

Stock Exchange Turnover

in Derivatives



Rise in turnover on the structured products market

Bonus Certificates and Tracker Certificates in strong demand

STRUCTURED SECURITIES



DDV Classification System

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November | 2017

- In the categories of investment products and leverage products, the exchanges in Stuttgart and Frankfurt achieved a total turnover of EUR 3.8 billion in November.
- Leverage products saw a sharper rise in exchange turnover (up 32.1 percent) than the overall market. The figure accounted for 53.0 percent of the aggregate trading volume.
- The trading volume of Tracker Certificates climbed by 52.9 percent and amounted to EUR 323.3 million.
- Turnover in leverage products with indices as an underlying grew by 42.3 percent to stand at EUR 953.0 billion.

Rise in turnover on the structured products market

Bonus Certificates and Tracker Certificates in strong demand

Significant growth in trading in Structured Products on the exchanges in Stuttgart and Frankfurt was stimulated by developments on the capital markets in November 2017. Exchange turnover in structured products and leverage products totalled EUR 3.8 billion. The total number of orders executed stood at 578,559, while the average order size was EUR 6,586. A trading volume of EUR 1.8 billion was generated with investment products in November. It made up 47.0 percent of the total transaction volume. The average order size was EUR 21,013.

Turnover in leverage products totalled EUR 2.0 billion in the period under review, and accounted for 53.0 percent of the total turnover. The average order size was EUR 4,094.

New issues

Banks issued 52,623 new investment products and 305,758 new leverage products at the end of November. In total, 546,011 investment products and 1,138,246 leverage

products were available at the exchanges in Stuttgart and Frankfurt.

Exchange turnover by product category

Investment products

Almost all product categories saw an increase in turnover activity. In particular, Bonus and Tracker Certificates recorded a significant rise in absolute terms. Turnover in **Bonus Certificates** rose to EUR 479.9 million in November, while trading in **Tracker Certificates** stood at EUR 323.3 million in the reporting month. **Reverse Convertibles** saw brisk trading as well, whereas **Credit Linked Notes** fell to EUR 8.3 million in turnover. The exchange turnover for Capital Protection Products offering full capital protection stood at EUR 18.9 million in total in November.

Leverage products

All product categories recorded a significant increase in turnover. **Warrants** saw turnover growth of EUR 558.1

million. Trading activity in **Knock-Out Warrants** stood at EUR 1.2 billion, and at EUR 281.8 million in **Factor Certificates**.

Exchange turnover by underlying

Investment products

Trading in products with **indices as an underlying** was more lively in November (EUR 771.3 million). Following growth in the previous month, turnover in investment products with **equities as an underlying** went up to EUR 817.5 million during the period under review. Equities were the most popular underlying among investment products, representing a share of 45.7 percent. After a downturn in October, turnover in **commodities as an underlying** declined further and stood at EUR 37.5 million. There was a strong increase in demand for investment products with **currencies as an underlying** which generated turnover of EUR 112.7 million, whereas turnover in **interest rates as an underlying** dropped. ▶▶

Leverage products

Exchange-based turnover recorded a growth in almost all types of underlying. Thanks to an increase in turnover to EUR 953.0 million, products with **indices as an underlying** extended their market share to 47.2 percent. Turnover in products with **equities as an underlying** rose to EUR 926.0 million. After losses in the previous month, turnover in **commodities as an underlying** declined further and stood at EUR 69.4 million, whereas the trading volume of leverage products with **currencies as an underlying** increased as well.

Exchange turnover

Stuttgart Exchange scored a turnover volume of EUR 2.5 billion in November. Its market share of the total turnover amounted to 65.0 percent. Frankfurt's exchange registered a trading volume of EUR 1.3 billion. The figure accounted for 35.0 percent of the total exchange-based turnover. 45.6 percent of all customer orders were executed in Frankfurt and 54.4 percent in Stuttgart. ■



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 sixteen 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

