

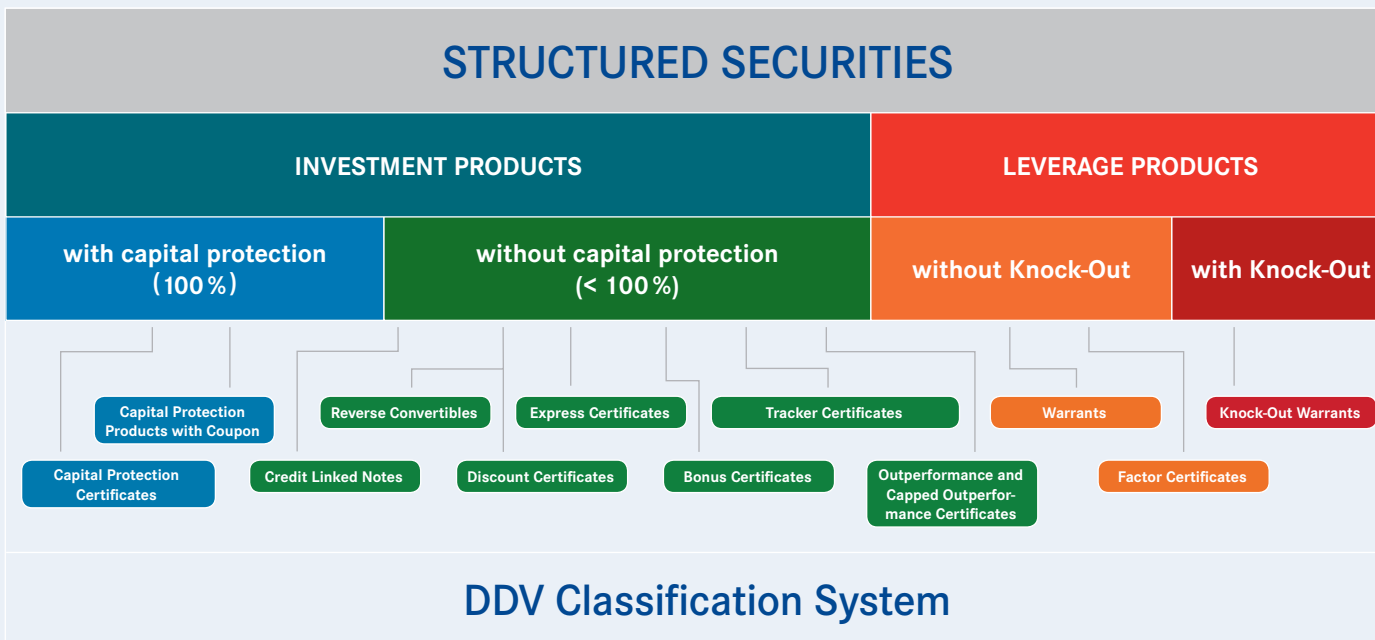
# Market Volume

in Derivatives

## Structured securities are becoming more popular

In particularly high demand: Express Certificates and Reverse Convertibles

### STRUCTURED SECURITIES



### DDV Classification System

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## November | 2015

- In November, the total volume of the German structured products market rose to EUR 70.8 billion.
- Express Certificates experienced above-average growth of 7.4 percent. Their market volume stood at EUR 6.1 billion.
- The market volume of investment products with commodities as an underlying bucked the generally positive trend in November. Their market volume went down to EUR 854.6 million.
- The market volume of leverage products gained a significant 18.8 percent, taking their volume to EUR 2.2 billion.

## Structured securities are becoming more popular

In particularly high demand: Express Certificates and Reverse Convertibles

The outstanding volume of the German structured products increased once again in November 2015. A positive market environment was responsible for growth in almost all product categories. Express Certificates and Reverse Convertibles attracted very strong demand.

Overall, the market volume increased by 1.1 percent or EUR 736.2 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 puts the **total volume of the German structured products market at EUR 70.8 billion at the end of November 2015.**

Compared with the previous month, the **ratio of investment products to leverage products** shifted in favour of leverage products. They made up 3.4 percent of the total market share. Investment products continued to influence market developments with a total market volume share of 96.6 percent.

