

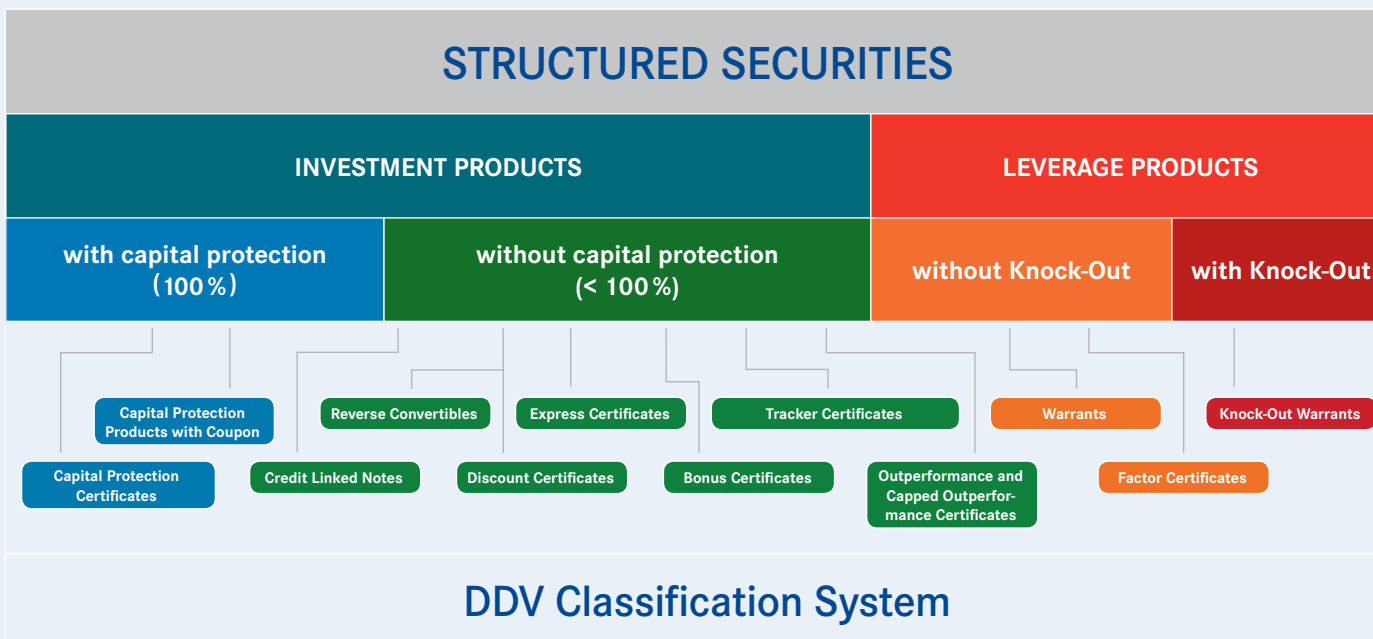
# Market Volume

in Derivatives

## Structured products in high demand

Express Certificates and Discount Certificates particularly sought-after

### STRUCTURED SECURITIES



### DDV Classification System

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## February | 2017

- The total volume of the German structured products market rose to EUR 68.6 billion in February.
- At 5.6 percent, Discount Certificates grew particularly strongly, with a volume of EUR 4.9 billion.
- The market volume of leverage products increased by 8.8 percent to EUR 1.9 billion.
- Leverage products with equities as an underlying recorded an increase of 9.9 percent. The volume invested in these products was EUR 1.1 billion.

## Structured products in high demand

### Express Certificates and Discount Certificates particularly sought-after

The outstanding volume of the German structured products market increased in February 2017. Particularly strong growth was recorded in Express Certificates and Discount Certificates. However, there were further losses in the volume of Capital Protection Products, despite the upward overall trend.

The total market volume increased by 1.8 percent, or EUR 1.1 billion, in comparison with the previous month. These trends are shown by the latest figures collected each month from 15 banks by the European Derivatives Group (EDG AG) on behalf of the German Derivatives Association (Deutscher Derivate Verband, DDV). Extrapolating these figures to all issuers puts the **total volume of the German structured products market** at **EUR 68.6 billion in February 2017**.

The **ratio of investment products to leverage products** shifted in favour of leverage products. Investment products accounted for 96.9 percent of the total market volume, while leverage products made up 3.1 percent.