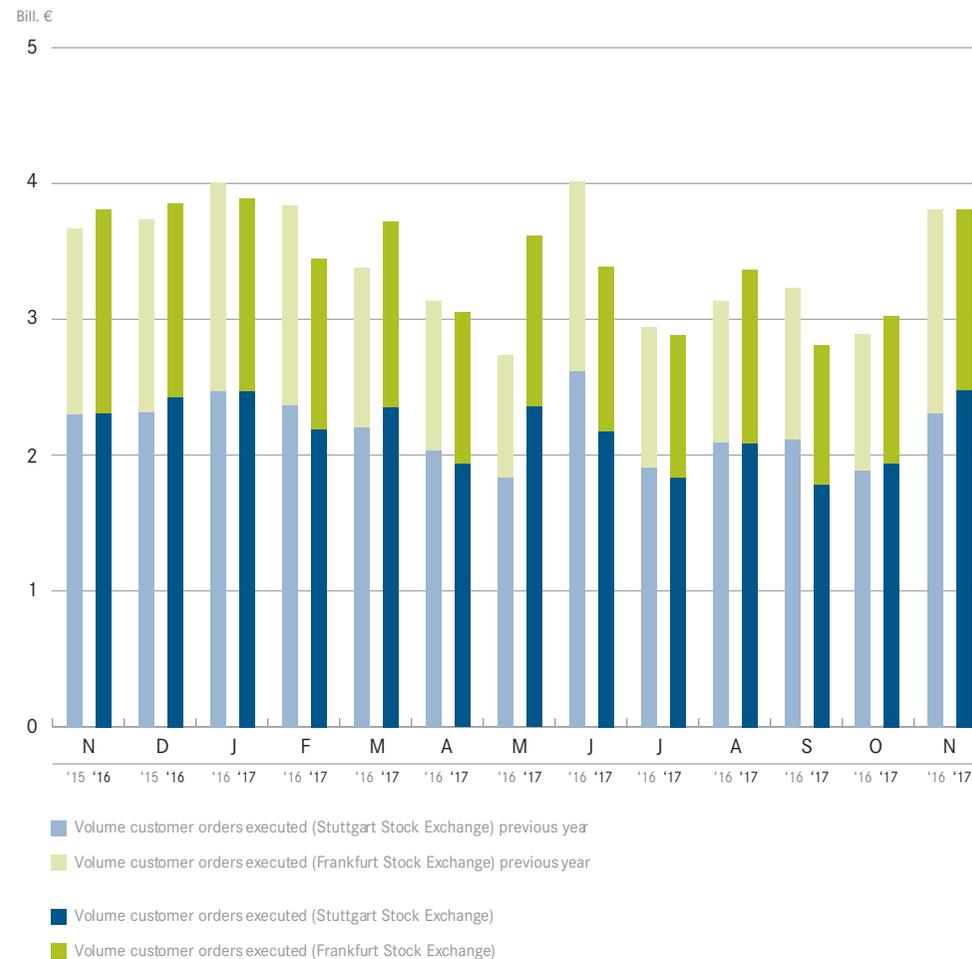
phone: +49 (0)69 244 33 03 70, mobile phone: +49 (0)160 805 30 34

heftrich@derivateverband.de

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Year Overview Stock Exchange Turnover November 2017

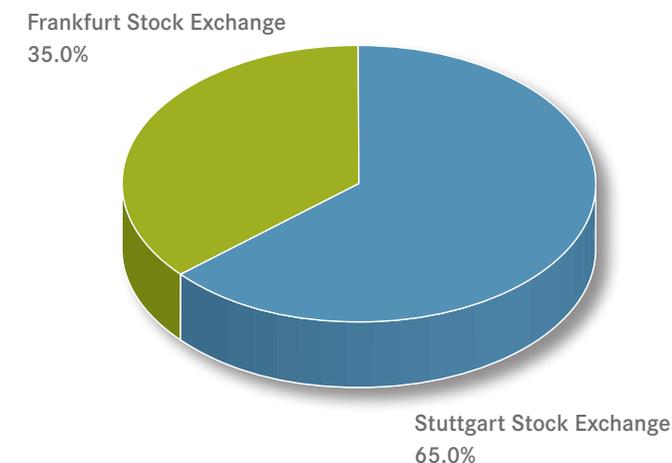
Month	Total		Stuttgart Stock Exchange		Frankfurt Stock Exchange	
	in T€	Number of orders	in T€	Number of orders	in T€	Number of orders
November 2016	3,844,342	473,587	2,327,843	262,943	1,516,499	210,644
December 2016	3,893,990	417,756	2,450,053	227,392	1,443,937	190,364
January 2017	3,925,127	464,407	2,497,422	253,889	1,427,706	210,518
February 2017	3,479,234	437,876	2,214,075	238,716	1,265,159	199,160
March 2017	3,757,006	474,302	2,376,315	257,601	1,380,691	216,701
April 2017	3,073,798	361,755	1,951,579	203,176	1,122,220	158,579
May 2017	3,640,768	446,440	2,376,169	244,843	1,264,600	201,597
June 2017	3,421,454	453,382	2,196,531	243,120	1,224,923	210,262
July 2017	2,911,359	424,463	1,852,962	232,910	1,058,398	191,553
August 2017	3,361,404	485,230	2,085,003	264,830	1,276,401	220,400
September 2017	2,806,304	420,047	1,786,501	222,331	1,019,803	197,716
October 2017	3,013,092	444,144	1,936,767	239,074	1,076,324	205,070
November 2017	3,810,208	578,559	2,476,476	314,925	1,333,731	263,634



