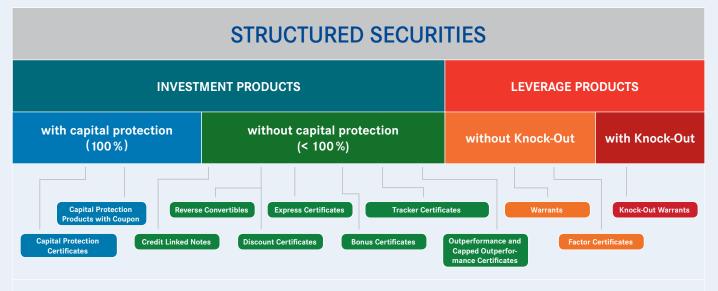
# Market Volume

in Derivatives



# \_\_\_\_\_ German structured products market at EUR 69.5 billion

**Growth in Capital Protection Products** 



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# **DDV Classification System**

# March I 2018

- In March, the total volume of the German structured products market stood at EUR 69.5 billion.
- The volume invested in Capital Protection Products offering full cover climbed to a total of EUR 23.0 billion.
  - Express Certificates recorded an increase of 2.9 percent to EUR 13.5 billion.
- Investment products with indices as an underlying also experienced growth, taking them to EUR 18.3 billion.

# German structured products market at EUR 69.5 billion

**Growth in Capital Protection Products** 

The outstanding volume of the German structured products market was slightly lower at the end of the first quarter. Extrapolating the figures to all issuers puts the total volume of the German structured products market at EUR 69.5 billion in March 2018. This corresponds to a decline of 0.1 percent or almost EUR 100 million month on 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 Deutscher Derivate Verband (DDV), the German Derivatives Association. The ratio of investment products to leverage products shifted in favour of investment products.

### Investment products by product category

The volume of funds put into investment products rose, bucking the general trend. Express Certificates and Capital Protection Products offering full capital protection in particular experienced above-average growth in volumes. The total invested in Express Certificates climbed to EUR 13.5 billion as a result. At the end of the first quarter, the market volume of Capital Protection Products stood at EUR 23.0 billion. By contrast, the total for Discount Certificates dropped to EUR 4.7 billion.

### Leverage products by product category

The market volume of Leverage Products fell considerably again, coming in at EUR 1.9 billion in March. Decreases were

The outstanding volume of the German structured prod-seen in all product categories, with the sharpest decline in ucts market was slightly lower at the end of the first quar-Knock-Out Warrants.

### Investment products by underlying

Structured products with interest rates as an underlying remained the most popular category in March. Their volume came to EUR 22.3 billion. Investment products with equities as an underlying followed in second place. The volume invested in them totalled EUR 20.1 billion. Investment products with indices as an underlying also registered an upturn at the end of the quarter. Their volume came in at EUR 18.3 billion. Interest in investment products with commodities as an underlying fell in the month under review. Investment products with investment funds as an underlying posted above-average growth of 4.8 percent, taking them to EUR 653.5 million.

### Leverage products by underlying

Marked losses were seen in the main classes of leverage products in the reporting month. The market volume of leverage products with equities as an underlying decreased to EUR 1.2 billion, while the volume invested in leverage products with indices as an underlying fell to EUR 537.6 million. The market volume of leverage products with commodities as an underlying dropped to EUR 137.1 million. The volume invested in leverage products with currencies as an underlying rose to EUR 74.1 million, bucking the general trend.



### 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

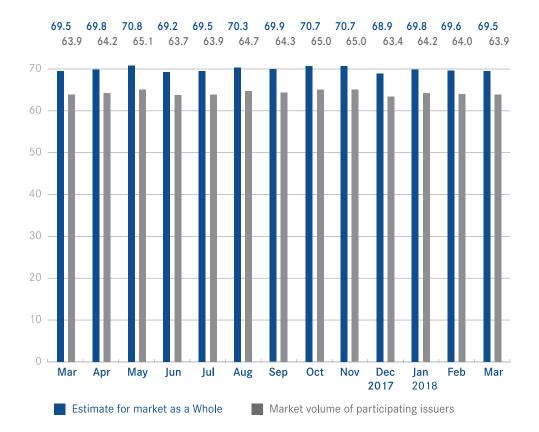
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## Market volume since 2017



