

Stock Exchange Turnover

in Derivatives



Rising turnover at year-end

Significant growth in Tracker and Express Certificates

STRUCTURED SECURITIES



DDV Classification System

CONTENTS

Year Overview Stock Exchange Turnover	4
Turnover volume by stock exchange	5
Number of customer orders by stock exchange	5
Turnover by product category	6
Investment products by underlying	7
Leverage products by underlying	7
Number of new issues	8
Total number of products	9
Statistics methodology	9

December | 2016

- Turnover recorded at the exchanges in Stuttgart and Frankfurt totalled EUR 3.9 billion in December 2016.
- Investment products outperformed the general market trend and surged by 6.9 percent, taking their share of the trading volume to 54.8 percent.
- The turnover of Express Certificates jumped by 42.1 percent and amounted to EUR 107.3 million in December.
- Investment products with equities as an underlying showed an increase in turnover by 19.8 percent, to stand at EUR 883.4 million.

Rising turnover at year-end

Significant growth in Tracker and Express Certificates

Developments on the capital markets prompted an increase in trading in structured products on the Stuttgart and Frankfurt Exchanges in December. Exchange turnover in structured products and leverage products totalled EUR 3.9 billion. This corresponded to a month-on-month increase of 1.3 percent. 417,756 customer orders were executed – 11.8 percent fewer than in November. The average order size grew by 14.8 percent to EUR 9,321.

The trading volume for investment products stood at EUR 2.1 billion in December – up 6.9 percent compared with one month earlier. They made up 54.8 percent of the total volume. The exchanges in Stuttgart and Frankfurt executed 70,061 customer orders, corresponding to an increase of 5.1 percent. The average order size was EUR 30,461 – up 1.7 percent on the previous month.

At just under EUR 1.8 billion, the turnover in leverage products was 4.7 percent lower than in November. This product category accounted for 45.2 percent of the total turnover as a result. 14.6 percent fewer customer orders were executed, taking the number to 347,695. The average order size

was EUR 5,062 – up 11.5 percent on the figure registered for November.

New issues

Banks issued 74,595 new investment products and 217,130 leverage products at the end of December. As a result, a total of 535,846 investment products and 795,373 leverage products were available at the Stuttgart and Frankfurt Exchanges.

Exchange turnover by product category

Investment products

Turnover in Discount Certificates rose by 11.2 percent in December, taking it to EUR 925.7 million. By contrast, the trading volume of Bonus Certificates fell by 13.8 percent to EUR 541.6 million. The turnover generated from Tracker Certificates stood at EUR 349.4 million – up 33.9 percent on November's figure. Reverse Convertibles chalked up a turnover of EUR 160.0 million, corresponding to an increase of 3.9 percent on the previous month. Meanwhile, the trading

volume for Express Certificates jumped significantly, up 42.1 percent at EUR 107.3 million. Capital Protection Products with Coupon accounted for a turnover of EUR 13.3 million, corresponding to a month-on-month rise of 53.4 percent. The trading volume of Uncapped Capital Protection Certificates was down 8.5 percent and stood at EUR 13.2 million in December. Credit Linked Notes saw their turnover volume decrease from EUR 19.2 million in November to EUR 13.3 million in December. Outperformance and Capped Outperformance Certificates notched up a trading volume of EUR 10.1 million. This corresponded to growth of 276.2 percent on the previous month. However, given their limited volume, they do not have a major impact on the overall market.

Leverage products

Trading by retail investors was slower than in the previous month. Turnover in Warrants increased by 13.1 percent and stood at EUR 500.5 million. The trading volume for Knock-Out Warrants amounted to EUR 1.0 billion – down 12.0 percent compared with November. A 3.0 percent fall was recorded for Factor Certificates, taking their figure to EUR 250.9 million. ▶▶

Exchange turnover by underlying

Investment products

Products with indices as an underlying recorded a slight, 2.8 percent decrease in turnover, which came in at EUR 1.1 billion. They accounted for 51.5 percent of the total turnover as a result. The turnover generated from investment products with equities as an underlying stood at EUR 883.4 million – up 19.8 percent on the previous month. They accounted for 41.4 percent of the trading volume in December. Turnover in products with commodities as an underlying grew by 16.1 percent, taking it to EUR 92.5 million. They made up 4.3 percent of the total turnover. Products with interest rates as an underlying recorded a 25.8 percent drop in turnover, which consequently stood at EUR 17.4 million. This corresponded to a market share of 0.8 percent. The turnover generated from investment products with investment funds as an underlying stood at EUR 25.7 million – up 49.9 percent on the previous month. This figure corresponded to 1.2 percent of the aggregate turnover.