### Investment products by product category

Bucking the generally positive market trend, the volume of **Capital Protection Products** decreased in the month under review. Compared with the previous month, the market

volume of Capital Protection Products with Coupon fell by 3.1 percent to EUR 20.3 billion. This corresponded to a 32.2 percent share of the investment products market. Uncapped Capital Protection Certificates registered a slight minus of 0.5 percent, taking their volume to EUR 9.3 billion. This represented 14.7 percent of the investment products market. A total of 46.9 percent of the market volume was invested in these two product categories in November.

**Reverse Convertibles** upped their volume substantially by 5.6 percent to EUR 8.2 billion. This corresponded to a market share of 13.1 percent.

**Express Certificates** also recorded above-average growth. They gained 7.4 percent to come in at EUR 6.1 billion. Their share was 9.7 percent in November.

The market volume of **Credit Linked Notes** increased by a moderate 1.5 percent to EUR 5.4 billion. They accounted for a share of 8.5 percent of the volume.

Contrary to the overall trend, **Discount Certificates** lost 0.7 percent to stand at EUR 5.1 billion – a share of 8.2 percent.

The market volume for **Tracker Certificates** increased by 2.1 percent to EUR 4.5 billion. Their share of the investment products segment accounted for 7.2 percent.

**Bonus Certificates** also experienced growth in November. Their market volume rose to EUR 2.7 billion, an increase of 2.8 percent on October. This corresponded to a 4.4 percent share of the total market.

**Outperformance and Capped Outperformance Certificates** charted significant growth of 4.9 percent taking the volume to EUR 124.2 million. However, as they accounted for just 0.2 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 0.8 percent to EUR 1.1 billion. They accounted for a 1.8 percent share.

### Leverage products by product category

The market volume of **leverage products** climbed 18.8 percent to stand at EUR 2.2 billion in November.

The volume invested in **Knock-Out Warrants** increased by 20.5 percent in comparison with the previous month, taking it to EUR 890.5 million. The share of Knock-Out Warrants in the leverage products market was 39.7 percent.

**Warrants** recorded a rise of 19.4 percent to come in at EUR 915.7 million. Their market share stood at 40.8 percent. ►►

The volume invested in **Factor Certificates** also increased substantially to EUR 438.0 million – a 14.4 percent increase. This category accounted for 19.5 percent of the leverage products market.

## Investment products by underlying

Despite registering some losses, structured products with **interest rates as an underlying** remained the most popular category. Their volume went down by 2.2 percent to EUR 26.8 billion mainly due to the decrease in Capital Protection Products with Coupon. This took their share to 42.6 percent.

Investment products with **equities as an underlying** followed in second place. Their volume grew by 1.6 percent, taking it to EUR 18.3 billion. This corresponded to 29.2 percent of the total volume.

Investment products with **indices as an underlying** were the third most popular investment category. Their share of the total volume grew by 4.7 percent to EUR 16.2 billion. This corresponded to a 25.8 percent share.

Following at a considerable distance behind the other asset classes were investment products with **commodities as an underlying**. Their outstanding volume dwindled by 7.9 percent to stand at EUR 854.6 million in November. Commodities accounted for a 1.4 percent share of the total volume.

As in the previous month, investment products with **investment funds as an underlying** made up a 1.0 percent share. Their volume came in at EUR 645.1 million.

Investment products with **currencies as an underlying** were fairly insignificant in relation to the general trend with a share of 0.1 percent. The volume invested in them rose by 1.8 percent to EUR 40.4 million in the reporting month.

## Leverage products by underlying

The market volume of leverage products with **equities as an underlying** gained 19.7 percent and amounted to EUR 1.2 billion. These instruments made up 53.9 percent of the total leverage products volume.

Leverage products with **indices as an underlying** climbed 23.8 percent to reach EUR 775.8 million. This corresponded to a 34.6 percent share of the total volume.

Lagging some way behind, leverage products with **commodities as an underlying** came in at EUR 137.2 million. This corresponded to an 11.3 percent decrease on the previous month. Their market share was 6.1 percent.

The market volume of leverage products with **currencies as an underlying** upped 36.9 percent to stand at EUR 96.2 million. This corresponded to a 4.3 percent share of the total volume.

