

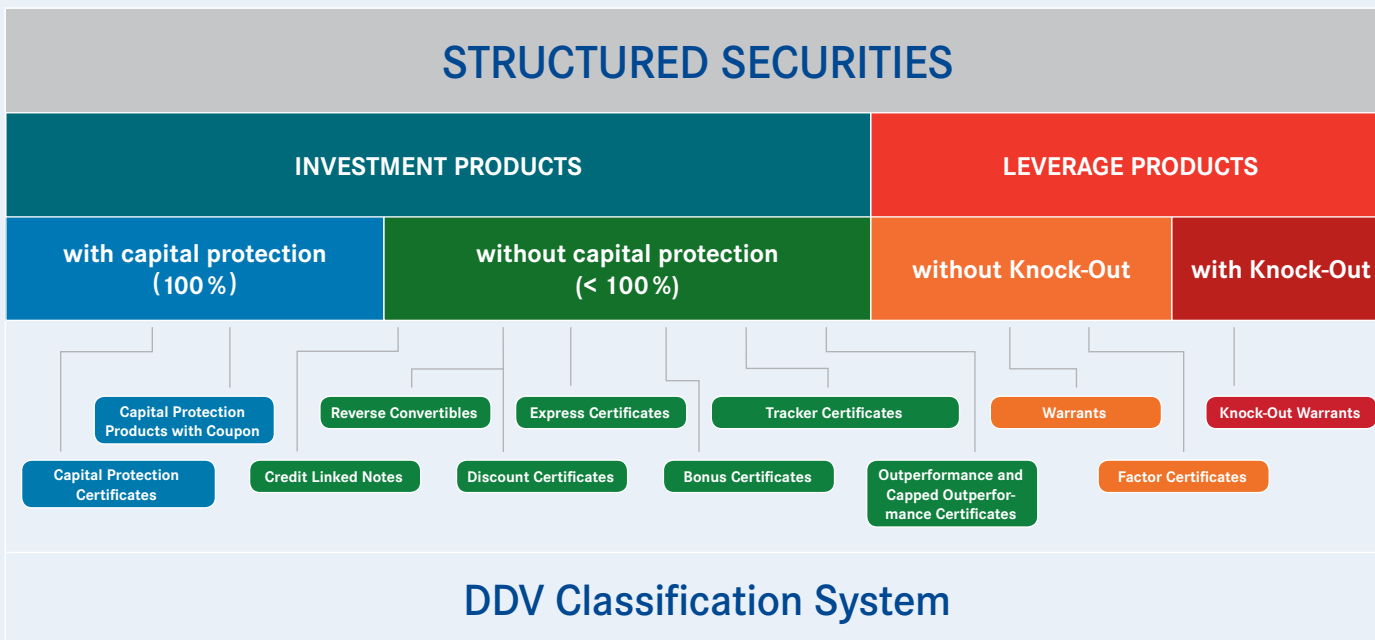
# Market Volume

in Derivatives

The German structured products market had a strong start to the second half of the year

Leverage products in particularly high demand

## STRUCTURED SECURITIES



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## July | 2017

- In July, the total volume of the German structured products market rose to EUR 69.5 billion.
- Discount Certificates experienced an above average growth of 4.7 percent and came in with a volume of EUR 4.9 billion.
- The leverage products category gained 3.0 percentage points and thus outperformed market growth.
- Investment products with equities as an underlying came in with a plus of 2.3 percent. The volume invested in this type of financial instruments was EUR 19.9 billion.

## The German structured products market had a strong start to the second half of the year

Leverage products in particularly high demand

Structured securities continue to gain in popularity. When the figures are extrapolated to all issuers, the total volume of the German structured products market worked out at EUR 69.5 billion in July 2017. This represents growth of 0.3 percent, or EUR 0.3 billion, compared with the previous month. These trends are shown by the latest set of the 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). The ratio of investment products to leverage products shifted slightly in favour of leverage products.

### Investment products by product category

The positive overall trend meant that demand was up on the previous month in almost all product categories. **Discount Certificates** and **Express Certificates** in particular experienced above-average growth in volumes. The volume invested in **Discount Certificates** rose to EUR 4.9 billion as a result. The upward trend in **Express Certificates** that began at the start of the year continued in July after a temporary decline in June. A market volume of EUR 12.2 billion was recorded for this type of product. **Reverse Convertibles** also recorded growth. Bucking the trend, **Capital Protection Products offering full capital protection** registered negative growth. A total of 36.4 percent of the market volume was invested in **Capital Protection Products with Coupon** and **Uncapped Capital Protection Certificates** in July. Credit Linked Notes showed a downwards trend as well.