#### Investment products by product category

Contrary to the general upward trend, the volume of **Capital Protection Products** fell during the month of February. The market volume of Capital Protection Products with Coupon

fell by 0.6 percent compared with the previous month, to EUR 15.7 billion. This represented a share of 25.6 percent of the investment products market. Uncapped Capital Protection Certificates recorded a decrease of 2.6 percent to EUR 7.1 billion. They accounted for 11.6 percent of the investment products market. A total of 37.2 percent of the market volume was invested in these two product categories in February.

The volume of **Reverse Convertibles** rose by 2.3 percent to EUR 9.4 billion, representing a share of 15.4 percent.

**Express Certificates** gained 4.0 percent, contributing EUR 10.8 billion to the total for February. This represented a share of 17.6 percent.

The market volume of **Credit-Linked Notes** increased by 0.2 percent to EUR 5.8 billion. They accounted for 9.5 percent of the total volume.

**Discount Certificates** recorded an increase of 5.6 percent to EUR 4.9 billion, representing a share of 8.1 percent.

The volume of **Tracker Certificates** rose by 5.3 percent to EUR 4.0 billion. Their share of the investment products segment was 6.5 percent.

**Bonus Certificates** also saw an increase in volume in February. Their market volume was EUR 2.4 billion, 5.0 percent higher than the previous month. This represented a share of 4.0 percent of the total volume.

The volume of **Outperformance and Capped Outperformance Certificates** rose by 1.1 percent to EUR 79.0 million. However, this category had hardly any impact on the overall trend, as it accounted for only 0.1 percent of the total volume of investment products.

The volume of **other Yield Enhancement Products** (Growth Other) increased by 0.2 percent to EUR 1.1 billion. They accounted for 1.8 percent of the total.

#### Leverage products by product category

**Leverage products** saw a particularly large increase of 8.8 percent in February, with their market volume rising to EUR 1.9 billion.

The volume invested in **Knock-Out Warrants** went up by 12.8 percent to EUR 853.5 million. Their share of the leverage products segment was 43.9 percent.

**Warrants** recorded an increase of 8.4 percent to EUR 720.4 million. Their share amounted to 37.1 percent. ►►

The volume of **Factor Certificates** rose by 1.3 percent to EUR 370.2 million. This category accounted for a share of 19.0 percent of the leverage products market.

## Investment products by underlying

Despite some losses, investment products with **interest rates as an underlying** remained the most popular category. Their volume fell by 0.4 percent in February to EUR 22.0 billion. This represented 35.9 percent of the total volume.

Investment products with **indices as an underlying** followed in second place. Their volume rose by 2.2 percent to EUR 19.2 billion, representing a share of 31.3 percent of the total volume.

Investment products with **equities as an underlying** were the third most popular category. Their share of the total volume increased by 2.5 percent to EUR 18.7 billion, or 30.6 percent.

Following at a considerable distance behind the other classes were investment products with **commodities as an underlying**. Their outstanding volume rose by 2.0 percent to EUR 788.9 million in February. Commodities accounted for a share of 1.3 percent.

Investment products with **investment funds as an underlying** accounted for 0.9 percent of the total, with a volume of EUR 527.8 million.

Investment products with **currencies as an underlying** had relatively little impact on the general trend, with a share of 0.1 percent. The volume invested in these products rose by 20.2 percent to EUR 33.5 million in February.

## Leverage products by underlying

Leverage products with **equities as an underlying** saw particularly strong growth of 9.9 percent in February, with their market volume rising to EUR 1.1 billion. They made up 54.7 percent of the total leverage products volume.

The volume of leverage products with **indices as an underlying** grew by 6.6 percent to EUR 565.4 million, representing a share of 29.1 percent.

Leverage products with **commodities as an underlying** followed at some distance behind the other classes. However, at EUR 210.1 million their volume was up 12.9 percent month on month. Their share was 10.8 percent.

The market volume of leverage products with **currencies as an underlying** rose by 11.5 percent to EUR 62.8 million, representing a share of 3.2 percent.