Leverage products with **interest rates as an underlying** lost 8.0 percent in November and dropped to EUR 24.5 million. Because they accounted for only 1.1 percent of the volume, their impact on the general trend was not significant, however. ■



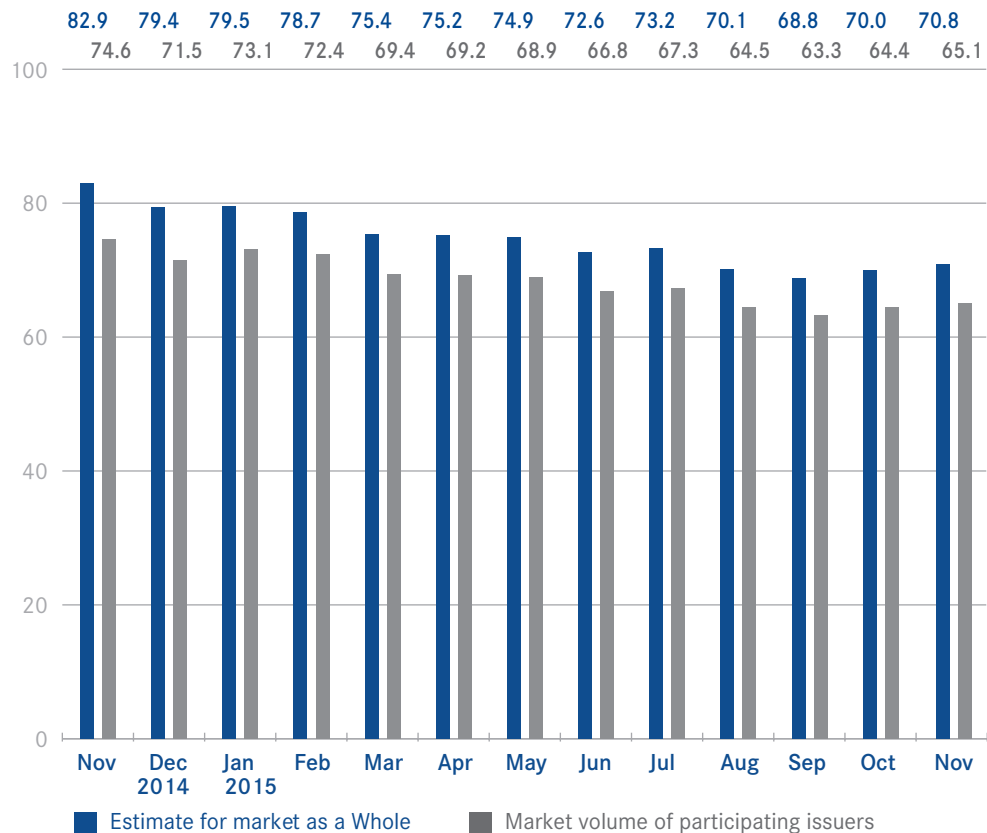
## Deutscher Derivate Verband (DDV)

Deutscher Derivate Verband (DDV), the German Derivatives Association, is the industry representative body for the 16 leading issuers of derivatives in Germany: Barclays, BayernLB, BNP Paribas, Citigroup, Commerzbank, DekaBank, Deutsche Bank, DZ BANK, Goldman Sachs, Helaba, HSBC Trinkaus, HypoVereinsbank, LBBW, Société Générale, UBS and Vontobel. The Association's work is supported by nine sponsoring members, which include the Stuttgart and Frankfurt am Main stock exchanges, finance portals and service providers.

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## Market volume since November 2014



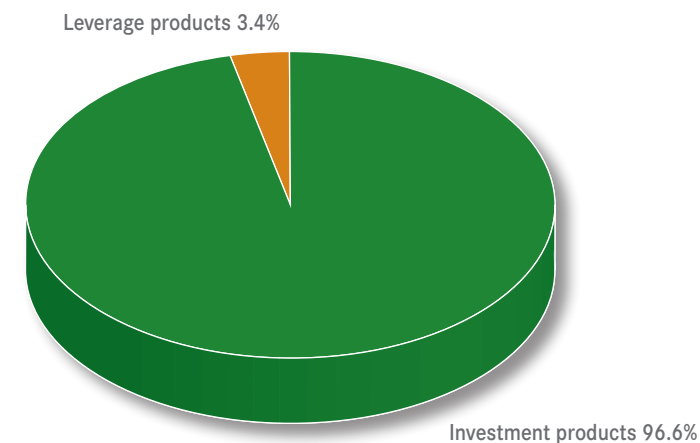
## Product classes

Market volume as at 30 November 2015

Product classes	Market volume	Share
	T€	%
Investment products with capital protection	29,521,168	47.0%
Investment products without capital protection	33,355,625	53.0%
<b>Total Investment products</b>	<b>62,876,793</b>	<b>100.0%</b>
Leverage products without Knock-Out	1,353,709	60.3%
Leverage products with Knock-Out	890,517	39.7%
<b>Total Leverage products</b>	<b>2,244,226</b>	<b>100.0%</b>
<b>Total Investment products</b>	<b>62,876,793</b>	<b>96.6%</b>
<b>Total Leverage products</b>	<b>2,244,226</b>	<b>3.4%</b>
<b>Total Derivatives</b>	<b>65,121,019</b>	<b>100.0%</b>