Turnover volume by stock exchange November 2017

	Stuttgart Stock Exchange		Frankfurt Stock Exchange		Total	
	Volume	Share	Volume	Share	Volume	Share
Investment products with capital protection	8,232	0.3%	10,723	0.8%	18,955	0.5%
Investment products without capital protection	1,226,565	49.5%	545,089	40.9%	1,771,654	46.5%
Investment products total	1,234,797	49.9%	555,812	41.7%	1,790,609	47.0%
Leverage products without knock-out	695,758	28.1%	483,919	36.3%	1,179,677	31.0%
Leverage products with knock-out	545,922	22.0%	294,000	22.0%	839,922	22.0%
Leverage products total	1,241,679	50.1%	777,919	58.3%	2,019,598	53.0%
Total	2,476,476	100.0%	1,333,731	100.0%	3,810,208	100.0%

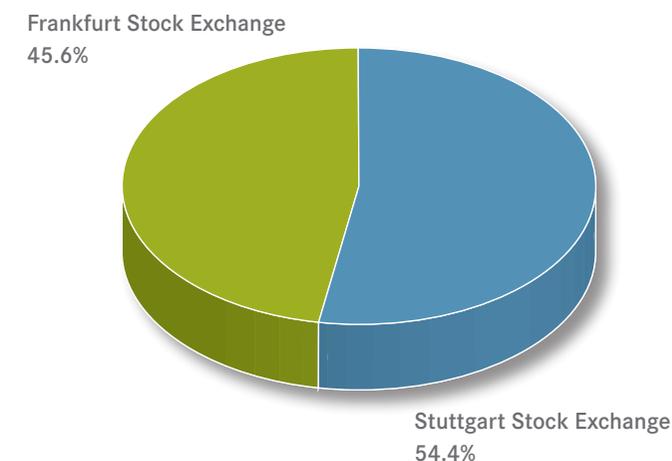
Turnover volume by stock exchange as a percentage



Number of customer orders by stock exchange November 2017

	Stuttgart Stock Exchange		Frankfurt Stock Exchange		Total	
	Number	Share	Number	Share	Number	Share
Investment products with capital protection	372	0.1%	540	0.2%	912	0.2%
Investment products without capital protection	51,446	16.3%	32,857	12.5%	84,303	14.6%
Investment products total	51,818	16.5%	33,397	12.7%	85,215	14.7%
Leverage products without knock-out	149,794	47.6%	152,330	57.8%	302,124	52.2%
Leverage products with knock-out	113,313	36.0%	77,907	29.6%	191,220	33.1%
Leverage products total	263,107	83.5%	230,237	87.3%	493,344	85.3%
Total	314,925	100.0%	263,634	100.0%	578,559	100.0%

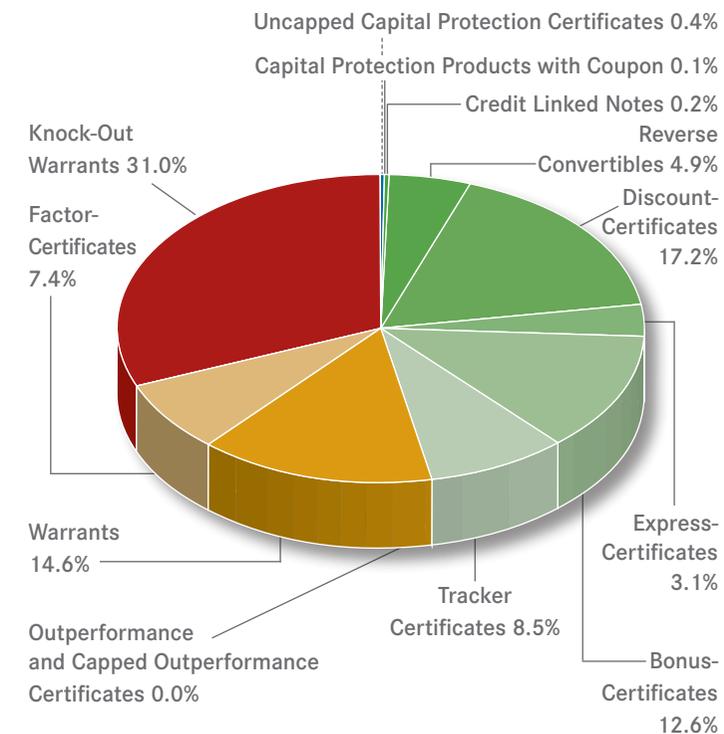
Number of customer orders by stock exchange as a percentage



