

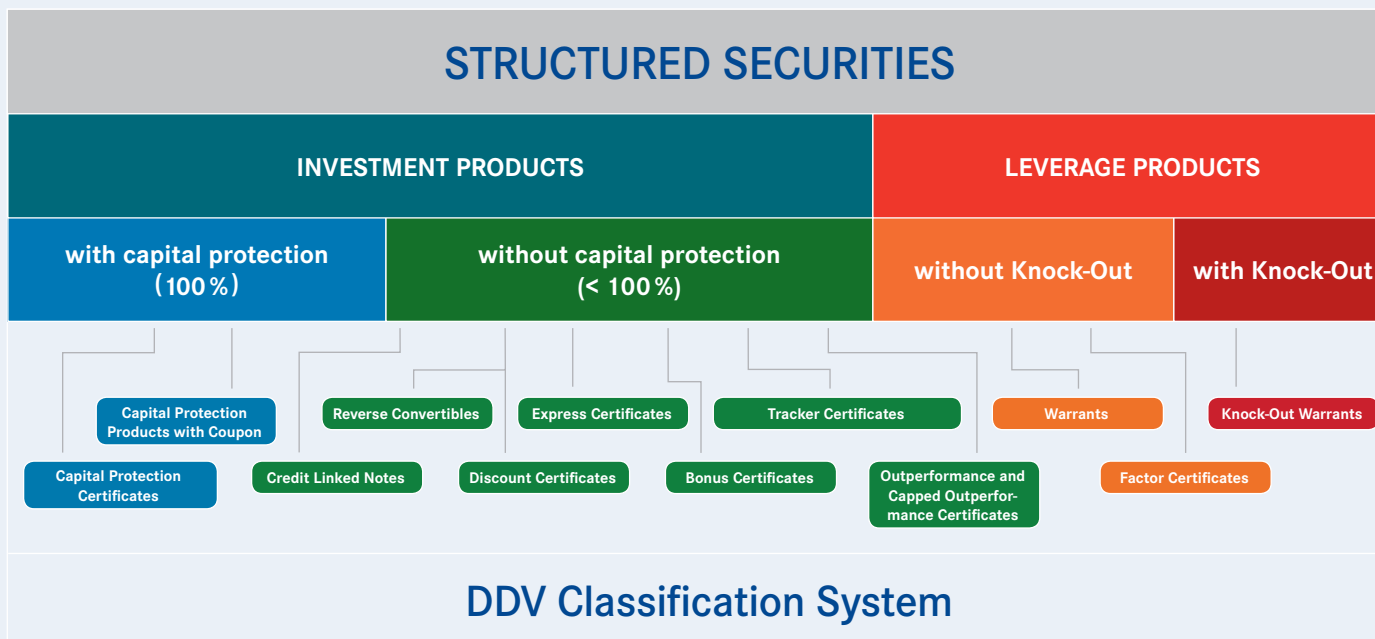
# Market Volume

in Derivatives

## Structured products market continues to grow

Capital Protection Products with Coupon and Discount Certificates in particularly high demand

### STRUCTURED SECURITIES



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## May | 2018

- The total volume of the German structured products market increased to EUR 71.4 billion in May.
- The strongest growth was in Capital Protection Products with Coupon, the volume of which increased by 1.1 percent to EUR 17.7 billion.
- The market volume of leverage products increased by 1.8 percent to EUR 2.1 billion.
- Leverage products with equities as an underlying recorded growth of 7.3 percent. The volume invested in this class of leverage product rose to EUR 1.3 billion.

## Structured products market continues to grow

Capital Protection Products with Coupon and Discount Certificates in particularly high demand

The outstanding volume of the German structured products market increased further in May. When the figures are extrapolated to all issuers, the total volume of the German structured products market in May 2018 works out at EUR 71.4 billion. This represents an increase of 0.3 percent, or EUR 210 million, on the previous month. These trends are shown by the latest set of figures collected each month from 15 banks by the European Derivatives Group (EDG) on behalf of the German Derivatives Association (Deutscher Derivate Verband, DDV). The ratio of investment products to leverage products was unchanged.