## Product classes

Market volume as at 30 November 2015

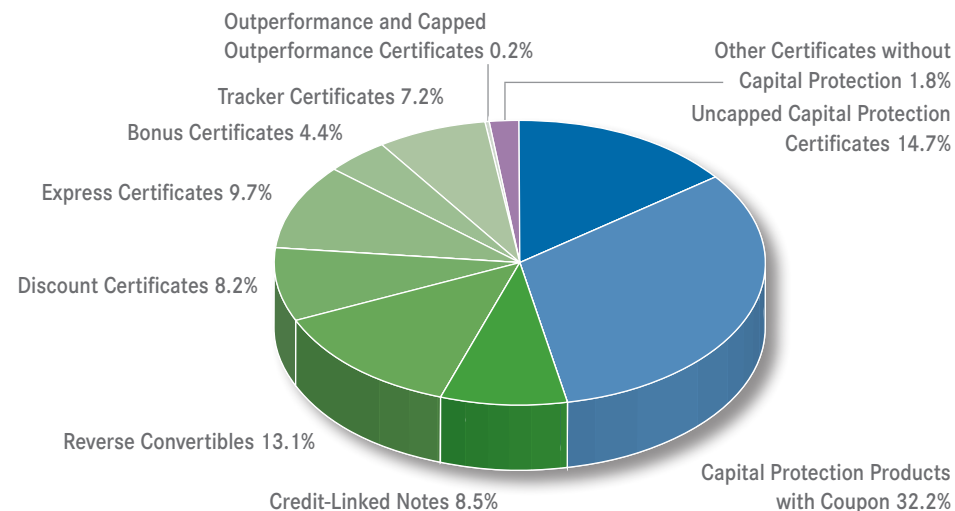


## Market volume by product category as at 30 November 2015

Product categories	Market volume		Market volume price-adjusted		Number of Products	
	T€	in %	T€	in %	#	in %
■ Uncapped Capital Protection Certificates	9,268,286	14.7%	9,234,153	14.8%	2,544	0.5%
■ Capital Protection Products with Coupon	20,252,882	32.2%	20,245,173	32.4%	2,074	0.4%
■ Credit-Linked Notes	5,362,108	8.5%	5,361,207	8.6%	1,802	0.3%
■ Reverse Convertibles	8,236,949	13.1%	8,163,826	13.1%	102,368	19.4%
■ Discount Certificates	5,136,613	8.2%	5,070,671	8.1%	178,722	33.9%
■ Express Certificates	6,108,252	9.7%	6,035,600	9.6%	6,829	1.3%
■ Bonus Certificates	2,740,545	4.4%	2,710,167	4.3%	227,676	43.2%
■ Tracker Certificates	4,546,526	7.2%	4,528,489	7.2%	1,930	0.4%
■ Outperformance and Capped Outperformance Certificates	124,241	0.2%	119,667	0.2%	1,157	0.2%
■ Other Certificates without Capital Protection	1,100,393	1.8%	1,085,668	1.7%	2,128	0.4%
<b>Investment products total</b>	<b>62,876,793</b>	<b>96.6%</b>	<b>62,554,622</b>	<b>96.8%</b>	<b>527,230</b>	<b>41.7%</b>
■ Warrants	915,667	40.8%	830,921	39.7%	379,674	51.4%
■ Factor Certificates	438,042	19.5%	427,648	20.4%	3,695	0.5%
■ Knock-Out Warrants	890,517	39.7%	833,794	39.8%	354,789	48.1%
<b>Leverage products total</b>	<b>2,244,226</b>	<b>3.4%</b>	<b>2,092,363</b>	<b>3.2%</b>	<b>738,158</b>	<b>58.3%</b>
<b>Total</b>	<b>65,121,019</b>	<b>100.0%</b>	<b>64,646,984</b>	<b>100.0%</b>	<b>1,265,388</b>	<b>100.0%</b>