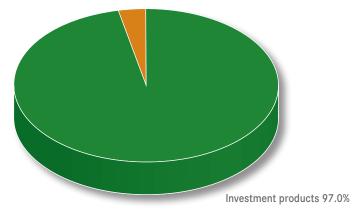
# Product classes

Market volume as at 31 March 2018

roduct classes	Market volume	Share	
	T€	%	
Investment products with capital protection	22,930,689	37.0%	
Investment products without capital protection	39,081,667	63.0%	
Total Investment products	62,012,356	100.0%	
Leverage products without Knock-Out	1,105,835	57.5%	
Leverage products without Knock-Out	817,021	42.5%	
Total Leverage products	1,922,857	100.0%	
Total Investment products	62,012,356	97.0%	
Total Leverage products	1,922,857	3.0%	
Total Derivatives	63,935,213	100.0%	

### Product classes Market volume as at 31 March 2018

Leverage products 3.0%



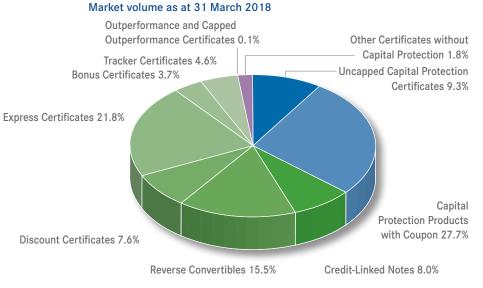
# Market volume by product category as at 31 March 2018

Product categories	Market volume		Market volume price-adjusted		Number of Products	
	T€	in %	T€	in %	#	in %
Uncapped Capital Protection Certificates	5,767,645	9.3%	5,773,313	9.3%	1,582	0.3%
Capital Protection Products with Coupon	17,163,044	27.7%	17,083,126	27.4%	3,252	0.7%
Credit-Linked Notes	4,935,504	8.0%	4,930,955	7.9%	2,417	0.5%
Reverse Convertibles	9,535,125	15.4%	9,644,184	15.5%	130,560	27.1%
Discount Certificates	4,691,116	7.6%	4,730,589	7.6%	143,387	29.7%
Express Certificates	13,532,673	21.8%	13,628,038	21.9%	11,677	2.4%
Bonus Certificates	2,308,744	3.7%	2,328,224	3.7%	185,393	38.5%
Tracker Certificates	2,876,809	4.6%	2,954,594	4.7%	1,408	0.3%
Outperformance and Capped	61,529	0.1%	62,939	0.1%	1,394	0.3%
Outperformance Certificates						
Other Certificates without Capital Protection	1,140,166	1.8%	1,149,035	1.8%	913	0.2%
Investment products total	62,012,356	97.0%	62,284,997	96.6%	481,983	31.4%
Warrants	784,035	40.8%	916,321	41.4%	562,014	53.4%
Factor Certificates	321,800	16.7%	400,037	18.1%	6,066	0.6%
Knock-Out Warrants	817,021	42.5%	898,391	40.6%	484,775	46.0%
Leverage products total	1,922,857	3.0%	2,214,748	3.4%	1,052,855	68.6%
Total	63,935,213	100.0%	64,499,746	100.0%	1,534,838	100.0%

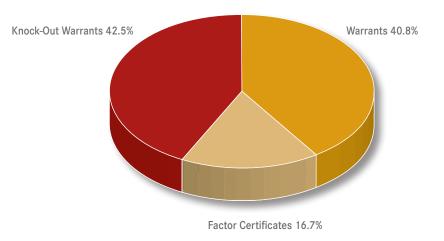
# Change in market volume by product category in comparison with previous month

Product categories	Change		Change price-adjusted		Price effect	
	T€	in %	T€	in %	in %	
Uncapped Capital Protection Certificates	92,341	1.6%	98,009	1.7%	-0.1%	
Capital Protection Products with Coupon	202,752	1.2%	122,835	0.7%	0.5%	
Credit-Linked Notes	51,626	1.1%	47,077	1.0%	0.1%	
Reverse Convertibles	-44,397	-0.5%	64,662	0.7%	-1.1%	
Discount Certificates	-254,927	-5.2%	-215,454	-4.4%	-0.8%	
Express Certificates	381,932	2.9%	477,297	3.6%	-0.7%	
Bonus Certificates	-56,756	-2.4%	-37,277	-1.6%	-0.8%	
Tracker Certificates	-122,594	-4.1%	-44,809	-1.5%	-2.6%	
Outperformance and Capped	-302	-0.5%	1,107	1.8%	-2.3%	
Outperformance Certificates						
Other Certificates without Capital Protection	2,494	0.2%	11,362	1.0%	-0.8%	
Investment products total	252,169	0.4%	524,810	0.8%	-0.4%	
Warrants	-101,289	-11.4%	30,997	3.5%	-14.9%	
Factor Certificates	-44,088	-12.0%	34,148	9.3%	-21.4%	
Knock-Out Warrants	-153,818	-15.8%	-72,448	-7.5%	-8.4%	
Leverage products total	-299,195	-13.5%	-7,303	-0.3%	-13.1%	
Total	-47,025	-0.1%	517,507	0.8%	-0.9%	