### Leverage products by product category

After having suffered losses in the previous month, the market volume of **Leverage Products** rose significantly and stood at EUR 1.9 billion in the month under review. Solely **Factor Certificates** registered a slight decline.

### Investment products by underlying

Structured products with **interest rates as an underlying** remained the most popular category in July. However, their volume decreased and stood at EUR 22.0 billion. Investment products with **equities as an underlying** saw considerable growth in volume and thus followed in second place. The volume invested in them went up to EUR 19.9 billion, whereas investment products with **indices as an underlying** registered negative growth once again. Following growth in the previous months, investment products with **commodities as an underlying** continued their upward trend and stood at EUR 799.0 million.

### Leverage products by underlying

The picture among the dominant classes of underlyings for leverage products in July was mixed. The market volume of leverage products with **equities as an underlying** increased markedly to EUR 1.1 billion, whereas the volume invested in leverage products with **indices as an underlying** fell to EUR 525.8 million. The market volume of leverage products with **commodities as an underlying** went up to EUR 176.4 million. ■



#### 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)

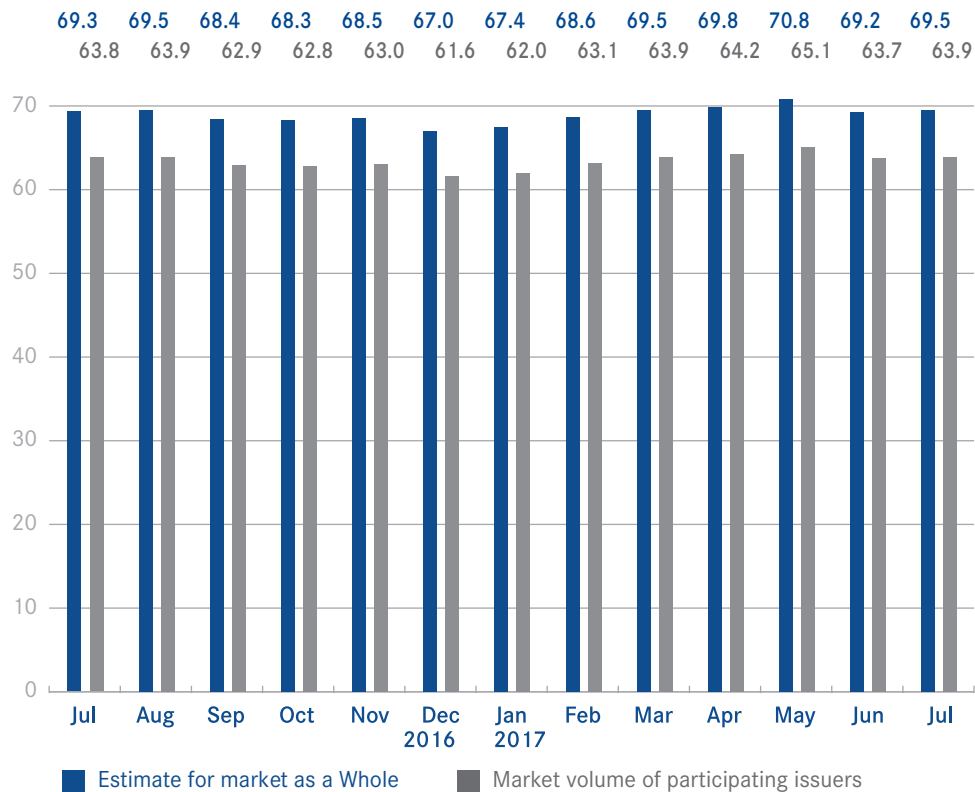
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## Market volume since July 2016