## Investment products by product category

Market volume as at 30 November 2015

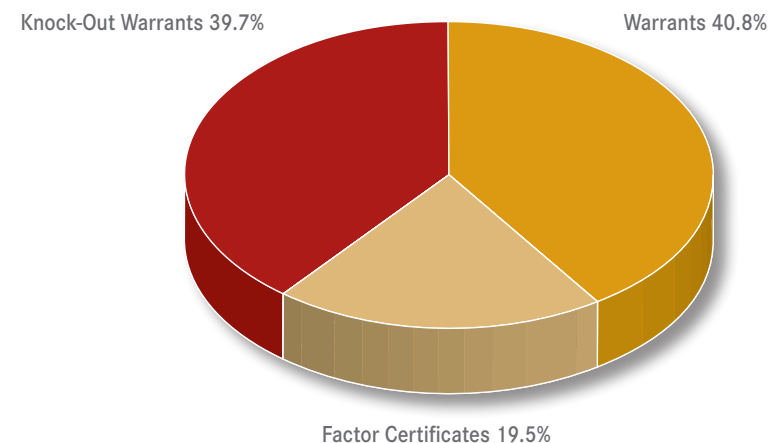


## Change in market volume by product category in comparison with previous month

Product categories	Change		Change price-adjusted		Price effect	
	T€	in %	T€	in %	T€	in %
■ Uncapped Capital Protection Certificates	-48,003	-0.5%	-82,136	-0.9%	0.4%	
■ Capital Protection Products with Coupon	-655,471	-3.1%	-663,180	-3.2%	0.0%	
■ Credit-Linked Notes	79,797	1.5%	78,896	1.5%	0.0%	
■ Reverse Convertibles	439,659	5.6%	366,536	4.7%	0.9%	
■ Discount Certificates	-35,630	-0.7%	-101,571	-2.0%	1.3%	
■ Express Certificates	419,168	7.4%	346,516	6.1%	1.3%	
■ Bonus Certificates	75,355	2.8%	44,977	1.7%	1.1%	
■ Tracker Certificates	92,343	2.1%	74,306	1.7%	0.4%	
■ Outperformance and Capped Outperformance Certificates	5,754	4.9%	1,181	1.0%	3.9%	
■ Other Certificates without Capital Protection	8,205	0.8%	-6,520	-0.6%	1.3%	
<b>Investment products total</b>	<b>381,177</b>	<b>0.6%</b>	<b>59,005</b>	<b>0.1%</b>	<b>0.5%</b>	
■ Warrants	148,645	19.4%	63,898	8.3%	11.0%	
■ Factor Certificates	55,074	14.4%	44,680	11.7%	2.7%	
■ Knock-Out Warrants	151,351	20.5%	94,628	12.8%	7.7%	
<b>Leverage products total</b>	<b>355,070</b>	<b>18.8%</b>	<b>203,207</b>	<b>10.8%</b>	<b>8.0%</b>	
<b>Total</b>	<b>736,247</b>	<b>1.1%</b>	<b>262,212</b>	<b>0.4%</b>	<b>0.7%</b>	