### Investment products by product category

The positive overall trend ensured that demand in most product categories was up on the previous month. **Discount Certificates** and **Capital Protection Products with Coupon** recorded particularly strong increases in volume. The volume invested in Capital Protection Products with Coupon increased to EUR 17.7 billion. Altogether, almost EUR 23.5 billion was invested in **Capital Protection Products** in May. Growth was also recorded in **Express Certificates** and **Bonus Certificates**. In contrast to the general trend, there was a decline in the volume of **Reverse Convertibles**.

### Leverage products by product category

The market volume of **leverage products** rose to EUR 2.1 billion in May. While growth was recorded in **Warrants** and **Factor Certificates**, **Knock-Out Warrants** registered a decline.

### Investment products by underlying

Structured products with **interest rates as an underlying** remained the most popular category in May. At EUR 22.4 billion, their volume was up slightly for the second consecutive month. In second place came investment products with **equities as an underlying**. The volume invested in these products was EUR 21.2 billion. However, investment products with **indices as an underlying** recorded a decline, after increases in the previous month. The market volume of investment products with **commodities** or **currencies as an underlying** fell to altogether EUR 670.5 million. Investment products with **funds as an underlying** recorded an increase to EUR 687.5 million.

### Leverage products by underlying

The dominant classes of underlying for leverage products showed a mixed picture in May. While the market volume of leverage products with **equities as an underlying** rose significantly to EUR 1.3 billion, the volume invested in leverage products with **indices as an underlying** fell to EUR 512.8 million. The market volume of leverage products with **commodities as an underlying** increased to EUR 147.5 million. However, a significant decline was recorded in leverage products with **interest rates as an underlying**. The volume invested in this class of leverage product fell to EUR 26.6 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 seventeen 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)

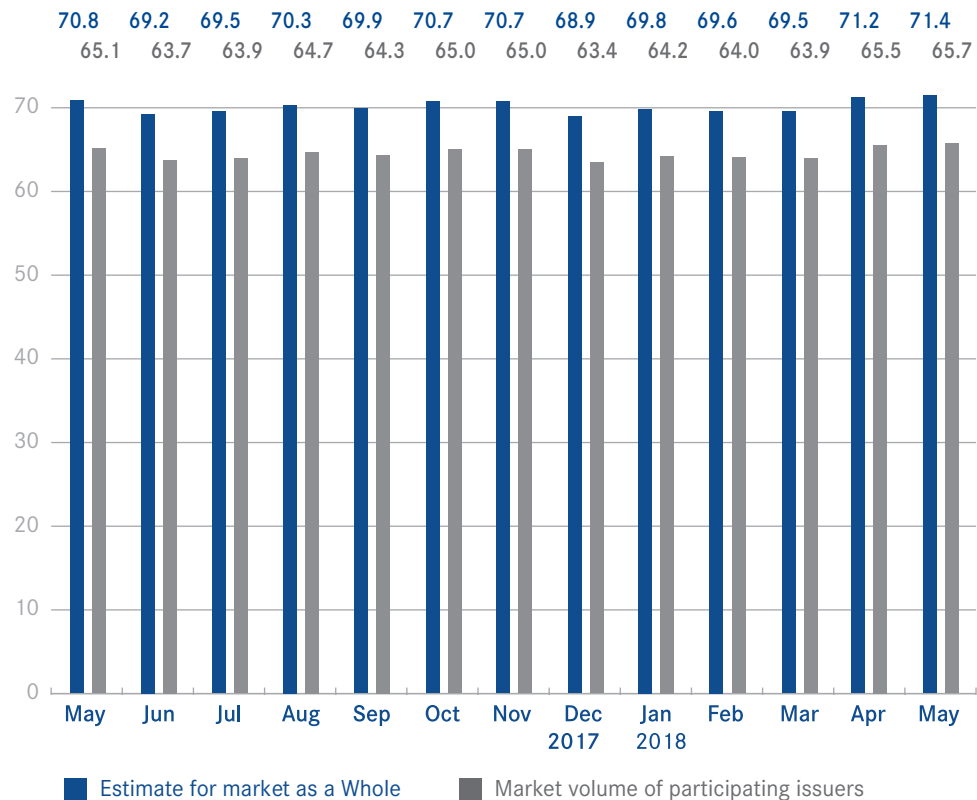
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## Market volume since May 2017



