Market Volume

in Derivatives



Total volume of German structured products market stands at EUR 68.4 billion

High demand for Express Certificates

STRUCTURED SECURITIES **INVESTMENT PRODUCTS** LEVERAGE PRODUCTS with capital protection without capital protection without Knock-Out with Knock-Out (100%) (< 100%) Capital Protection Reverse Convertibles **Express Certificates Tracker Certificates** Warrants **Knock-Out Warrants** Products with Coup Capital Protection Factor Certificates **Credit Linked Notes Discount Certificates Bonus Certificates** Capped Outperformance Certificates **DDV Classification System**

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September I 2016 ■ In September, the total volume of

- In September, the total volume of the German structured products market was FUR 68.4 billion.
- The market volume of Capital Protection Products decreased. Uncapped Capital Protection Certificates and Capital Protection Products with Coupon accounted for 40.1 percent of the total volume.
- Contrary to the general trend, the market volume of Express Certificates rose by 2.0 percent to EUR 9.0 billion.
- At EUR 824.7 million, the market volume of investment products with commodities as an underlying was 2.4 percent higher than in the previous month.

Total volume of German structured products market stands at EUR 68.4 billion

High demand for Express Certificates

The outstanding volume of the German structured products market fell slightly in September 2016. Demand for nearly all product categories decreased in particular as a result of the negative market environment.

Overall, the market volume was down 1.6 percent or EUR 994.3 million compared with the previous month. These trends are shown by the latest figures collected each month from 16 banks by the European Derivatives Group (EDG AG) on behalf of Deutscher Derivate Verband (DDV), the German Derivatives Association. Extrapolating these figures to all issuers operating on the market puts the total volume of the German structured products market at EUR 68.4 billion at the end of September 2016.

Compared with the previous month, the ratio of investment products to leverage products remained unchanged. The total market share of investment products was 97.4 percent, while leverage products made up 2.6 percent.

Investment products by product category

Overall the volume of Capital Protection Products decreased further in the month under review. Compared with the figure for August, the market volume of Capital Protection Products with Coupon fell by 2.7 percent to EUR 17.0 billion. This corresponded to a 27.8 percent share of the

investment products market. Uncapped Capital Protection Certificates experienced a decline of 1.5 percent to stand at EUR 7.5 billion and thus accounted for a share of 12.3 percent of the investment products market. A total of 40.1 percent of the market volume was invested in these two product categories in September.

The volume of Reverse Convertibles recorded a 0.6 percent decrease to EUR 8.7 billion. This corresponded to a share of 14.1 percent.

Contrary to the general trend, Express Certificates gained 2.0 percent to come in at EUR 9.0 billion. Their share was 14.6 percent in September.

Credit Linked Notes lost 0.8 percent to stand at EUR 6.3 billion. They accounted for 10.2 percent of the volume.

Discount Certificates charted a drop of 6.2 percent to EUR 5.2 billion - a share of 8.6 percent.

At EUR 3.9 billion, the market volume for Tracker Certificates remained unchanged in the reporting month. Their volume share made up 6.4 percent of the investment products segment.

Bonus Certificates proved to be less attractive in September. Their volume was down by 4.6 percent to EUR 2.5 billion, representing 4.1 percent of the total market.

Outperformance and Capped Outperformance Certificates fell considerably by 15.0 percent taking the volume to EUR 69.2 million. However, as they accounted for just 0.1 percent of the total investment products volume, this category

had scarcely any impact on the overall trend.

The volume of other Yield Enhancement Products rose by 0.7 percent to EUR 1.1 billion. They represented a share of 1.8 percent of the aggregate volume.

Leverage products by product category

The market volume of leverage products lost 0.6 percent to stand at EUR 1.6 billion in September.

The volume invested in Knock-Out Warrants increased by 1.4 percent in comparison with the previous month, taking it to EUR 677.9 million. Their share of the leverage products segment was 41.2 percent.

Warrants lost 4.2 percent to come in at EUR 613.0 million. Their market share stood at 37.3 percent.

Market Volume in Derivatives

and stood at EUR 352.6 million. This category accounted for a 21.5 percent share of the leverage products market.

Investment products by underlying

Despite suffering losses, structured products with interest rates as an underlying remained the most popular category. At EUR 23.9 billion, their investment volume was down 2.4 percent; their share amounted to 39.0 percent.

Investment products with indices as an underlying followed in second place. Their volume shrank by 1.3 percent, taking it to EUR 18.4 billion. This corresponded to 30.0 percent of the total volume.

Investment products with equities as an underlying were the third most popular investment category. Their share of the total volume was 29.0 percent, down 1.1 percent to EUR 17.8 billion.

