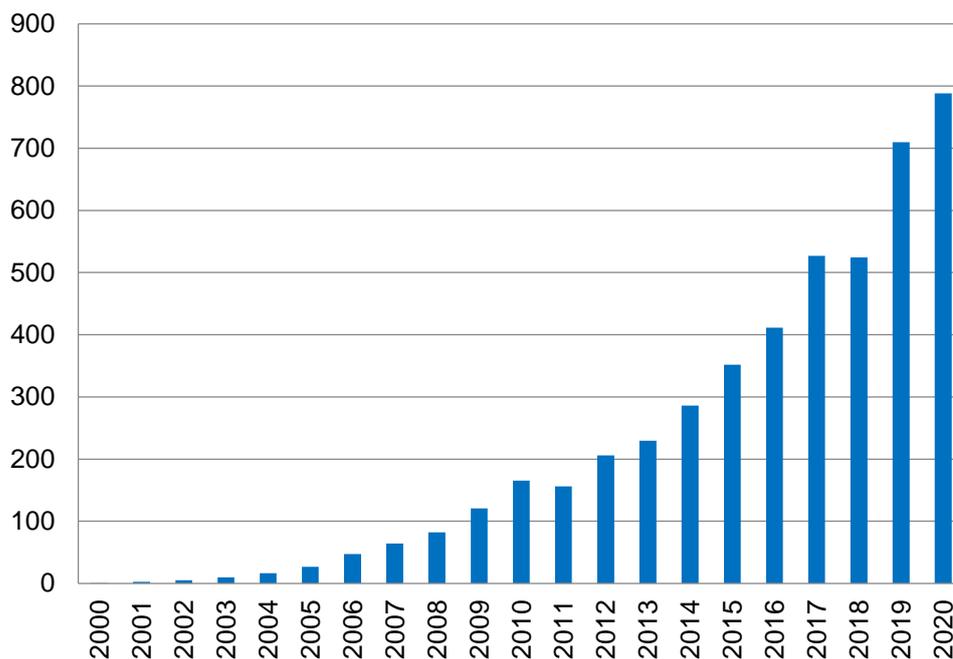
² Price, performance and currency-hedged index variants were assigned to the respective reference index and not counted as independent indices.

Number of products by issuer

ETF issuer	Number of ETFs end 2020
iShares	341
Lyxor	252
Xtrackers	206
Amundi	133
UBS ETF	99
SPDR	99
Invesco	88
EasyETF	55
Deka ETF	52
Vanguard	51
HSBC ETF	33
WisdomTree	29
L&G ETF	27
J.P. Morgan ETF	25
VanEck Vectors	21
Ossiam	18
Franklin LibertyShares	16
Fidelity ETF	13
Expat	11
HANetf	10
Credit Suisse	7
Tabula	7
PIMCO	6
First Trust	5
UniCredit ETF	4
Rize ETF	4
Market Access	3
Goldman Sachs ETF	3
Total	1,618

- ETFs by 28 issuers are currently tradable on Xetra.
- Deutsche Börse welcomed two new ETF issuers to Xetra in 2020: Credit Suisse und Rize.
- The range of ETF products has been growing strongly. The product offering not only includes the major Bluechip-indices such as the DAX® and EURO STOXX 50® but also a wide range of country and regional indices, a variety of sector and strategy indices as well as other asset classes such as bonds and commodities.
- In the fixed-income segment a wide range of government and corporate bonds with different periods, high-yield bonds as well as money market ETFs are available for investors. Furthermore, first pension product ETFs with a strategic component are accessible.
- The current trend is towards indices with a focus on sustainability and special investment themes, so-called megatrends. For example, sustainability ETFs exclude companies involved in the manufacture of controversial products such as weapons and nuclear weapons, tobacco products, alcohol or the extraction of coal for power stations. These ETFs are often labelled with ESG or SRI in their name. At the end of 2020, 251 ETFs representing sustainable investment strategies were listed on Xetra. For megatrends, issuers are focusing on innovations, particularly in the areas of energy generation, health, and technologies such as cloud services and digitalization.

Development of managed fund assets on Xetra (Assets under Management in € bn)



- At the end of the first trading year (December 2000), the ETF assets under management in the XTF segment were €0.4 billion; as of the end of the year 2020, it reached the record high of €788.1 billion. The annual growth rate of the fund assets over the past ten years amounts to 17 per cent.