Leverage products

The turnover achieved from trading in leverage products amounted to almost EUR 1.8 billion in December. Turnover in products with indices as an underlying was down 8.1 per-

cent, taking it to EUR 1.0 billion. They accounted for 58.9 percent of the total turnover. Products with equities as an underlying recorded a 3.3 percent rise in turnover in December, which consequently stood at EUR 533.5 million. They therefore accounted for a market share of 30.3 percent. Turnover from leverage products with commodities as an underlying dropped by 18.3 percent and totalled EUR 101.8 million. Their share stood at 5.8 percent. At EUR 60.6 million, the trading volume recorded for leverage products with currencies as an underlying was 4.9 percent higher than in the previous month. They accounted for 3.4 percent of the total turnover.

Exchange turnover

Stuttgart Exchange reported a trading volume of approximately EUR 2.5 billion in December. Its market share of the total turnover amounted to 62.9 percent. Boerse Stuttgart executed 227,392 customer orders in the month under review.

190,364 customer orders were executed on the Frankfurt Exchange, where a trading volume of EUR 1.4 billion was achieved. The figure accounted for 37.1 percent of the aggregate exchange turnover. ■



Deutscher Derivate Verband (DDV)

Deutscher Derivate Verband (DDV), the German Derivatives Association, is the industry representative body for the leading issuers of derivative securities in Germany, who represent more than 90 percent of the German structured products market: BayernLB, BNP Paribas, Citigroup, Commerzbank, Deka-Bank, Deutsche Bank, DZ BANK, Goldman Sachs, Helaba, HSBC Trinkaus, HypoVereinsbank, LBBW, Société Générale, UBS and Vontobel. Furthermore, the Association's work is supported by fourteen sponsoring members, which include the Stuttgart and Frankfurt Exchanges, Baader Bank, the direct banks comdirect bank, Consorsbank, DAB Bank, flatex, ING-DiBa and S Broker, as well as finance portals and other service providers.

www.derivateverband.de

Office Berlin, Pariser Platz 3, 10117 Berlin, Germany
Office Frankfurt a.M., Feldbergstr. 38, 60323 Frankfurt a.M., Germany