Following at a considerable distance behind the other asset classes were investment products with commodities as an underlying. Their outstanding volume increased by 2.4 percent in September, taking it to EUR 824.7 million. Commodities therefore accounted for a 1.3 percent share of the aggregate volume.

As in the previous month, investment products with investment funds as an underlying made up a 0.6 percent share. Their volume came in at EUR 397.9 million.

Investments in Factor Certificates went up by 2.1 percent With a share of 0.04 percent, investment products with currencies as an underlying were fairly insignificant in relation to the general trend of the market. The volume invested in this category dropped by 0.1 percent to EUR 24.5 million in the reporting month.

Leverage products by underlying

The market volume of leverage products with equities as an underlying fell by 0.5 percent to EUR 870.0 million. They made up 52.9 percent of the total leverage products volume.

Leverage products with indices as an underlying were down 3.5 percent at EUR 500.1 million. This corresponded to a 30.4 percent share of the total volume.

Lagging some way behind leverage products based on equities and indices were those with commodities as an underlying. Their volume was up a significant 7.5 percent month on month and came in at EUR 205.6 million. Their market share was 12.5 percent.

Leverage products with currencies as an underlying lost 1.2 percent. Their volume stood at EUR 50.6 million, corresponding to a 3.1 percent share of the total volume.

The market volume of leverage products with interest rates as an underlying plunged by 10.0 percent to EUR 17.1 million in September. However, since they accounted for only 1.0 percent of the total volume, their impact on the general trend was not significant.































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.

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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).

Market volume since September 2015





Product classes

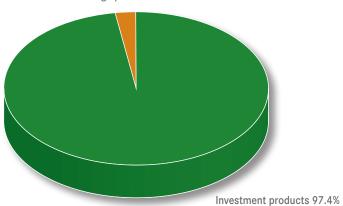
Market volume as at 30 September 2016

Product classes	Market volume	Share	
	T€	%	
Investment products with capital protection	24,552,457	40.1%	
Investment products without capital protection	36,721,550	59.9%	
■ Total Investment products	61,274,007	100.0%	
Leverage products without Knock-Out	965,578	58.8%	
Leverage products without Knock-Out	677,861	41.2%	
■ Total Leverage products	1,643,439	100.0%	
■ Total Investment products	61,274,007	97.4%	
■ Total Leverage products	1,643,439	2.6%	
Total Derivatives	62,917,446	100.0%	

Product classes

Market volume as at 30 September 2016

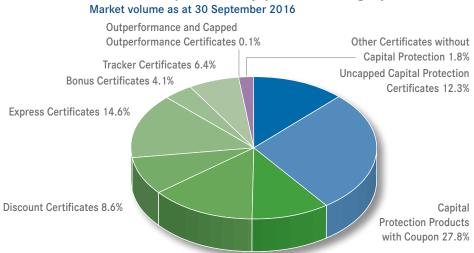




Market volume by product category as at 30 September 2016

Product categories	Market volume			volume djusted	Number of Products	
	T€	in %	T€	in %	#	in %
Uncapped Capital Protection Certificates	7,522,234	12.3%	7,521,671	12.2%	2,148	0.4%
Capital Protection Products with Coupon	17,030,223	27.8%	17,050,274	27.8%	2,417	0.5%
Credit-Linked Notes	6,257,443	10.2%	6,259,452	10.2%	2,432	0.5%
Reverse Convertibles	8,663,845	14.1%	8,725,741	14.2%	102,236	20.4%
■ Discount Certificates	5,240,925	8.6%	5,237,530	8.5%	155,244	31.0%
Express Certificates	8,953,446	14.6%	9,026,965	14.7%	9,470	1.9%
■ Bonus Certificates	2,485,749	4.1%	2,485,901	4.0%	223,097	44.6%
Tracker Certificates	3,931,525	6.4%	3,914,272	6.4%	1,831	0.4%
Outperformance and Capped	69,209	0.1%	69,901	0.1%	764	0.2%
Outperformance Certificates						
Other Certificates without Capital Protection	1,119,408	1.8%	1,122,334	1.8%	907	0.2%
Investment products total	61,274,007	97.4%	61,414,041	97.3%	500,546	40.0%
Warrants	613,005	37.3%	682,870	39.4%	396,963	52.8%
Factor Certificates	352,573	21.5%	372,644	21.5%	3,892	0.5%
Knock-Out Warrants	677,861	41.2%	679,639	39.2%	351,195	46.7%
Leverage products total	1,643,439	2.6%	1,735,153	2.7%	752,050	60.0%
Total	62,917,446	100.0%	63,149,195	100.0%	1,252,596	100.0%