Leverage products with **interest rates as an underlying** recorded a decrease of 8.9 percent to EUR 42.0 million in February. Their share of the total volume was 2.2 percent. ■



## 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](http://www.derivateverband.de)

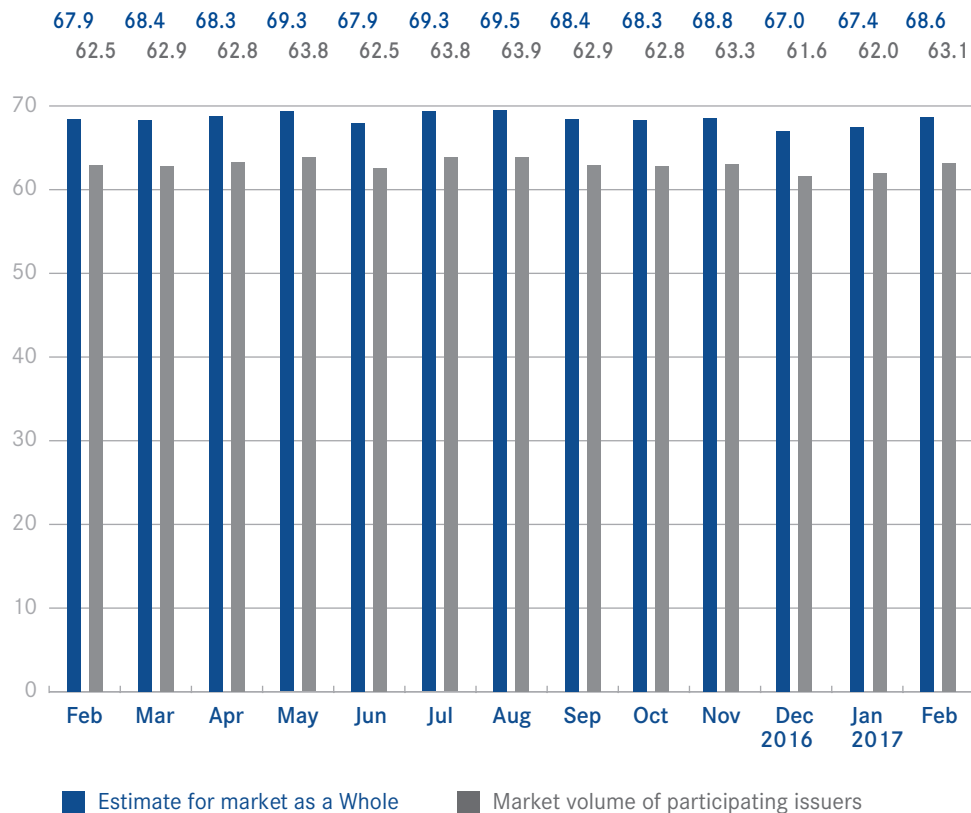
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## Market volume since February 2016



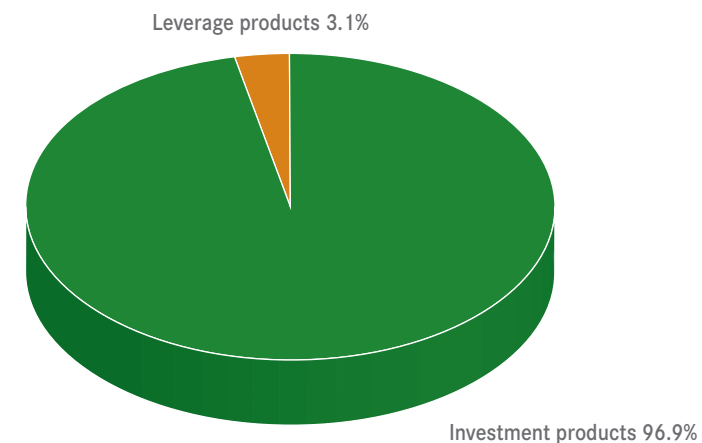
## Product classes

Market volume as at 28 February 2017

Product classes	Market volume	Share
	T€	%
Investment products with capital protection	22,736,288	37.1%
Investment products without capital protection	38,466,922	62.9%
<b>Total Investment products</b>	<b>61,203,210</b>	<b>100.0%</b>
Leverage products without Knock-Out	1,090,599	56.1%
Leverage products with Knock-Out	853,484	43.9%
<b>Total Leverage products</b>	<b>1,944,083</b>	<b>100.0%</b>
<b>Total Investment products</b>	<b>61,203,210</b>	<b>96.9%</b>
<b>Total Leverage products</b>	<b>1,944,083</b>	<b>3.1%</b>
<b>Total Derivatives</b>	<b>63,147,293</b>	<b>100.0%</b>