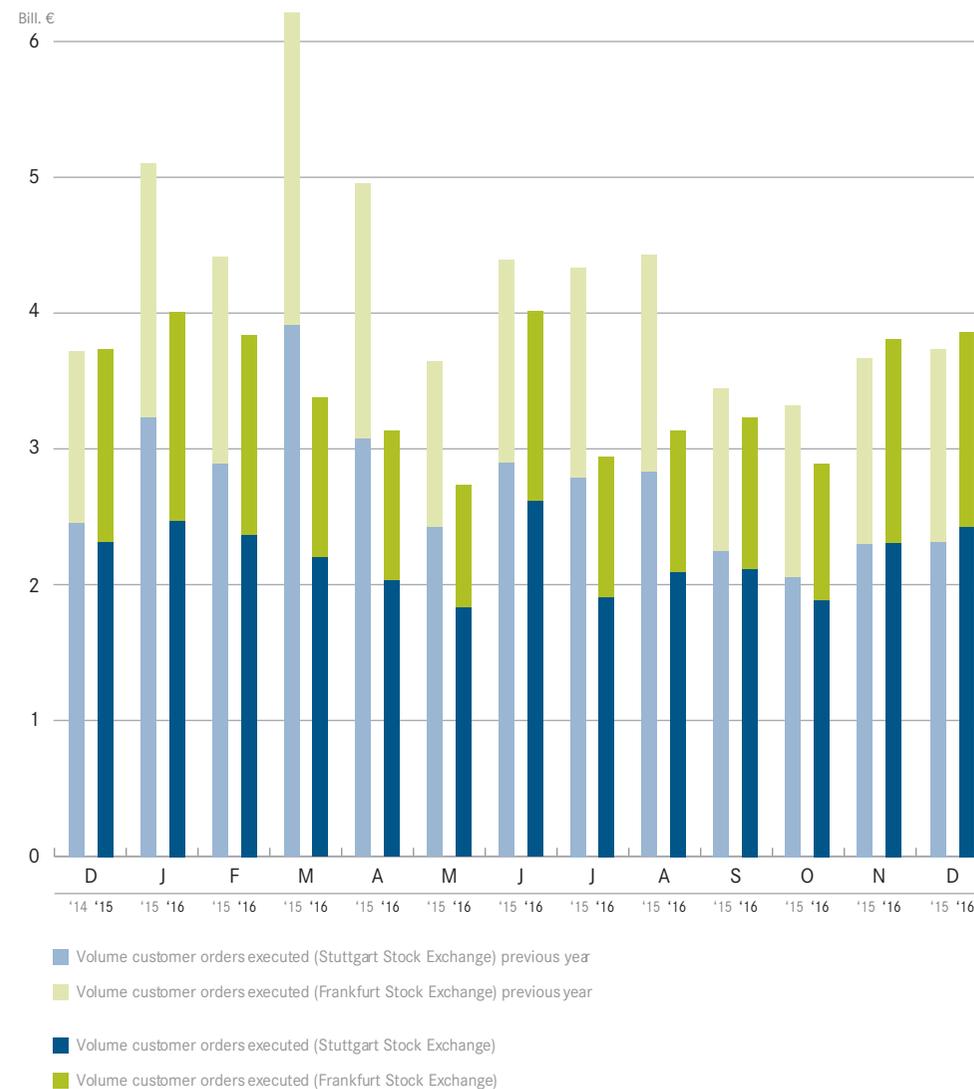
Your contact:

Alexander Heftrich, Media Relations Officer
phone: +49 (0)69 244 33 03 70, mobile phone: +49 (0)160 805 30 34
heftrich@derivateverband.de

Under the heading Presse (Media) our website www.derivateverband.de provides not only our latest media releases but also audio and video recordings for reporting (presently only available on the German website).

Year Overview Stock Exchange Turnover December 2016

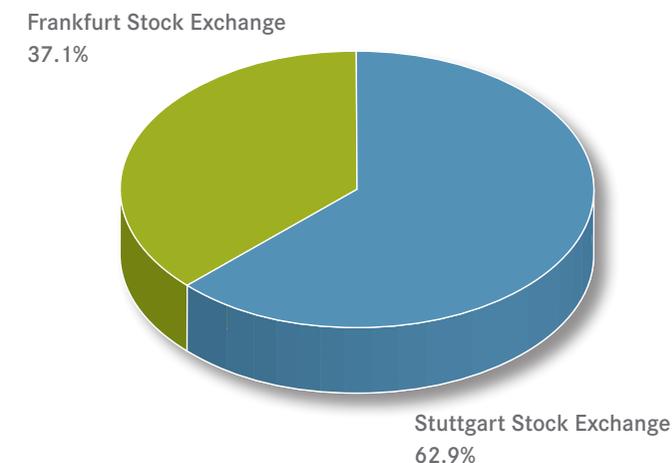
Month	Total		Stuttgart Stock Exchange		Frankfurt Stock Exchange	
	in T€	Number of orders	in T€	Number of orders	in T€	Number of orders
December 2015	3,760,048	466,165	2,332,162	272,977	1,427,886	193,188
January 2016	4,000,451	509,024	2,464,126	305,966	1,536,325	203,058
February 2016	3,850,981	504,998	2,378,673	305,901	1,472,308	199,097
March 2016	3,379,659	443,979	2,200,445	267,798	1,179,214	176,181
April 2016	3,139,046	423,401	2,031,717	251,537	1,107,329	171,864
May 2016	2,753,359	361,591	1,850,179	219,614	903,180	141,977
June 2016	4,021,008	457,267	2,623,690	278,213	1,397,317	179,054
July 2016	2,974,922	394,014	1,925,547	235,776	1,049,375	158,238
August 2016	3,165,917	391,002	2,116,181	234,734	1,049,736	156,268
September 2016	3,265,298	395,186	2,139,617	233,212	1,125,681	161,974
October 2016	2,922,886	371,796	1,908,930	212,139	1,013,956	159,657
November 2016	3,844,342	473,587	2,327,843	262,943	1,516,499	210,644
December 2016	3,893,990	417,756	2,450,053	227,392	1,443,937	190,364