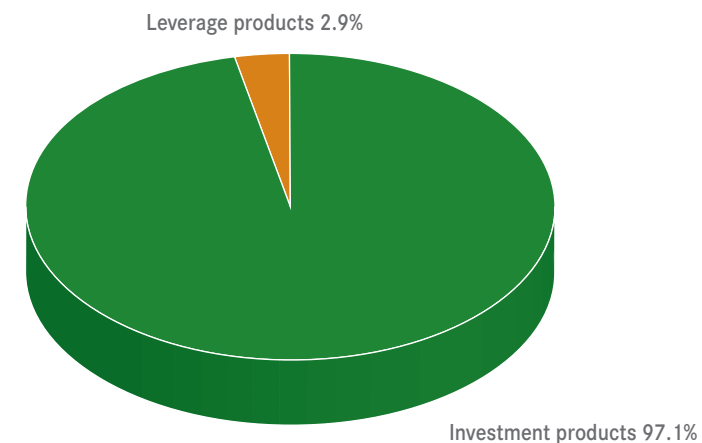
## Product classes

Market volume as at 31 July 2017

Product classes	Market volume	Share
	T€	%
Investment products with capital protection	22,571,199	36.4%
Investment products without capital protection	39,417,458	63.6%
<b>Total Investment products</b>	<b>61,988,657</b>	<b>100.0%</b>
Leverage products without Knock-Out	1,009,708	54.1%
Leverage products with Knock-Out	855,130	45.9%
<b>Total Leverage products</b>	<b>1,864,838</b>	<b>100.0%</b>
<b>Total Investment products</b>	<b>61,988,657</b>	<b>97.1%</b>
<b>Total Leverage products</b>	<b>1,864,838</b>	<b>2.9%</b>
<b>Total Derivatives</b>	<b>63,853,495</b>	<b>100.0%</b>

## Product classes

Market volume as at 31 July 2017

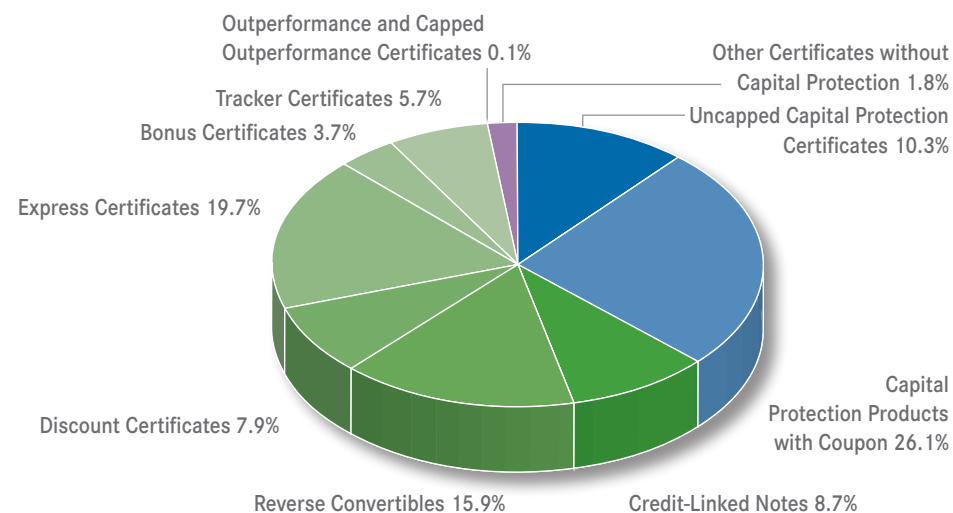


## Market volume by product category as at 31 July 2017

Product categories	Market volume		Market volume price-adjusted		Number of Products	
	T€	in %	T€	in %	#	in %
■ Uncapped Capital Protection Certificates	6,365,004	10.3%	6,365,010	10.3%	1,790	0.3%
■ Capital Protection Products with Coupon	16,206,195	26.1%	16,183,230	26.1%	2,769	0.5%
■ Credit-Linked Notes	5,416,870	8.7%	5,408,606	8.7%	2,346	0.4%
■ Reverse Convertibles	9,866,121	15.9%	9,895,013	16.0%	130,974	24.9%
■ Discount Certificates	4,907,953	7.9%	4,899,079	7.9%	156,997	29.8%
■ Express Certificates	12,206,459	19.7%	12,207,436	19.7%	10,653	2.0%
■ Bonus Certificates	2,316,175	3.7%	2,289,424	3.7%	217,376	41.3%
■ Tracker Certificates	3,511,132	5.7%	3,496,293	5.6%	1,549	0.3%
■ Outperformance and Capped Outperformance Certificates	85,103	0.1%	85,100	0.1%	1,273	0.2%
■ Other Certificates without Capital Protection	1,107,645	1.8%	1,108,287	1.8%	851	0.2%
<b>Investment products total</b>	<b>61,988,657</b>	<b>97.1%</b>	<b>61,937,477</b>	<b>96.9%</b>	<b>526,578</b>	<b>36.6%</b>
■ Warrants	670,477	36.0%	722,733	37.1%	504,203	55.3%
■ Factor Certificates	339,230	18.2%	354,943	18.2%	5,186	0.6%
■ Knock-Out Warrants	855,130	45.9%	871,915	44.7%	401,646	44.1%
<b>Leverage products total</b>	<b>1,864,838</b>	<b>2.9%</b>	<b>1,949,591</b>	<b>3.1%</b>	<b>911,035</b>	<b>63.4%</b>
<b>Total</b>	<b>63,853,495</b>	<b>100.0%</b>	<b>63,887,068</b>	<b>100.0%</b>	<b>1,437,613</b>	<b>100.0%</b>

