



ETF TRADING ON XETRA

Facts & figures for the year 2017

Overview

- Deutsche Börse's XTF segment for exchange-traded index funds (ETFs) was launched on 11 April 2000.
- Thus, Xetra® was the first trading platform for ETFs in Europe and since then is the market leader in terms of listed ETFs (1,205) and trading turnover (€11.0 billion monthly average).
- The market share of Xetra for the on-exchange volume of ETFs in Europe was 29 per cent in 2017.
- 89 percent of the exchange-traded funds turnover in Germany is generated on Xetra.
- ETFs can be traded on Xetra every trading day from 9 a.m. to 5.30 p.m. and on the Börse Frankfurt trading venue from 8 a.m. to 8 p.m. All ETFs traded in euro on Xetra are also tradable through Börse Frankfurt.

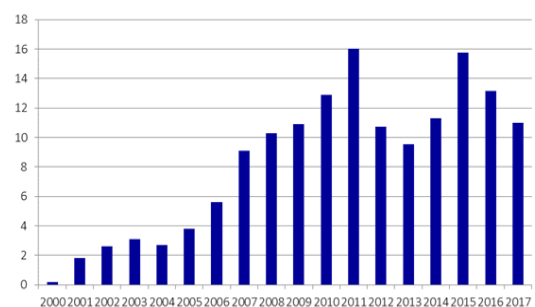
Top 10 reference indices with trading turnover on Xetra in the year 2017

Benchmark	Turnover in €bn	Highest Volume Instrument	Turnover in €bn
DAX Index	25.56	iShares Core DAX UCITS ETF (DE)	17.64
EURO STOXX 50 Index	19.30	iShares EURO STOXX 50 UCITS ETF (DE)	8.86
STOXX Europe 600 Index	6.37	iShares STOXX Europe 600 UCITS ETF (DE)	5.03
EURO STOXX Banks 30-15	4.24	iShares EURO STOXX Banks 30-15 UCITS ETF (DE)	4.24
MSCI World Index	4.22	iShares Core MSCI World UCITS ETF USD (Acc)	1.22
S&P 500 Index	3.42	iShares Core S&P 500 UCITS ETF	1.11
MSCI Emerging Markets Index	2,46	db x-trackers MSCI Emerging Markets Index UCITS ETF 1C	0.64
Europe Index MSCI	2,12	db x-trackers MSCI Europe Index UCITS ETF (DR) 1C	0.60
MDAX Index	1,95	iShares MDAX UCITS ETF (DE)	1.51
LevDax Index	1,76	Lyxor Daily LevDAX UCITS ETF	0.78

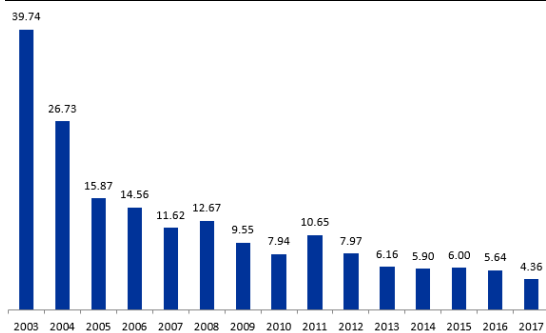
Development of trading turnover & liquidity

- The average monthly order book volume in 2017 was €11.0 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 4.4 basis points in 2017.

Xetra turnover in € billions (monthly average)

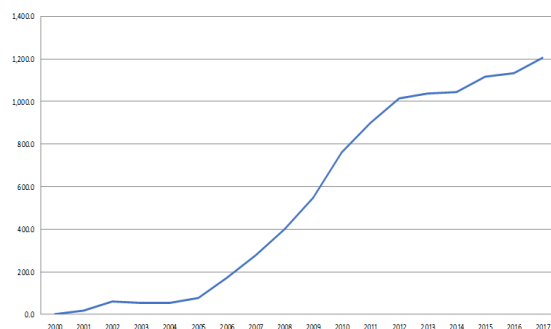


XLM (€100k) of the 20 most liquid equity ETFs on Xetra



- The spread of all Xetra listed ETFs was on average 29 basis points in 2017.
- There are 14 Designated Sponsors, which provide liquidity in ETF trading on Xetra.
- Measured by ETF trading volume in 2017, the share of private investors¹ was 5 per cent; measured by the number of transactions, it was 35 per cent.
- The average order size for ETFs on Xetra was €50,000 in 2017; in 2016, it amounted to €62,000.

Development of tradable products on Xetra since the year 2000



- At the end of 2017, 1,205 ETFs were listed on Xetra. The ETFs cover six categories: equities (657), pension products (299), commodities (25), strategies (204), Active ETFs (14) and other (6, among them hedge funds, volatility and mixed funds). Active ETFs pursue an active investment strategy to surpass the performance of a reference index.
- The 1,191 index ETFs facilitate trading of 856 different reference indices (price index and performance index both taken into account).
- In 2017 134 new ETFs were listed on Xetra.