Turnover volume by stock exchange December 2016

	Stuttgart Stock Exchange		Frankfurt Stock Exchange		Total	
	Volume	Share	Volume	Share	Volume	Share
Investment products with capital protection	7,666	0.3%	18,825	1.3%	26,492	0.7%
Investment products without capital protection	1,440,665	58.8%	666,956	46.2%	2,107,621	54.1%
Investment products total	1,448,331	59.1%	685,781	47.5%	2,134,112	54.8%
Leverage products without knock-out	515,387	21.0%	493,125	34.2%	1,008,512	25.9%
Leverage products with knock-out	486,335	19.8%	265,031	18.4%	751,367	19.3%
Leverage products total	1,001,722	40.9%	758,156	52.5%	1,759,878	45.2%
Total	2,450,053	100.0%	1,443,937	100.0%	3,893,990	100.0%

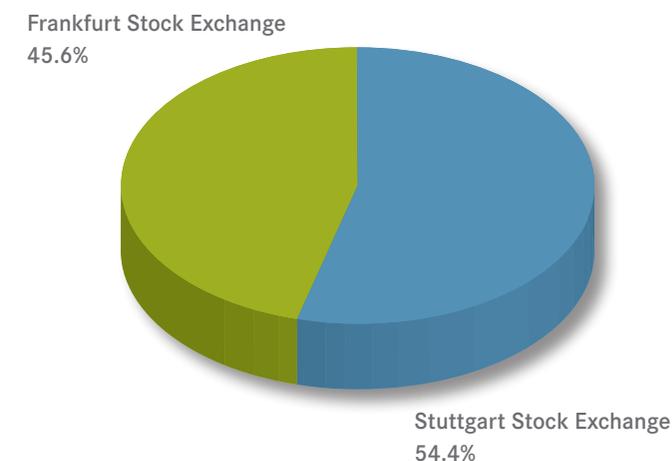
Turnover volume by stock exchange as a percentage



Number of customer orders by stock exchange December 2016

	Stuttgart Stock Exchange		Frankfurt Stock Exchange		Total	
	Number	Share	Number	Share	Number	Share
Investment products with capital protection	376	0.2%	835	0.4%	1,211	0.3%
Investment products without capital protection	45,494	20.0%	23,356	12.3%	68,850	16.5%
Investment products total	45,870	20.2%	24,191	12.7%	70,061	16.8%
Leverage products without knock-out	107,546	47.3%	107,767	56.6%	215,313	51.5%
Leverage products with knock-out	73,976	32.5%	58,406	30.7%	132,382	31.7%
Leverage products total	181,522	79.8%	166,173	87.3%	347,695	83.2%
Total	227,392	100.0%	190,364	100.0%	417,756	100.0%