## Investment products by product category

Market volume as at 31 July 2017

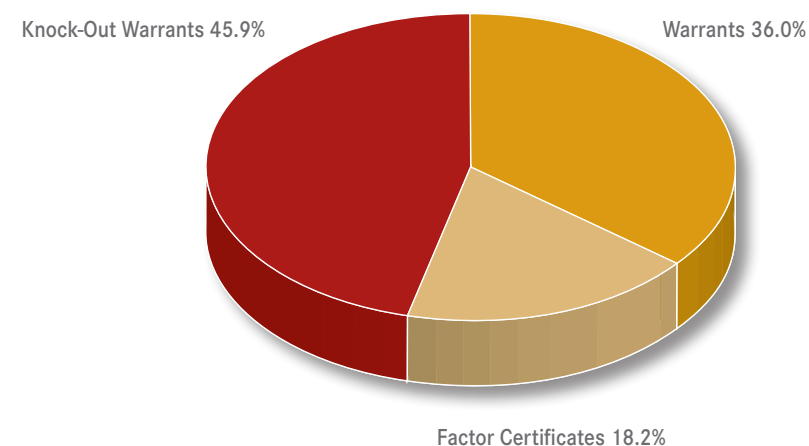


## Change in market volume by product category in comparison with previous month

Product categories	Change		Change price-adjusted		Price effect	
	T€	in %	T€	in %	T€	in %
■ Uncapped Capital Protection Certificates	-138,413	-2.1%	-138,407	-2.1%	0.0%	0.0%
■ Capital Protection Products with Coupon	-12,170	-0.1%	-35,134	-0.2%	0.1%	0.1%
■ Credit-Linked Notes	-211,147	-3.8%	-219,412	-3.9%	0.1%	0.1%
■ Reverse Convertibles	129,390	1.3%	158,282	1.6%	-0.3%	-0.3%
■ Discount Certificates	219,876	4.7%	211,003	4.5%	0.2%	0.2%
■ Express Certificates	163,834	1.4%	164,811	1.4%	0.0%	0.0%
■ Bonus Certificates	15,247	0.7%	-11,503	-0.5%	1.2%	1.2%
■ Tracker Certificates	-75,965	-2.1%	-90,805	-2.5%	0.4%	0.4%
■ Outperformance and Capped Outperformance Certificates	-2,590	-3.0%	-2,594	-3.0%	0.0%	0.0%
■ Other Certificates without Capital Protection	-4,410	-0.4%	-3,769	-0.3%	-0.1%	-0.1%
<b>Investment products total</b>	<b>83,652</b>	<b>0.1%</b>	<b>32,472</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>
■ Warrants	23,350	3.6%	75,606	11.7%	-8.1%	-8.1%
■ Factor Certificates	-2,207	-0.6%	13,505	4.0%	-4.6%	-4.6%
■ Knock-Out Warrants	33,948	4.1%	50,733	6.2%	-2.0%	-2.0%
<b>Leverage products total</b>	<b>55,090</b>	<b>3.0%</b>	<b>139,844</b>	<b>7.7%</b>	<b>-4.7%</b>	<b>-4.7%</b>
<b>Total</b>	<b>138,742</b>	<b>0.2%</b>	<b>172,315</b>	<b>0.3%</b>	<b>-0.1%</b>	<b>-0.1%</b>