Turnover by product category November 2017

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	Share	Share	Volume	Share	Share
	in T €	in %	in %		#	in %	in %	in T €	in %	in %
■ Uncapped Capital Protection Certificates	15,644	7.9	0.4	723	8.9	0.1	21,638	-0.9		
■ Capital Protection Products with Coupon	3,311	-51.0	0.1	189	-29.7	0.0	17,518	-30.3		
■ Credit Linked Notes	8,312	-34.2	0.2	362	-17.7	0.1	22,960	-20.1		
■ Reverse Convertibles	185,548	22.4	4.9	8,511	14.3	1.5	21,801	7.1		
■ Discount Certificates	654,680	11.0	17.2	18,720	28.3	3.2	34,972	-13.5		
■ Express Certificates	118,119	13.6	3.1	5,860	29.5	1.0	20,157	-12.3		
■ Bonus Certificates	479,897	23.2	12.6	14,733	13.1	2.5	32,573	8.9		
■ Tracker Certificates	323,281	52.9	8.5	36,050	71.0	6.2	8,968	-10.6		
■ Outperformance and Capped Outperformance Certificates	1,817	-56.0	0.0	67	-57.3	0.0	27,119	3.0		
Investment products	1,790,609	20.6	47.0	85,215	37.0	14.7	21,013	-12.0		
■ Warrants	558,148	33.0	14.6	141,583	33.1	24.5	3,942	-0.1		
■ Factor Certificates	281,774	31.2	7.4	49,637	34.2	8.6	5,677	-2.2		
■ Knock-Out Warrants	1,179,677	32.0	31.0	302,124	26.6	52.2	3,905	4.2		
Leverage products	2,019,598	32.1	53.0	493,344	29.2	85.3	4,094	2.3		
Total	3,810,208	26.5	100.0	578,559	30.3	100.0	6,586	-2.9		