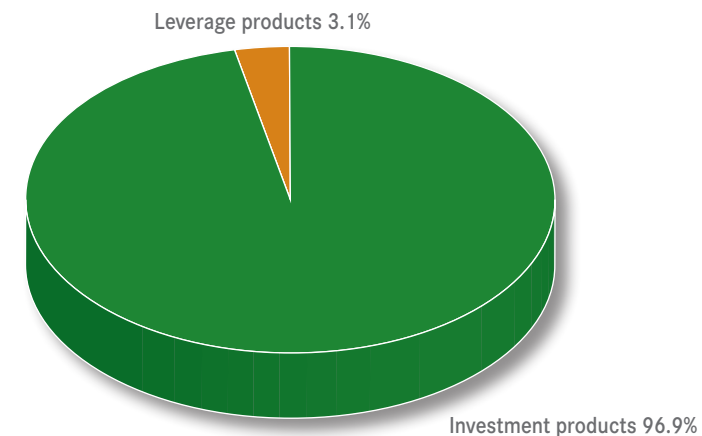
## Product classes

Market volume as at 31 May 2018

Product classes	Market volume	Share
	T€	%
Investment products with capital protection	23,432,767	36.8%
Investment products without capital protection	40,197,741	63.2%
<b>Total Investment products</b>	<b>63,630,508</b>	<b>100.0%</b>
Leverage products without Knock-Out	1,195,816	57.9%
Leverage products with Knock-Out	870,854	42.1%
<b>Total Leverage products</b>	<b>2,066,670</b>	<b>100.0%</b>
<b>Total Investment products</b>	<b>63,630,508</b>	<b>96.9%</b>
<b>Total Leverage products</b>	<b>2,066,670</b>	<b>3.1%</b>
<b>Total Derivatives</b>	<b>65,697,178</b>	<b>100.0%</b>