## Leverage products by product category

Market volume as at 31 July 2017



## Market volume by underlying asset as at 31 July 2017

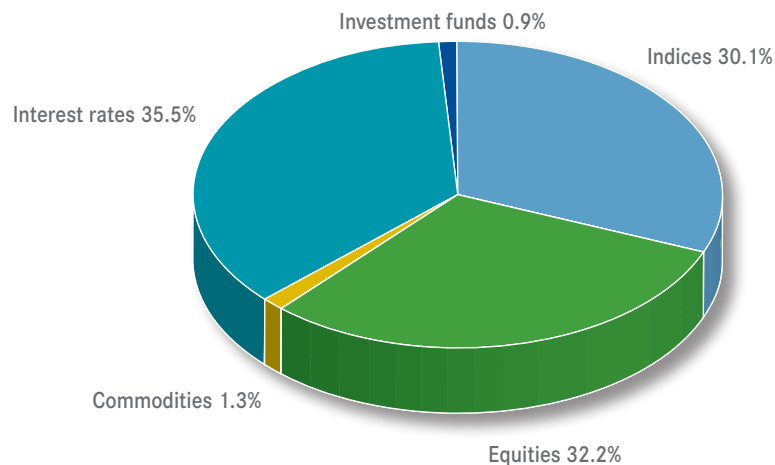
Underlying	Market volume		Market volume price-adjusted*		Number of Products	
	T€	%	T€	%	#	%
<b>Investment products</b>						
Indices	18,644,919	30.1%	18,583,536	30.0%	121,262	23.0%
Equities	19,940,776	32.2%	20,000,812	32.3%	397,708	75.5%
Commodities	799,004	1.3%	781,008	1.3%	2,203	0.4%
Currencies	43,731	0.1%	42,039	0.1%	39	0.0%
Interest rates	21,985,785	35.5%	21,954,066	35.4%	5,194	1.0%
Investment funds	574,442	0.9%	576,015	0.9%	172	0.0%
	<b>61,988,657</b>	<b>97.1%</b>	<b>61,937,477</b>	<b>96.9%</b>	<b>526,578</b>	<b>36.6%</b>
<b>Leverage products</b>						
Indices	525,756	28.2%	592,236	30.4%	209,223	23.0%
Equities	1,080,371	57.9%	1,098,979	56.4%	601,504	66.0%
Commodities	176,371	9.5%	170,844	8.8%	47,867	5.3%
Currencies	45,230	2.4%	49,791	2.6%	47,754	5.2%
Interest rates	37,086	2.0%	37,719	1.9%	4,679	0.5%
Investment funds	23	0.0%	22	0.0%	8	0.0%
	<b>1,864,838</b>	<b>2.9%</b>	<b>1,949,591</b>	<b>3.1%</b>	<b>911,035</b>	<b>63.4%</b>
<b>Total</b>	<b>63,853,495</b>	<b>100.0%</b>	<b>63,887,068</b>	<b>100.0%</b>	<b>1,437,613</b>	<b>100.0%</b>

\*Market volume adjusted for price changes = quantity outstanding as at 31 July 2017 x price as at 30 June 2017

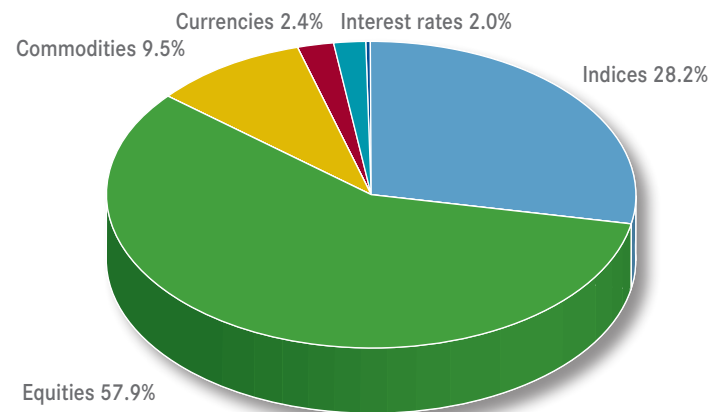
## Change in the market volume by underlying asset in comparison with previous month

Underlying	Change		Change price-adjusted		Price effect
	T€	%	T€	%	
<b>Investment products</b>					
Indices	-108,534	-0.6%	-169,918	-0.9%	0.3%
Equities	455,495	2.3%	515,531	2.6%	-0.3%
Commodities	6,951	0.9%	-11,044	-1.4%	2.3%
Currencies	1,958	4.7%	266	0.6%	4.1%
Interest rates	-269,000	-1.2%	-300,719	-1.4%	0.1%
Investment funds	-3,217	-0.6%	-1,644	-0.3%	-0.3%
	<b>83,652</b>	<b>0.1%</b>	<b>32,472</b>	<b>0.1%</b>	<b>0.1%</b>
<b>Leverage products</b>					
Indices	-10,600	-2.0%	55,880	10.4%	-12.4%
Equities	58,520	5.7%	77,128	7.5%	-1.8%
Commodities	10,772	6.5%	5,245	3.2%	3.3%
Currencies	-2,656	-5.5%	1,905	4.0%	-9.5%
Interest rates	-946	-2.5%	-314	-0.8%	-1.7%
Investment funds	1	2.7%	0	0.0%	2.7%
	<b>55,090</b>	<b>3.0%</b>	<b>139,844</b>	<b>7.7%</b>	<b>-4.7%</b>
<b>Total</b>	<b>138,742</b>	<b>0.2%</b>	<b>172,315</b>	<b>0.3%</b>	<b>-0.1%</b>

### Investment products by underlying asset Market volume as at 31 July 2017



### Leverage products by underlying asset Market volume as at 31 July 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.

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