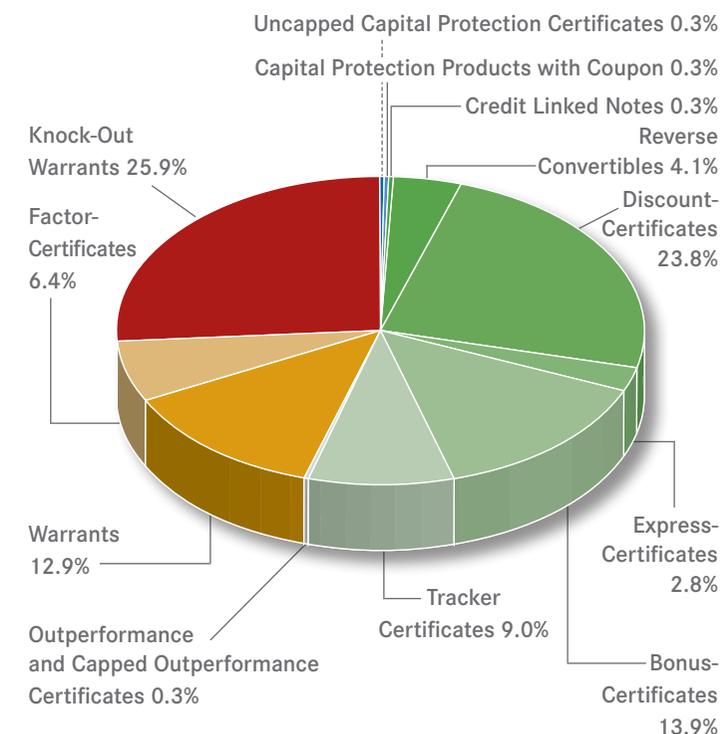
Number of customer orders by stock exchange as a percentage



Turnover by product category December 2016

Product categories	Change in comparison with previous month			Number of orders	Change in comparison with previous month		Change in comparison with previous month	
	Volume	Share	Share		Volume per order	Share	Volume	Share
	in T €	in %	in %		#	in %	in %	in T €
■ Uncapped Capital Protection Certificates	13,150	-8.5	0.3	758	-4.7	0.2	17,349	-4.0
■ Capital Protection Products with Coupon	13,341	53.4	0.3	453	-23.0	0.1	29,451	99.1
■ Credit Linked Notes	13,287	-30.8	0.3	614	-19.2	0.1	21,639	-14.4
■ Reverse Convertibles	160,045	3.9	4.1	8,948	0.9	2.1	17,886	3.0
■ Discount Certificates	925,737	11.2	23.8	18,045	-7.2	4.3	51,302	19.7
■ Express Certificates	107,346	42.1	2.8	5,412	27.1	1.3	19,835	11.7
■ Bonus Certificates	541,639	-13.8	13.9	15,418	5.3	3.7	35,130	-18.2
■ Tracker Certificates	349,445	33.9	9.0	20,191	17.9	4.8	17,307	13.6
■ Outperformance and Capped Outperformance Certificates	10,122	276.2	0.3	222	11.6	0.1	45,594	237.2
Investment products	2,134,112	6.9	54.8	70,061	5.1	16.8	30,461	1.7
■ Warrants	500,469	13.1	12.9	96,353	-14.5	23.1	5,194	32.2
■ Factor Certificates	250,897	-3.0	6.4	36,029	-14.3	8.6	6,964	13.2
■ Knock-Out Warrants	1,008,512	-12.0	25.9	215,313	-14.6	51.5	4,684	3.1
Leverage products	1,759,878	-4.7	45.2	347,695	-14.6	83.2	5,062	11.5
Total	3,893,990	1.3	100.0	417,756	-11.8	100.0	9,321	14.8