- During the past 17 years, 472 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 and thereby providing a clear offering to investors.

Number of products by issuer in 2017

ETF issuer	Number
iShares	258
db x-trackers	193
Lyxor ETF	113
ComStage	106
Amundi	84
SPDR	83
PowerShares & Source	76
UBS-ETF	71
BNP Paribas Easy	47
Deka ETFs	43
HSBC ETFs	24
WisdomTree ETFs	24
Vanguard	23
ETF Securities	12
Ossiam	12
Market Access	9
Fidelity ETFs	7
VanEck Vectors	6
Commerzbank	5
Franklin Liberty Shares	5
UniCredit ETFs	2
First Trust	2
Total	1.205

- ETFs by 22 issuers are currently tradable on Xetra.
- Deutsche Börse welcomed three new ETF issuers to Xetra in 2017: Franklin Liberty Shares, Fidelity and Vanguard.
- 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

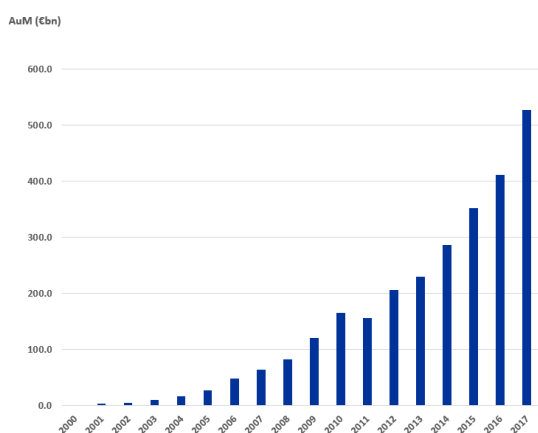
¹ Assuming that all orders in an amount of up to €25,000 were placed by private investors.

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 new index concepts, which aim to generate higher profits compared to classical indices with a market capitalisation weighting. 204 strategy ETFs are currently listed on Xetra, of which 185 are known as Smart-Beta-ETFs.

Development of managed fund assets on Xetra (Assets under Management, AuM)



- At the end of the first trading year (December 2000), the ETF assets on Xetra were €0.4 billion; as of the end of the year 2017, it reached the record high of €527.1 billion.
- At the end of 2010, €165.3 billion assets were under management – hence the annual growth rate of the fund assets over the past seven years amounts to 18 per cent.
- ETFs Worldwide the assets under management reached a record high of \$5.3 billion at the end of December 2017.
- The provider are positive regarding growth and profitability for the upcoming years.

Managed fund assets by issuer December 2017

ETF issuer	AuM in €m
iShares	270.40
db x-trackers	65.32
Lyxor ETF	42.68
Amundi ETF	32.94
Vanguard	30.09
SPDR	21.91
UBS-ETF	15.88
PowerShares & Source	15.37
Deka ETFs	9.11
ComStage	7.93
BNP Paribas Easy	5.86
HSBC ETFs	4.92
ETF Securities	2.07
Ossiam	1.03
WisdomTree ETFs	0.61
Market Access	0.24
VanEck Vectors	0.22
Fidelity ETFs	0.18
First Trust	0.13
Unicredit ETF	0.09
Commerzbank	0.08
Franklin Liberty Shares	0.02
Total	527.08

*Managed fund assets per product section in relation to EFTs, which are listed on Xetra.

Milestones since the introduction of the segment

- 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)" by Indexchange and "iShares € Corporate Bond" the first European pension ETFs on German government bonds and European corporate bonds follow.
- 2005: Inclusion of dividend strategy and commodities 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, linked to the performance of the DAX and leveraged by a factor of 2.

- 2007/2008: First listing of pension ETFs with currency hedging and ETFs with inverse performance (short ETFs).
- 2010: First high-yield ETF on corporate bonds tradable.
- 2011: First issuance of ETFs on equal-weight approach indices instead of classic weighting by market capitalisation.
- 2011: 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 is 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.
- 2015: First nine US sector ETFs are tradable.
- 2016: With the first ETF on the Israeli market the iShares TA-25 Israel UCITS ETF investors have the possibility to benefit from the performance of Israeli publicly listed companies.
- 2016: First ETF on Turkish government bonds (LAM Alternatif ZyFin Turkey Sovereign Bond UCITS ETF) is included in trading.
- 2017: The first ETF with access to equities from the Biotechnological- and Pharmaceutical branch, which are listed on the NASDAQ (iShares NASDAQ US Biotechnology UCITS ETF).

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