## Product classes

Market volume as at 31 May 2018

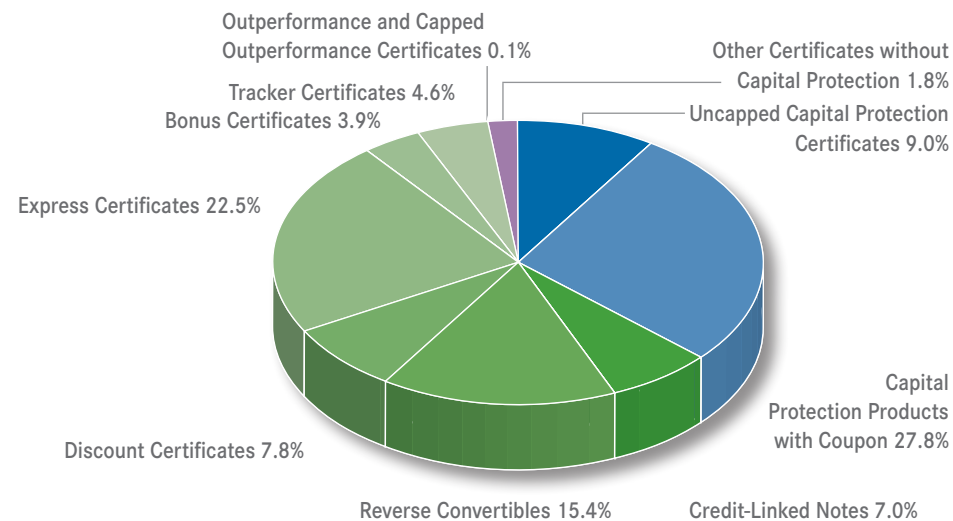


## Market volume by product category as at 31 May 2018

Product categories	Market volume		Market volume price-adjusted		Number of Products	
	T€	in %	T€	in %	#	in %
■ Uncapped Capital Protection Certificates	5,750,393	9.0%	5,752,748	9.0%	1,577	0.3%
■ Capital Protection Products with Coupon	17,682,373	27.8%	17,649,720	27.6%	3,378	0.7%
■ Credit-Linked Notes	4,458,952	7.0%	4,471,498	7.0%	2,367	0.5%
■ Reverse Convertibles	9,830,471	15.4%	9,918,263	15.5%	130,515	26.5%
■ Discount Certificates	4,974,476	7.8%	4,978,505	7.8%	152,151	30.8%
■ Express Certificates	14,329,990	22.5%	14,558,984	22.8%	12,187	2.5%
■ Bonus Certificates	2,457,750	3.9%	2,473,622	3.9%	187,649	38.0%
■ Tracker Certificates	2,935,767	4.6%	2,884,945	4.5%	1,366	0.3%
■ Outperformance and Capped Outperformance Certificates	63,782	0.1%	64,662	0.1%	1,145	0.2%
■ Other Certificates without Capital Protection	1,146,554	1.8%	1,150,820	1.8%	954	0.2%
<b>Investment products total</b>	<b>63,630,508</b>	<b>96.9%</b>	<b>63,903,768</b>	<b>97.0%</b>	<b>493,289</b>	<b>32.0%</b>
■ Warrants	852,830	41.3%	812,789	40.5%	563,917	53.7%
■ Factor Certificates	342,986	16.6%	351,077	17.5%	7,079	0.7%
■ Knock-Out Warrants	870,854	42.1%	843,246	42.0%	479,052	45.6%
<b>Leverage products total</b>	<b>2,066,670</b>	<b>3.1%</b>	<b>2,007,112</b>	<b>3.0%</b>	<b>1,050,048</b>	<b>68.0%</b>
<b>Total</b>	<b>65,697,178</b>	<b>100.0%</b>	<b>65,910,880</b>	<b>100.0%</b>	<b>1,543,337</b>	<b>100.0%</b>