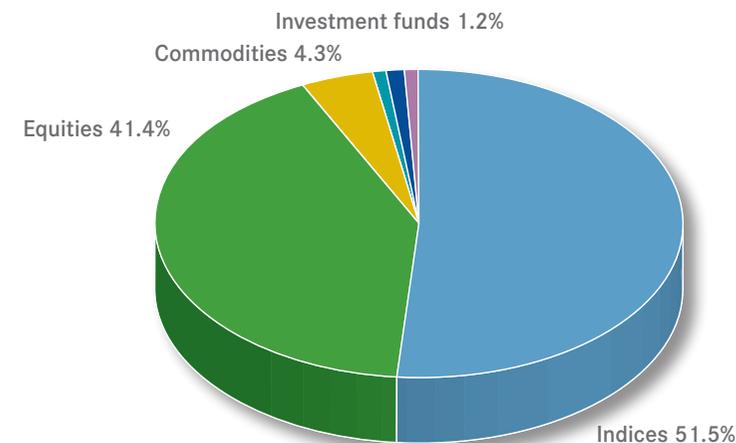
Share in total volume



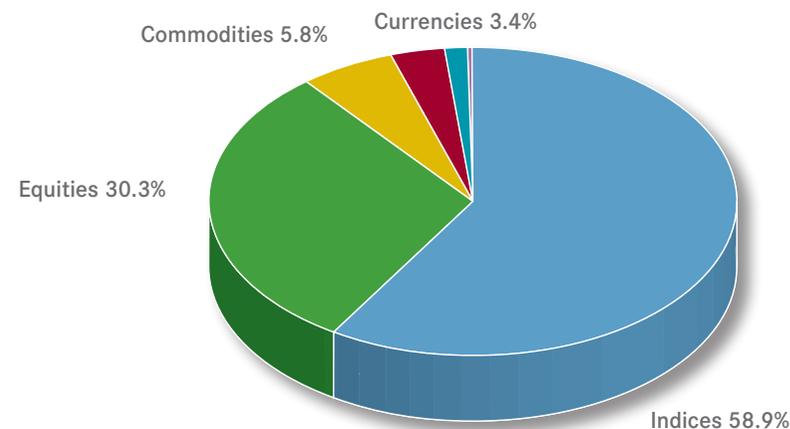
Turnover by underlying December 2016

Underlying	Volume	Change in comparison with previous month	Share
	in T €	in %	in %
Investment products			
Indices	1,099,163	-2.8%	51.5%
Equities	883,440	19.8%	41.4%
Commodities	92,495	16.1%	4.3%
Currencies	1,913	602.8%	0.1%
Interest rates	17,350	-25.8%	0.8%
Investment funds	25,683	49.9%	1.2%
Other	14,068	72.8%	0.7%
Investment products total	2,134,112	6.9%	100.0%
Leverage products			
Indices	1,036,979	-8.1%	58.9%
Equities	533,510	3.3%	30.3%
Commodities	101,821	-18.3%	5.8%
Currencies	60,642	4.9%	3.4%
Interest rates	23,214	21.3%	1.3%
Investment funds	0	0.0%	0.0%
Other	3,712	172.2%	0.2%
Leverage products total	1,759,878	-4.7%	100.0%
Total	3,893,990	1.3%	

Investment products by underlying



Leverage products by underlying



Number of new issues December 2016

Month	Investment products									Leverage products			Total
	With capital protection		Without capital protection							Without knock-out	With knock-out		
	Uncapped Capital Protection Certificates	Capital Protection Products with Coupon	Credit Linked Notes	Reverse Convertibles	Discount Certificates	Express Certificates	Bonus Certificates	Tracker Certificates	Outperformance and Capped Outperformance Certificates	Warrants	Factor Certificates	Knock-Out Warrants	
January 2016	8	3	26	12,200	18,854	227	38,667	145	147	64,220	64	181,439	316,000
February 2016	16	1	44	10,779	15,556	290	45,012	174	7	43,815	37	188,242	303,973
March 2016	14		59	7,375	17,504	227	36,992	262	76	42,123	167	149,095	253,894
April 2016	11	2	34	8,524	11,196	238	39,515	57	18	51,183	150	150,010	260,938
May 2016	11		45	7,242	14,213	333	24,304	290	20	47,576	34	141,227	235,295
June 2016	12		40	8,621	11,107	255	39,970	286	272	38,845	52	148,412	247,872
July 2016	10		34	8,355	17,244	254	35,466	176	6	62,244	198	150,930	274,917
August 2016	3		28	9,884	17,697	336	31,665	148	2	43,793	379	139,962	243,897
September 2016	8		4	17,212	20,944	224	28,548	302	2	52,824	47	144,855	264,970
October 2016	4		8	11,050	11,658	239	24,052	160	39	53,720	127	136,878	237,935
November 2016	10		9	12,972	34,676	258	28,548	135	412	78,812	140	161,631	317,603
December 2016	5		8	15,291	20,333	229	37,799	263	667	79,888	950	136,292	291,725
1/16 - 12/16	112	6	339	129,505	210,982	3,110	410,538	2,398	1,668	659,043	2,345	1,828,973	3,249,019
1/16 - 12/16	118		758,540							661,388		1,828,973	3,249,019
			758,658							2,490,361		3,249,019	