## Product classes

Market volume as at 28 February 2017

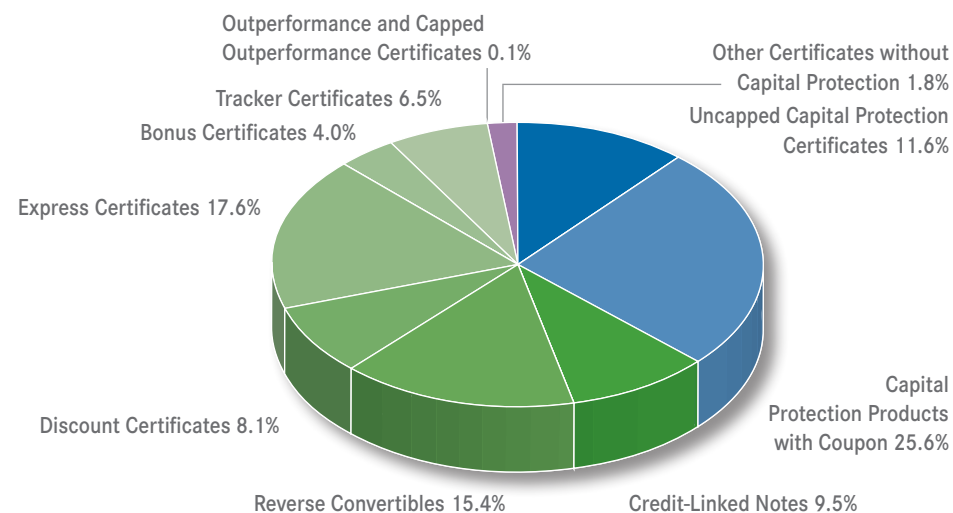


## Market volume by product category as at 28 February 2017

Product categories	Market volume		Market volume price-adjusted		Number of Products	
	T€	in %	T€	in %	#	in %
■ Uncapped Capital Protection Certificates	7,070,611	11.6%	7,030,535	11.6%	1,993	0.4%
■ Capital Protection Products with Coupon	15,665,676	25.6%	15,620,727	25.7%	2,571	0.5%
■ Credit-Linked Notes	5,789,363	9.5%	5,769,152	9.5%	2,321	0.4%
■ Reverse Convertibles	9,448,943	15.4%	9,433,122	15.5%	122,058	22.8%
■ Discount Certificates	4,934,467	8.1%	4,904,877	8.1%	165,807	31.0%
■ Express Certificates	10,762,207	17.6%	10,687,203	17.6%	9,989	1.9%
■ Bonus Certificates	2,421,428	4.0%	2,408,134	4.0%	226,403	42.3%
■ Tracker Certificates	3,960,336	6.5%	3,815,642	6.3%	1,718	0.3%
■ Outperformance and Capped Outperformance Certificates	79,049	0.1%	77,152	0.1%	1,430	0.3%
■ Other Certificates without Capital Protection	1,071,129	1.8%	1,053,798	1.7%	811	0.2%
<b>Investment products total</b>	<b>61,203,210</b>	<b>96.9%</b>	<b>60,800,341</b>	<b>96.9%</b>	<b>535,101</b>	<b>39.8%</b>
■ Warrants	720,405	37.1%	713,498	37.2%	452,115	55.8%
■ Factor Certificates	370,194	19.0%	386,566	20.1%	4,339	0.5%
■ Knock-Out Warrants	853,484	43.9%	818,496	42.7%	353,575	43.6%
<b>Leverage products total</b>	<b>1,944,083</b>	<b>3.1%</b>	<b>1,918,560</b>	<b>3.1%</b>	<b>810,029</b>	<b>60.2%</b>
<b>Total</b>	<b>63,147,293</b>	<b>100.0%</b>	<b>62,718,901</b>	<b>100.0%</b>	<b>1,345,130</b>	<b>100.0%</b>