## Investment products by product category

Market volume as at 31 May 2018

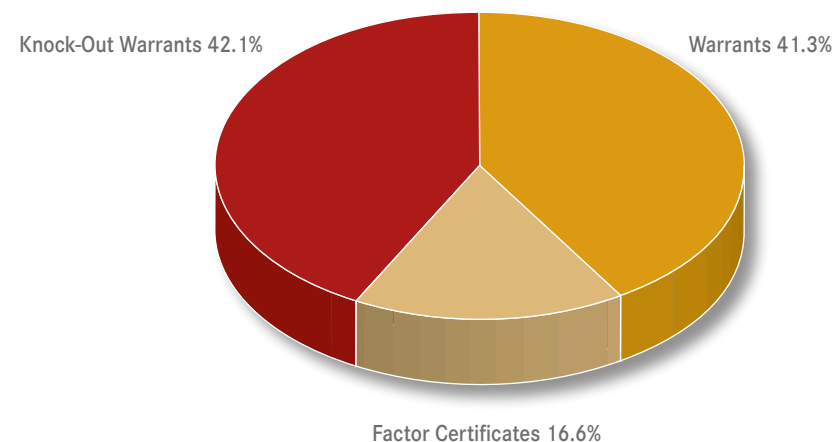


## Change in market volume by product category in comparison with previous month

Product categories	Change		Change price-adjusted		Price effect
	T€	in %	T€	in %	in %
■ Uncapped Capital Protection Certificates	-150,947	-2.6%	-148,593	-2.5%	0.0%
■ Capital Protection Products with Coupon	187,410	1.1%	154,757	0.9%	0.2%
■ Credit-Linked Notes	24,524	0.6%	37,071	0.8%	-0.3%
■ Reverse Convertibles	-21,161	-0.2%	66,630	0.7%	-0.9%
■ Discount Certificates	42,826	0.9%	46,856	1.0%	-0.1%
■ Express Certificates	51,285	0.4%	280,278	2.0%	-1.6%
■ Bonus Certificates	33,534	1.4%	49,406	2.0%	-0.7%
■ Tracker Certificates	19,009	0.7%	-31,813	-1.1%	1.7%
■ Outperformance and Capped Outperformance Certificates	-1,970	-3.0%	-1,090	-1.7%	-1.3%
■ Other Certificates without Capital Protection	-11,298	-1.0%	-7,031	-0.6%	-0.4%
<b>Investment products total</b>	<b>173,211</b>	<b>0.3%</b>	<b>446,471</b>	<b>0.7%</b>	<b>-0.4%</b>
■ Warrants	55,180	6.9%	15,139	1.9%	5.0%
■ Factor Certificates	8,098	2.4%	16,189	4.8%	-2.4%
■ Knock-Out Warrants	-27,211	-3.0%	-54,820	-6.1%	3.1%
<b>Leverage products total</b>	<b>36,067</b>	<b>1.8%</b>	<b>-23,491</b>	<b>-1.2%</b>	<b>2.9%</b>
<b>Total</b>	<b>209,278</b>	<b>0.3%</b>	<b>422,980</b>	<b>0.6%</b>	<b>-0.3%</b>

## Leverage products by product category

Market volume as at 31 May 2018



## Market volume by underlying asset as at 31 May 2018

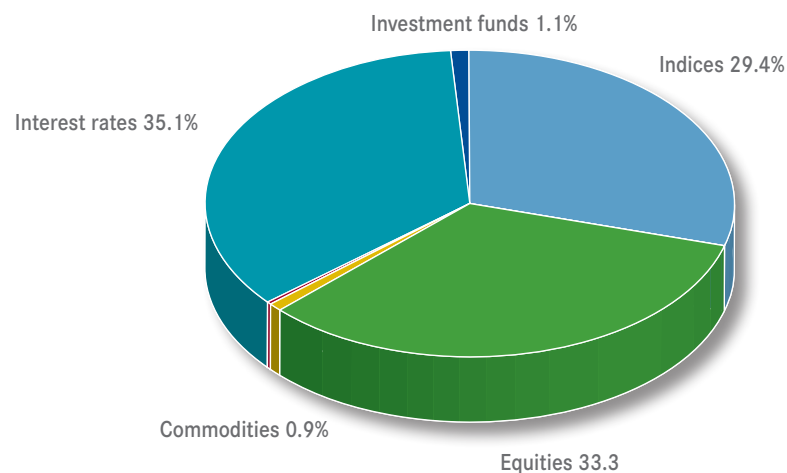
Underlying	Market volume		Market volume price-adjusted*		Number of Products	
	T€	%	T€	%	#	%
<b>Investment products</b>						
Indices	18,699,059	29.4%	18,740,994	29.3%	109,910	22.3%
Equities	21,211,788	33.3%	21,470,854	33.6%	375,019	76.0%
Commodities	587,881	0.9%	567,317	0.9%	2,304	0.5%
Currencies	82,596	0.1%	97,343	0.2%	19	0.0%
Interest rates	22,361,721	35.1%	22,340,060	35.0%	5,806	1.2%
Investment funds	687,464	1.1%	687,200	1.1%	231	0.0%
	<b>63,630,508</b>	<b>96.9%</b>	<b>63,903,768</b>	<b>97.0%</b>	<b>493,289</b>	<b>32.0%</b>
<b>Leverage products</b>						
Indices	512,818	24.8%	533,784	26.6%	237,802	22.6%
Equities	1,328,661	64.3%	1,243,432	62.0%	697,719	66.4%
Commodities	147,483	7.1%	145,681	7.3%	51,285	4.9%
Currencies	51,072	2.5%	50,801	2.5%	56,171	5.3%
Interest rates	26,636	1.3%	33,414	1.7%	7,071	0.7%
Investment funds	0	0.0%	0	0.0%	0	0.0%
	<b>2,066,670</b>	<b>3.1%</b>	<b>2,007,112</b>	<b>3.0%</b>	<b>1,050,048</b>	<b>68.0%</b>
<b>Total</b>	<b>65,697,178</b>	<b>100.0%</b>	<b>65,910,880</b>	<b>100.0%</b>	<b>1,543,337</b>	<b>100.0%</b>