## Leverage products by product category

Market volume as at 30 November 2015



## Market volume by underlying asset as at 30 November 2015

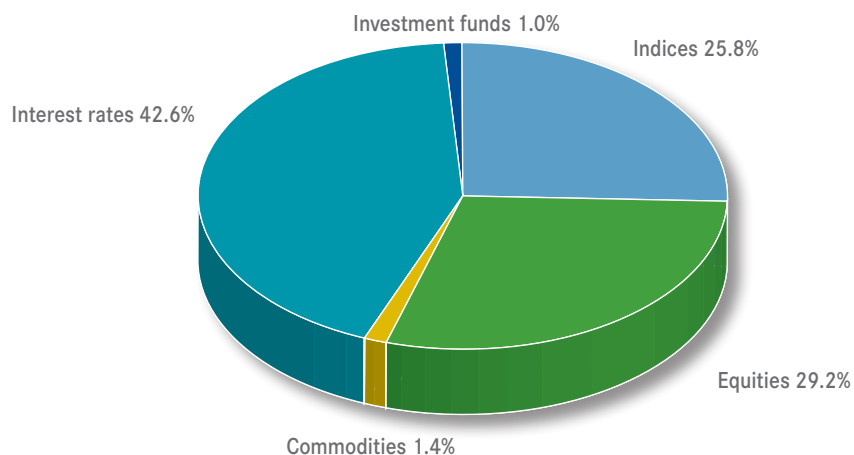
Underlying	Market volume		Market volume price-adjusted*		Number of Products	
	T€	%	T€	%	#	%
<b>Investment products</b>						
Indices	16,193,236	25.8%	15,990,116	25.6%	122,653	23.3%
Equities	18,341,415	29.2%	18,136,960	29.0%	398,489	75.6%
Commodities	854,552	1.4%	905,393	1.4%	1,855	0.4%
Currencies	40,404	0.1%	39,617	0.1%	35	0.0%
Interest rates	26,802,061	42.6%	26,792,141	42.8%	4,094	0.8%
Investment funds	645,126	1.0%	690,395	1.1%	104	0.0%
	<b>62,876,793</b>	<b>96.6%</b>	<b>62,554,622</b>	<b>96.8%</b>	<b>527,230</b>	<b>41.7%</b>
<b>Leverage products</b>						
Indices	775,820	34.6%	685,117	32.7%	198,633	26.9%
Equities	1,210,507	53.9%	1,105,141	52.8%	470,449	63.7%
Commodities	137,217	6.1%	196,228	9.4%	33,676	4.6%
Currencies	96,162	4.3%	78,783	3.8%	32,411	4.4%
Interest rates	24,491	1.1%	27,067	1.3%	2,979	0.4%
Investment funds	28	0.0%	26	0.0%	10	0.0%
	<b>2,244,226</b>	<b>3.4%</b>	<b>2,092,363</b>	<b>3.2%</b>	<b>738,158</b>	<b>58.3%</b>
<b>Total</b>	<b>65,121,019</b>	<b>100.0%</b>	<b>64,646,984</b>	<b>100.0%</b>	<b>1,265,388</b>	<b>100.0%</b>

\*Market volume adjusted for price changes = quantity outstanding as at 30 November 2015 x price as at 31 October 2015

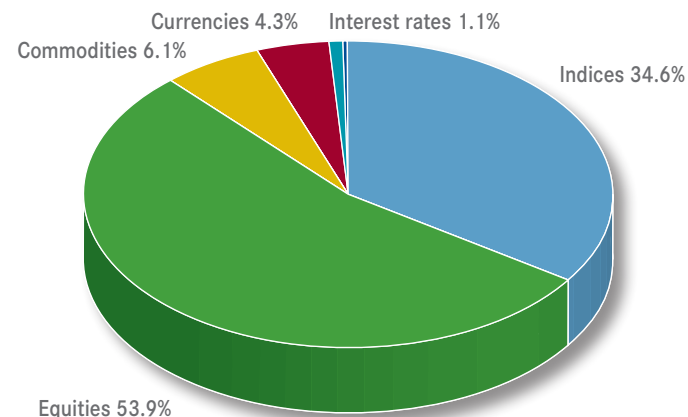
## Change in the market volume by underlying asset in comparison with previous month

Underlying	Change		Change price-adjusted		Price effect
	T€	%	T€	%	
<b>Investment products</b>					
Indices	721,697	4.7%	518,578	3.4%	1.3%
Equities	282,756	1.6%	78,301	0.4%	1.1%
Commodities	-73,139	-7.9%	-22,298	-2.4%	-5.5%
Currencies	696	1.8%	-91	-0.2%	2.0%
Interest rates	-590,235	-2.2%	-600,155	-2.2%	0.0%
Investment funds	39,402	6.5%	84,670	14.0%	-7.5%
	<b>381,177</b>	<b>0.6%</b>	<b>59,005</b>	<b>0.1%</b>	<b>0.5%</b>
<b>Leverage products</b>					
Indices	149,200	23.8%	58,497	9.3%	14.5%
Equities	199,579	19.7%	94,213	9.3%	10.4%
Commodities	-17,472	-11.3%	41,538	26.9%	-38.1%
Currencies	25,900	36.9%	8,521	12.1%	24.7%
Interest rates	-2,139	-8.0%	437	1.6%	-9.7%
Investment funds	2	8.6%	1	2.4%	6.3%
	<b>355,070</b>	<b>18.8%</b>	<b>203,207</b>	<b>10.8%</b>	<b>8.0%</b>
<b>Total</b>	<b>736,247</b>	<b>1.1%</b>	<b>262,212</b>	<b>0.4%</b>	<b>0.7%</b>

## Investment products by underlying asset Market volume as at 30 November 2015



## Leverage products by underlying asset Market volume as at 30 November 2015



## 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](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 on-site 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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