Investment products by product category



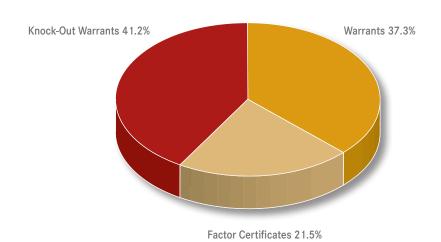
Change in market volume by product category in comparison with previous month

Product categories	Change		Change price-adjusted		Price effect	
	T€	in %	T€	in %	in %	
Uncapped Capital Protection Certificates	-111,175	-1.5%	-111,738	-1.5%	0.0%	
Capital Protection Products with Coupon	-474,909	-2.7%	-454,858	-2.6%	-0.1%	
Credit-Linked Notes	-52,632	-0.8%	-50,623	-0.8%	0.0%	
Reverse Convertibles	-48,735	-0.6%	13,162	0.2%	-0.7%	
■ Discount Certificates	-348,881	-6.2%	-352,276	-6.3%	0.1%	
Express Certificates	175,852	2.0%	249,371	2.8%	-0.8%	
Bonus Certificates	-119,554	-4.6%	-119,402	-4.6%	0.0%	
Tracker Certificates	1,264	0.0%	-15,990	-0.4%	0.4%	
Outperformance and Capped	-12,172	-15.0%	-11,480	-14.1%	-0.9%	
Outperformance Certificates						
Other Certificates without Capital Protection	7,338	0.7%	10,264	0.9%	-0.3%	
Investment products total	-983,604	-1.6%	-843,570	-1.4%	-0.2%	
Warrants	-27,200	-4.2%	42,665	6.7%	-10.9%	
Factor Certificates	7,400	2.1%	27,471	8.0%	-5.8%	
Knock-Out Warrants	9,152	1.4%	10,931	1.6%	-0.3%	
Leverage products total	-10,648	-0.6%	81,067	4.9%	-5.5%	
Total	-994,252	-1.6%	-762,503	-1.2%	-0.4%	

Leverage products by product category

Market volume as at 30 September 2016

Reverse Convertibles 14.1%



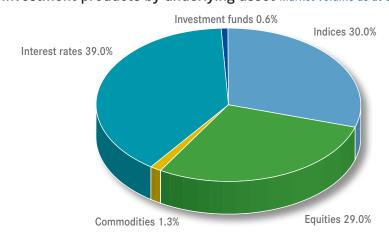
Credit-Linked Notes 10.2%

Market volume by underlying asset as at 30 September 2016

Underlying	Market volume		Market volume price-adjusted*		Number of	Products
	T€	%	T€	%	#	%
Investment products						
Indices	18,358,448	30.0%	18,376,885	29.9%	120,634	24.1%
Equities	17,790,739	29.0%	17,909,619	29.2%	372,652	74.4%
Commodities	824,704	1.3%	806,942	1.3%	2,148	0.4%
Currencies	24,454	0.0%	24,316	0.0%	19	0.0%
Interest rates	23,877,776	39.0%	23,898,874	38.9%	4,970	1.0%
Investment funds	397,886	0.6%	397,406	0.6%	123	0.0%
	61,274,007	97.4%	61,414,041	97.3%	500,546	40.0%
Leverage products					'	
Indices	500,065	30.4%	542,682	31.3%	176,882	23.5%
Equities	870,006	52.9%	915,561	52.8%	498,120	66.2%
Commodities	205,594	12.5%	204,764	11.8%	37,131	4.9%
Currencies	50,626	3.1%	53,262	3.1%	36,564	4.9%
Interest rates	17,127	1.0%	18,864	1.1%	3,345	0.4%
Investment funds	21	0.0%	21	0.0%	8	0.0%
	1,643,439	2.6%	1,735,153	2.7%	752,050	60.0%
Total	62,917,446	100.0%	63,149,195	100.0%	1,252,596	100.0%

^{*}Market volume adjusted for price changes = quantity outstanding as at 30 September 2016 x price as at 31 August 2016

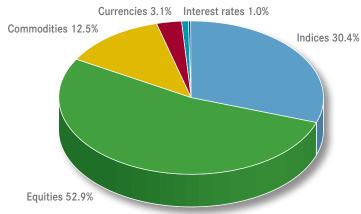
Investment products by underlying asset Market volume as at 30 September 2016



Change in the market volume by underlying asset in comparison with previous month