## Investment products by product category

Market volume as at 28 February 2017

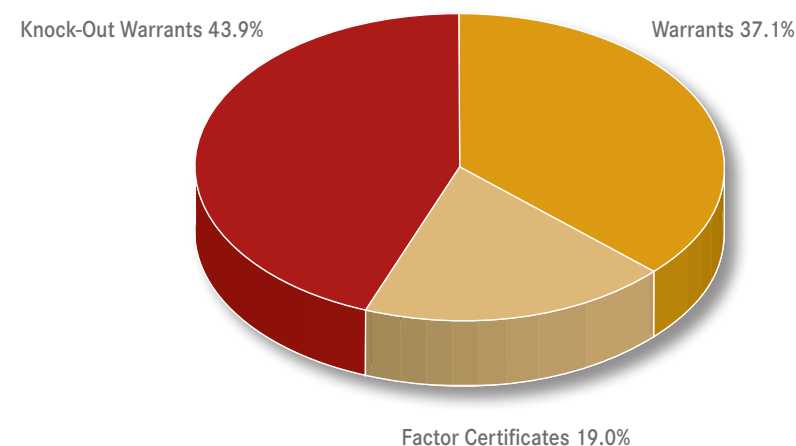


## Change in market volume by product category in comparison with previous month

Product categories	Change		Change price-adjusted		Price effect	
	T€	in %	T€	in %	T€	in %
■ Uncapped Capital Protection Certificates	-190,782	-2.6%	-230,859	-3.2%		0.6%
■ Capital Protection Products with Coupon	-89,350	-0.6%	-134,299	-0.9%		0.3%
■ Credit-Linked Notes	13,055	0.2%	-7,156	-0.1%		0.3%
■ Reverse Convertibles	216,767	2.3%	200,946	2.2%		0.2%
■ Discount Certificates	261,983	5.6%	232,393	5.0%		0.6%
■ Express Certificates	411,205	4.0%	336,201	3.2%		0.7%
■ Bonus Certificates	116,297	5.0%	103,003	4.5%		0.6%
■ Tracker Certificates	199,419	5.3%	54,725	1.5%		3.8%
■ Outperformance and Capped Outperformance Certificates	838	1.1%	-1,059	-1.4%		2.4%
■ Other Certificates without Capital Protection	1,929	0.2%	-15,402	-1.4%		1.6%
<b>Investment products total</b>	<b>941,361</b>	<b>1.6%</b>	<b>538,492</b>	<b>0.9%</b>		<b>0.7%</b>
■ Warrants	55,596	8.4%	48,689	7.3%		1.0%
■ Factor Certificates	4,717	1.3%	21,089	5.8%		-4.5%
■ Knock-Out Warrants	97,170	12.8%	62,183	8.2%		4.6%
<b>Leverage products total</b>	<b>157,484</b>	<b>8.8%</b>	<b>131,961</b>	<b>7.4%</b>		<b>1.4%</b>
<b>Total</b>	<b>1,098,845</b>	<b>1.8%</b>	<b>670,453</b>	<b>1.1%</b>		<b>0.7%</b>