Managed fund assets by issuer

ETF issuer	AuM in €bn end 2020³
iShares	385.75
Xtrackers	103.26
Lyxor	58.14
Vanguard	51.51
Amundi	41.74
SPDR	39.09
UBS ETF	27.63
Invesco	23.40
EasyETF	11.09
HSBC ETF	10.49
Deka ETF	9.53
L&G ETF	6.69
Credit Suisse	3.67
J.P. Morgan ETF	3.23
PIMCO	3.04
VanEck Vectors	2.75
Ossiam	1.93
WisdomTree	1.30
Fidelity ETF	1.14
Franklin LibertyShares	0.98
First Trust	0.69
HANetf	0.32
Tabula	0.20
Market Access	0.15
Goldman Sachs ETF	0.14
UniCredit ETF	0.12
Rize ETF	0.08
Expat	0.01
Total	788.06

- ETFs have firmly established themselves as a successful investment product. Worldwide, assets managed by ETFs reached a record high of more than €6 trillion at the end of December 2020
- Issuers remain optimistic about growth and profitability in the coming years.

³ Assets under management per issuer product family in relation to ETFs listed on Xetra

Milestones since the introduction of the segment in 2020

- 11 April 2000: The first ETFs of the underlying reference indices EURO STOXX 50 and STOXX Europe 50 are tradable on Xetra. The issuer was Merrill Lynch International with the LDRS product family, which is today part of the iShares product family of BlackRock.
- 2001: Indexchange, today also part of the iShares product family of BlackRock, issues the first ETF on the DAX index globally.
- 2003: With “iShares eb.rexx Government Germany (DE)” and “iShares € Corporate Bond”, the first European bond ETFs on German government bonds and European corporate bonds follow.
- 2005: The segment is expanded to include dividend strategy and commodity ETFs on DivDAX, EURO STOXX 50 Select Dividend 30 and STOXX50 Select Dividend 30 as well as on EasyETF GSCI.
- 2006: A Lyxor ETF facilitates participation in the performance of the LevDAX. The index is linked to the performance of the DAX with a leverage factor of 2.
- 2007/2008: The first bond ETFs with currency hedging and the first ETFs with inverse performance (short ETFs) are listed.
- 2010: First high-yield ETF on corporate bonds tradable.
- 2011: First issuance of ETFs on equal-weighted indices instead of the traditional weighting according to market capitalisation. Furthermore, the first volatility ETF is listed.
- 2012: The 1,000th ETF becomes tradable on Xetra on 22 August.
- 2014: First ETF with direct access to Chinese A shares listed.
- 2015: First ETFs on Chinese and Indian government bonds (db X-trackers II Harvest CSI China Sovereign Bond UCITS ETF (DR) 1D and LAM Sun Global ZyFin India Sovereign Enterprise Bond UCITS ETF Class USD) are tradable on Xetra. Furthermore, the first nine US sector ETFs are tradable.
- 2016: With the first ETF on Israeli market the iShares TA-25 Israel UCITS ETF investors have the possibility to benefit from the performance of Israeli publicly listed companies. They also have access to Turkish government bonds (LAM Alternatif ZyFin Turkey Sovereign Bond UCITS ETF).
- 2017: The first sector ETF with access to biotechnological and pharmaceutical stocks listed on NASDAQ (iShares NASDAQ US Biotechnology UCITS ETF).
- 2018: First ETFs focusing on companies active in artificial intelligence, digital security or cloud technology: Amundi STOXX Global Artificial Intelligence, iShares Digital Security UCITS ETF (Acc), HAN-GINS Cloud Technology UCITS ETF. In addition, bond ETFs on conditional mandatory convertible bonds (Co-Co bonds) of WisdomTree are listed for the first time. For the first time, investors are able to access ETFs on individual Eastern European countries such as Macedonia, Bulgaria, Croatia or Slovenia from the issuer Expat.
- 2019: New thematic ETFs focusing on artificial intelligence, innovative technologies and the block-chain ecosystem; 62 sustainability ETFs were listed - a new record.
- 2020: First ETFs on medical cannabis and the CBD industry (The Medical Cannabis and Wellness UCITS ETF and Rize Medical Cannabis and Life Sciences UCITS ETF). This was followed by the first sustainable ETF products based on the Paris Climate Agreement.

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