Underlying		Change	price	Change e-adjusted	Price effect
	T€	%	T€	%	%
Investment products					
Indices	-233,305	-1.3%	-214,868	-1.2%	-0.1%
Equities	-197,261	-1.1%	-78,381	-0.4%	-0.7%
Commodities	19,632	2.4%	1,871	0.2%	2.2%
Currencies	-21	-0.1%	-159	-0.6%	0.6%
Interest rates	-583,412	-2.4%	-562,314	-2.3%	-0.1%
■ Investment funds	10,762	2.8%	10,282	2.7%	0.1%
	-983,604	-1.6%	-843,570	-1.4%	-0.2%
Leverage products					
Indices	-18,136	-3.5%	24,481	4.7%	-8.2%
Equities	-4,382	-0.5%	41,173	4.7%	-5.2%
Commodities	14,402	7.5%	13,573	7.1%	0.4%
Currencies	-624	-1.2%	2,011	3.9%	-5.1%
Interest rates	-1,907	-10.0%	-171	-0.9%	-9.1%
Investment funds	0	0.0%	0	0.0%	0.0%
	-10,648	-0.6%	81,067	4.9%	-5.5%
Total	-994,252	-1.6%	-762,503	-1.2%	-0.4%

Leverage products by underlying asset Market volume as at 30 September 2016



Collection, validation and analysis methodology

1. Calculation of the market volume

In calculating the outstanding volume, the first step is to establish the market volume for an individual issue by multiplying the quantity outstanding by the market price on the last trading day of the month under review. The total market volume is calculated by adding the individual values. The price-adjusted figure is obtained by valuing the outstanding quantities at the market prices on the last trading day of the previous month. Newly launched products are valued at the price on the last trading day in the month under review.

2. Calculation of the turnover

Turnover is calculated at the relevant exercise price by aggregating the individual trades per issue and period and then adding them up. Purchases and sales are included at their relevant absolute amounts. The only turnover recorded is that relating to end customers. Also, issues are not classified as turnover until their value dates. By contrast, repayments are not included in the turnover figures, since they do not constitute actual trades. This means that there is a natural outflow of funds at the maturity date of the products, although this is offset by new issues if investors continue to invest in these investment classes. This turnover calculation can lead to inflows of funds in one investment class in one month that exceed the turnover recorded for that month in terms of their amounts. Also, large price fluctuations can lead to a change in the market volume that exceeds the turnover amount in terms of its amount.

3. Definition of the retail products covered

The collection and analysis process covers market volume and turnover in retail products that are publicly offered and listed on at least one German stock exchange in the relevant survey period. Private placements, institutional transactions and white-label trading are not covered. The possibility that parts of an issue may be bought by institutional investors, for instance through the stock exchange, cannot be ruled out.

4. DDV classification system (Derivatives League)

The product classification system used is based on DDV's Derivatives League concept. Investment products include Uncapped Capital Protection Certificates, Capital Protection Products with Coupon, Reverse Convertibles, Discount Certificates, Express Certificates, Bonus Certificates, Tracker Certificates, Outperformance and Capped Outperformance Certificates, as well as other investment products without capital protection. Leverage products comprise Warrants and Knock-Out Warrants. (For further details please refer to http://www.derivateverband.de/DE/MediaLibrary/Document/ddv_klassifizierung_final.pdf).

5. Differentiation by investment class

Retail products are differentiated by the investment class of the underlying. All products with an equity component are included among the equity-based investment or leverage products. Products with a purely bond-based underlying (e.g. index certificates based on the German REX bond index, capital protected certificates based on the EURIBOR Euro Interbank Offered Rate) are included in the investment class of bonds. The currencies and commodities investment class comprises products based on goods, commodities and currencies. Hedge fund products are also shown separately.

6. Collection of the data

Each month, the issuers provide the relevant data in a specified scope and format from their internal systems (trading, risk management and pricing systems etc.). The mandatory information comprises ISIN, product type, asset class of the underlying, product category, turnover, market volume, quantity outstanding, maturity date of the products, product name, issue date, issue volume (quantity issued). The optional information includes details of the underlying, the knock-out thresholds, market prices and listings on German stock exchanges.

7. Monitoring of compliance with the self-commitment

Compliance with the code of conduct is monitored by means of onsite and off-site inspection of data and systems. Random sampling and targeted requests for selected information are backed up by cross-checking of data using stock exchange data, information services and the websites of issuers. In particular, the data are reconciled on a regular basis in cooperation with Boerse Stuttgart, with the main focus on stock exchange listing, the categorisation of products and the substantiation of figures for turnover and outstanding volumes.

DISCLAIMER

EDG AG regularly checks the methods and analyses on which this interpretation is based. However, it does not guarantee the correctness of the analyses. By signing up to the voluntary agreement, the issuers have agreed to ensure the correctness of the transaction data provided by them, and on which the analysis is based. However, EDG AG cannot guarantee the correctness or the completeness of the data from the issuers.

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