Total number of products December 2016

Month	Investment products									Leverage products			Total
	With capital protection		Without capital protection							Without knock-out	With knock-out		
	Uncapped Capital Protection Certificates	Capital Protection Products with Coupon	Credit Linked Notes	Reverse Convertibles	Discount Certificates	Express Certificates	Bonus Certificates	Tracker Certificates	Outperformance and Capped Outperformance Certificates	Warrants	Factor Certificates	Knock-Out Warrants	
Dezember 2015	2,044	306	1,217	98,669	200,644	3,778	267,914	6,937	1,139	376,118	4,104	329,398	1,292,268
January 2016	2,007	290	1,232	103,970	212,831	3,950	269,598	7,024	1,186	406,527	4,148	333,062	1,345,825
February 2016	1,970	278	1,275	109,059	219,620	4,201	265,187	7,116	1,192	419,667	4,142	342,516	1,376,223
March 2016	1,855	262	1,327	100,437	206,820	4,388	254,273	7,302	1,122	381,976	4,241	326,710	1,290,713
April 2016	1,810	254	1,340	105,842	208,969	4,583	274,969	7,304	1,044	411,280	4,365	333,276	1,355,036
May 2016	1,782	242	1,385	103,763	208,062	4,850	276,680	7,528	1,064	433,951	4,363	344,750	1,388,420
June 2016	1,734	230	1,418	92,185	178,414	5,052	248,923	7,756	974	383,272	4,403	305,620	1,229,981
July 2016	1,670	217	1,430	93,217	188,371	5,246	267,845	7,899	971	418,569	4,578	332,052	1,322,065
August 2016	1,631	199	1,458	97,593	183,486	5,440	273,314	7,993	971	431,963	4,942	345,375	1,354,365
September 2016	1,636	188	1,456	92,947	172,760	5,589	247,231	8,265	600	397,372	4,958	330,267	1,263,269
October 2016	1,595	181	1,411	98,790	177,512	5,681	256,722	8,339	629	419,873	5,058	348,164	1,323,955
November 2016	1,568	175	1,419	104,867	183,460	5,839	259,488	8,395	963	458,274	5,182	355,243	1,384,873
December 2016	1,528	164	1,421	101,351	171,253	5,759	244,505	8,431	1,434	449,896	5,686	339,791	1,331,219
December 2016	1,692					534,154				449,896	5,686	339,791	1,331,219
						535,846					795,373		1,331,219

The statistics include the turnover in derivatives at the stock exchanges in Stuttgart (EUWAX) and Frankfurt (Börse Frankfurt Zertifikate). The turnover figures are taken from Xetra and XONTRO (Xontro Order). The number of customer orders executed was integrated into the EUWAX statistics. The statistics cover all orders entered into the system by customers (not issuers or market makers) and executed by price determination. Issuers' market making activities (provision of liquidity for own securities) are not taken into account. Orders routed via an order flow provider offering an intermediary service are only counted once. Each partial execution of an order counts as an order. Later corrections made in stock exchange systems (e.g. a cancellation following a mistrade) are not taken into account. The securities are allocated using securities master data from WM Gruppe (Wertpapier-Mittelungen), the German numbering agent and provider of securities information, as well as the securities master data from boerse-stuttgart AG. This allows the best possible classification of the turnover data by stock exchange, product group and issuer. From January 2010, the derivatives are classified according to the product classification developed by Deutscher Derivate Verband (DDV).

© Deutscher Derivate Verband (DDV) 2016. This document may only be copied, forwarded or distributed with the express written permission of DDV. Although the data in this document originate from sources deemed to be reliable, no responsibility can be taken for their correctness, completeness or relevance. All the figures for volumes and market shares are based on freely available data. They are provided for information purposes only, and should be taken only as a guide. This document and the information contained in it may only be distributed or published in states in which the relevant statutory provisions permit it. The direct or indirect distribution of this document in the United States, the United Kingdom, Canada or Japan is prohibited, as is its forwarding to US residents.