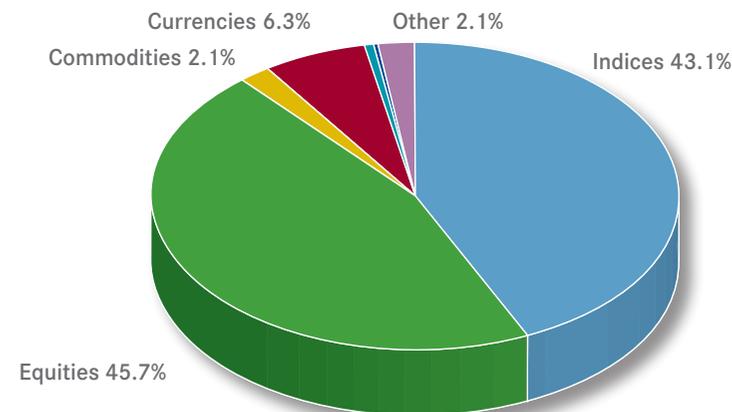
Share in total volume



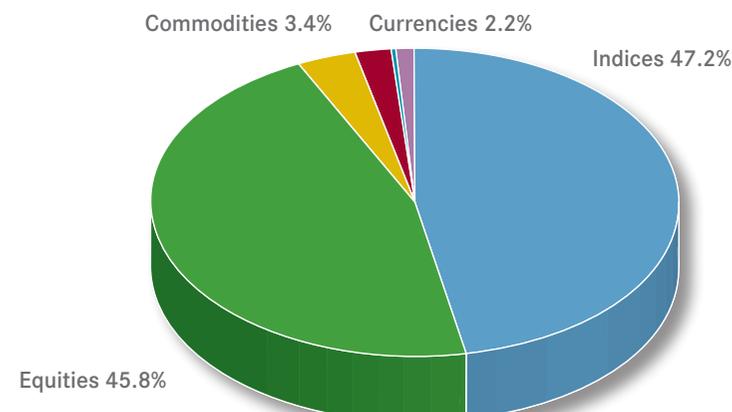
Turnover by underlying November 2017

Underlying	Volume	Change in comparison with previous month	Share
	in T €	in %	in %
Investment products			
Indices	771,307	17.7%	43.1%
Equities	817,484	15.4%	45.7%
Commodities	37,541	-26.2%	2.1%
Currencies	112,745	360.5%	6.3%
Interest rates	8,714	-42.7%	0.5%
Investment funds	4,974	295.5%	0.3%
Other	37,845	31.3%	2.1%
Investment products total	1,790,609	20.6%	100.0%
Leverage products			
Indices	952,960	42.3%	47.2%
Equities	925,977	26.1%	45.8%
Commodities	69,424	-8.5%	3.4%
Currencies	44,900	11.9%	2.2%
Interest rates	7,835	15.1%	0.4%
Investment funds	0	0.0%	0.0%
Other	18,501	952.2%	0.9%
Leverage products total	2,019,598	32.1%	100.0%
Total	3,810,208	26.5%	

Investment products by underlying



Leverage products by underlying



Number of new issues November 2017

Month	Investment products									Leverage products			Total
	With capital protection		Without capital protection						Without knock-out	With knock-out	Total		
	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	
January 2017	7		2	15,438	22,256	254	24,131	133		61,867	507	156,913	281,508
February 2017	7		1	14,125	14,565	282	26,837	390	52	61,844	3,377	119,679	241,159
March 2017	8		7	10,676	18,926	377	34,587	222	294	67,495	254	188,667	321,513
April 2017	7		18	7,394	10,607	305	18,625	205	40	60,865	534	149,348	247,948
May 2017	7		14	13,835	13,921	359	21,777	225	54	77,097	298	160,953	288,540
June 2017	5		24	12,417	14,618	369	26,845	149	29	61,159	1,386	157,600	274,601
July 2017	4		25	14,709	17,730	409	35,538	339		68,994	120	166,694	304,562
August 2017	5		21	11,032	9,185	451	25,204	169	16	70,405	60	192,478	309,026
September 2017	4		15	7,969	13,087	414	20,060	342	1	70,531	256	171,882	284,561
October 2017	10		8	10,232	11,186	396	28,430	164	2	98,487	122	176,122	325,159
November 2017	7		45	10,540	17,147	387	24,379	115	3	85,726	951	219,081	358,381
1/17 - 11/17	71	0	180	128,367	163,228	4,003	286,413	2,453	491	784,470	7,865	1,859,417	3,236,958
1/17 - 11/17	71		585,135						792,335			1,859,417	3,236,958
			585,206						2,651,752			3,236,958	

Total number of products November 2017

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	
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
January 2017	1,494	159	1,407	111,872	186,198	5,619	256,801	8,463	1,429	472,839	5,620	352,164	1,404,065
February 2017	1,453	153	1,408	121,579	190,192	5,544	256,027	8,791	1,478	495,664	8,836	358,619	1,449,744
March 2017	1,393	143	1,414	116,254	179,902	5,574	247,335	8,902	1,685	479,398	8,886	362,338	1,413,224
April 2017	1,352	137	1,416	115,138	184,384	5,636	251,119	9,052	1,629	508,820	9,353	372,441	1,460,477
May 2017	1,318	129	1,427	123,720	190,046	5,607	252,882	9,153	1,582	551,388	9,583	396,656	1,543,491
June 2017	1,285	118	1,449	118,897	172,643	5,483	228,607	9,204	1,341	525,563	10,962	383,370	1,458,922
July 2017	1,243	112	1,424	127,838	183,595	5,526	251,188	9,500	1,337	557,121	10,908	404,243	1,554,035
August 2017	1,195	108	1,444	129,322	183,128	5,492	258,542	9,600	1,351	592,107	10,904	430,955	1,624,148
September 2017	1,179	100	1,456	123,411	168,780	5,520	231,174	9,906	1,115	571,071	11,107	435,983	1,560,802
October 2017	1,167	94	1,421	120,849	169,748	5,538	241,717	9,981	1,035	628,012	11,186	455,640	1,646,388
November 2017	1,136	92	1,466	121,683	171,478	5,537	233,565	10,017	1,037	651,209	12,063	474,974	1,684,257
November 2017	1,228		544,783							651,209	12,063	474,974	1,684,257
			546,011							1,138,246			1,684,257

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).

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