\*Market volume adjusted for price changes = quantity outstanding as at 31 May 2018 x price as at 30 April 2018

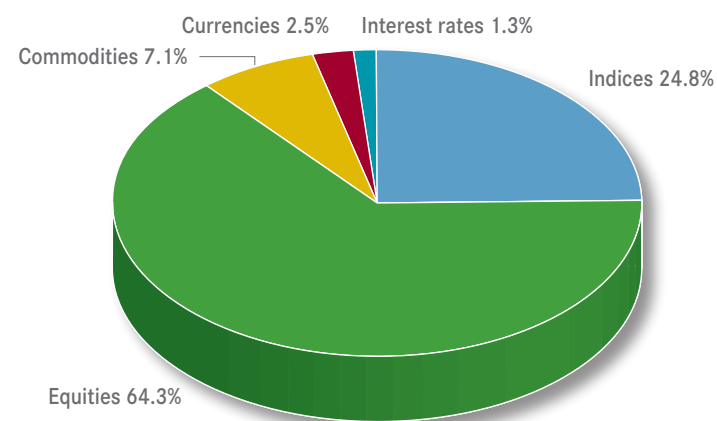
## Change in the market volume by underlying asset in comparison with previous month

Underlying	Change		Change price-adjusted		Price effect
	T€	%	T€	%	
<b>Investment products</b>					
Indices	-100,553	-0.5%	-58,617	-0.3%	-0.2%
Equities	73,764	0.3%	332,831	1.6%	-1.2%
Commodities	-7,788	-1.3%	-28,352	-4.8%	3.5%
Currencies	-13,583	-14.1%	1,164	1.2%	-15.3%
Interest rates	214,505	1.0%	192,843	0.9%	0.1%
Investment funds	6,866	1.0%	6,603	1.0%	0.0%
	<b>173,211</b>	<b>0.3%</b>	<b>446,471</b>	<b>0.7%</b>	<b>-0.4%</b>
<b>Leverage products</b>					
Indices	-48,283	-8.6%	-27,317	-4.9%	-3.7%
Equities	90,575	7.3%	5,346	0.4%	6.9%
Commodities	4,080	2.8%	2,277	1.6%	1.3%
Currencies	-657	-1.3%	-927	-1.8%	0.5%
Interest rates	-9,649	-26.6%	-2,871	-7.9%	-18.7%
Investment funds	0	n. a.	0	n. a.	n. a.
	<b>36,067</b>	<b>1.8%</b>	<b>-23,491</b>	<b>-1.2%</b>	<b>2.9%</b>
<b>Total</b>	<b>209,278</b>	<b>0.3%</b>	<b>422,980</b>	<b>0.6%</b>	<b>-0.3%</b>

### Investment products by underlying asset Market volume as at 31 May 2018



### Leverage products by underlying asset Market volume as at 31 May 2018



## 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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