# Investment products by product category



Leverage products by product category Market volume as at 31 March 2018

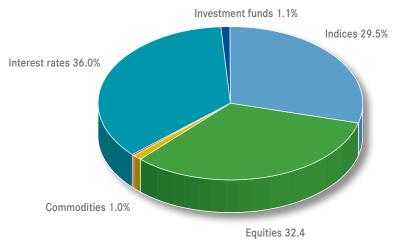


# Market volume by underlying asset as at 31 March 2018

Underlying	Marke	et volume	Market volume price-adjusted <sup>*</sup>		Number of Products	
	T€	%	T€	%	#	%
Investment products						
Indices	18,298,432	29.5%	18,343,747	29.5%	108,135	22.4%
Equities	20,079,821	32.4%	20,367,170	32.7%	365,450	75.8%
Commodities	603,796	1.0%	595,890	1.0%	2,432	0.5%
Currencies	74,088	0.1%	103,640	0.2%	18	0.0%
Interest rates	22,302,726	36.0%	22,217,793	35.7%	5,724	1.2%
Investment funds	653,493	1.1%	656,757	1.1%	224	0.0%
	62,012,356	97.0%	62,284,997	96.6%	481,983	31.4%
Leverage products						
Indices	537,574	28.0%	610,757	27.6%	236,922	22.5%
Equities	1,156,985	60.2%	1,357,464	61.3%	704,024	66.9%
Commodities	137,058	7.1%	145,588	6.6%	47,767	4.5%
Currencies	60,670	3.2%	59,761	2.7%	57,586	5.5%
Interest rates	30,569	1.6%	41,178	1.9%	6,556	0.6%
Investment funds	0	0.0%	0	0.0%	0	0.0%
	1,922,857	3.0%	2,214,748	3.4%	1,052,855	68.6%
Total	63,935,213	100.0%	64,499,746	100.0%	1,534,838	100.0%

\*Market volume adjusted for price changes = quantity outstanding as at 31 March 2018 x price as at 28 February 2018

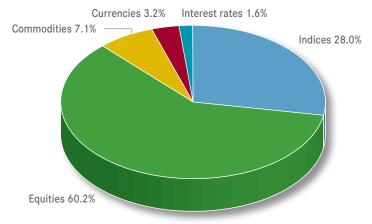
### Investment products by underlying asset Market volume as at 31 March 2018



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

Underlying		Change	pric	Change e-adjusted	Price effect
	T€	%	T€	%	%
Investment products					
Indices	316,053	1.8%	361,368	2.0%	-0.3%
Equities	-322,803	-1.6%	-35,455	-0.2%	-1.4%
Commodities	-5,729	-0.9%	-13,634	-2.2%	1.3%
Currencies	-27,605	-27.1%	1,947	1.9%	-29.1%
Interest rates	262,113	1.2%	177,180	0.8%	0.4%
Investment funds	30,140	4.8%	33,404	5.4%	-0.5%
	252,169	0.4%	524,810	0.8%	-0.4%
Leverage products			1		
Indices	-58,824	-9.9%	14,359	2.4%	-12.3%
Equities	-239,377	-17.1%	-38,897	-2.8%	-14.4%
Commodities	-1,879	-1.4%	6,651	4.8%	-6.1%
Currencies	12,285	25.4%	11,375	23.5%	1.9%
Interest rates	-11,400	-27.2%	-792	-1.9%	-25.3%
Investment funds	0	n. a.	0	n. a.	n.a
	-299,195	-13.5%	-7,303	-0.3%	-13.1%
Total	-47,025	-0.1%	517,507	0.8%	-0.9%

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

### 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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