## Leverage products by product category

Market volume as at 28 February 2017



## Market volume by underlying asset as at 28 February 2017

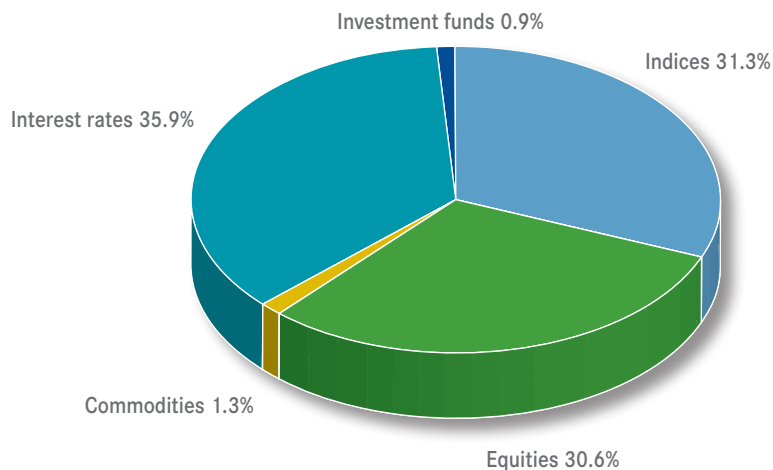
Underlying	Market volume		Market volume price-adjusted*		Number of Products	
	T€	%	T€	%	#	%
<b>Investment products</b>						
Indices	19,173,932	31.3%	18,951,841	31.2%	134,078	25.1%
Equities	18,724,083	30.6%	18,635,208	30.6%	393,535	73.5%
Commodities	788,888	1.3%	767,951	1.3%	2,298	0.4%
Currencies	33,481	0.1%	31,809	0.1%	50	0.0%
Interest rates	21,955,053	35.9%	21,888,168	36.0%	4,985	0.9%
Investment funds	527,772	0.9%	525,364	0.9%	155	0.0%
	<b>61,203,210</b>	<b>96.9%</b>	<b>60,800,341</b>	<b>96.9%</b>	<b>535,101</b>	<b>39.8%</b>
<b>Leverage products</b>						
Indices	565,423	29.1%	594,856	31.0%	187,668	23.2%
Equities	1,063,813	54.7%	1,005,826	52.4%	528,915	65.3%
Commodities	210,075	10.8%	197,770	10.3%	43,566	5.4%
Currencies	62,754	3.2%	63,043	3.3%	45,759	5.6%
Interest rates	41,995	2.2%	57,045	3.0%	4,113	0.5%
Investment funds	22	0.0%	21	0.0%	8	0.0%
	<b>1,944,083</b>	<b>3.1%</b>	<b>1,918,560</b>	<b>3.1%</b>	<b>810,029</b>	<b>60.2%</b>
<b>Total</b>	<b>63,147,293</b>	<b>100.0%</b>	<b>62,718,901</b>	<b>100.0%</b>	<b>1,345,130</b>	<b>100.0%</b>

\*Market volume adjusted for price changes = quantity outstanding as at 28 February 2017 x price as at 31 January 2017

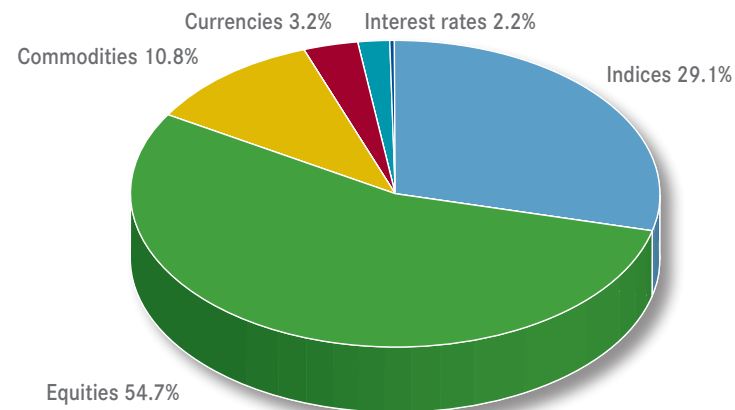
## Change in the market volume by underlying asset in comparison with previous month

Underlying	Change		Change price-adjusted		Price effect
	T€	%	T€	%	
<b>Investment products</b>					
Indices	405,429	2.2%	183,338	1.0%	1.2%
Equities	464,989	2.5%	376,113	2.1%	0.5%
Commodities	15,576	2.0%	-5,361	-0.7%	2.7%
Currencies	5,616	20.2%	3,944	14.2%	6.0%
Interest rates	-90,272	-0.4%	-157,158	-0.7%	0.3%
Investment funds	140,024	36.1%	137,616	35.5%	0.6%
	<b>941,361</b>	<b>1.6%</b>	<b>538,492</b>	<b>0.9%</b>	<b>0.7%</b>
<b>Leverage products</b>					
Indices	34,809	6.6%	64,242	12.1%	-5.5%
Equities	96,233	9.9%	38,246	4.0%	6.0%
Commodities	24,075	12.9%	11,769	6.3%	6.6%
Currencies	6,467	11.5%	6,756	12.0%	-0.5%
Interest rates	-4,102	-8.9%	10,948	23.7%	-32.6%
Investment funds	1	6.6%	0	0.0%	6.6%
	<b>157,484</b>	<b>8.8%</b>	<b>131,961</b>	<b>7.4%</b>	<b>1.4%</b>
<b>Total</b>	<b>1,098,845</b>	<b>1.8%</b>	<b>670,453</b>	<b>1.1%</b>	<b>0.7%</b>

## Investment products by underlying asset Market volume as at 28 February 2017



## Leverage products by underlying asset Market volume as at 28 February 2017



## 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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