

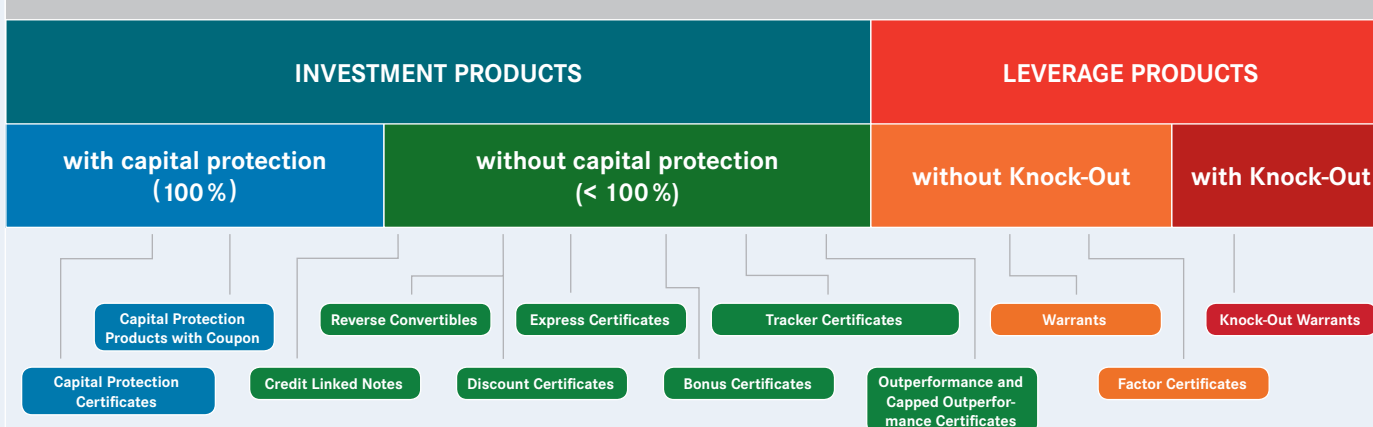
# Market Volume

in Derivatives

## Express Certificates in high demand

German structured products market at EUR 68.3 billion

### STRUCTURED SECURITIES



### DDV Classification System

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## March | 2016

- The total volume of the German structured products market stood at EUR 68.3 billion in March.
- Express Certificates recorded substantial gains of 9.4 percent. Their market volume amounted to EUR 6.7 billion.
- The market volume of investment products with full capital protection experienced losses. Uncapped Capital Protection Certificates and Capital Protection Products with Coupon accounted for 45.2 percent of the total volume.
- The market volume of leverage products rose to EUR 1.5 billion in March.

## Express Certificates in high demand

German structured products market at EUR 68.3 billion

The outstanding volume of the German structured products market was slightly down in March 2016. Bucking the generally negative trend, Express Certificates recorded strong growth.

Overall, the market volume decreased marginally by 0.2 percent or EUR 157.0 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 operating on the market puts the **total volume of the German structured products market at EUR 68.3 billion at the end of March 2016.**

Compared with February, the **ratio of investment products to leverage products** shifted in favour of leverage products. They made up 2.4 percent of the total market share. Investment products accounted for 97.6 percent of the aggregate market volume.

### Investment products by product category

The volume of **Capital Protection Products** decreased further in the month under review. The slowdown was more pronounced than in February. The market volume of Capital Protection Products with Coupon fell by 1.9 percent to

EUR 18.8 billion. The figure corresponded to a 30.7 percent share of the investment products market. Uncapped Capital Protection Certificates registered an above-average drop of 4.4 percent, taking their volume to EUR 8.9 billion. This represented 14.5 percent of the investment products market. A total of 45.2 percent of the market volume was invested in these two product categories in March.

**Reverse Convertibles** upped their volume by 1.4 percent to EUR 8.1 billion, and thus accounted for a 13.3 percent market share.

**Express Certificates** also recorded growth. They gained 9.4 percent to come in at EUR 6.7 billion. Their market share was 10.9 percent in March.

The market volume of **Credit Linked Notes** rose by 3.6 percent to EUR 6.2 billion. They made up a share of 10.1 percent of the total volume.

**Discount Certificates** lost 1.7 percent and stood at EUR 5.1 billion – a share of 8.4 percent.

The market volume recorded for **Tracker Certificates** went down 4.4 percent to stand at EUR 4.0 billion. Their share of the investment products segment accounted for 6.5 percent.

The market volume of **Bonus Certificates** went down by 4.4 percent and amounted to EUR 2.3 billion in March. This corresponded to a 3.7 percent share of the total market.

**Outperformance and Capped Outperformance Certificates** recorded significant growth of 15.5 percent, taking their volume to EUR 97.1 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** increased 0.8 percent to EUR 1.1 billion. They accounted for 1.8 percent of the aggregate market volume.

### Leverage products by product category

The market volume of **leverage products** climbed 4.5 percent to stand at EUR 1.5 billion in March.

The volume invested in **Knock-Out Warrants** grew by 11.9 percent in comparison with the previous month, taking it to EUR 541.5 million. The share of Knock-Out Warrants in the leverage products market was 36.3 percent.

**Warrants** dropped by 2.7 percent to come in at EUR 607.9 million. Their market share stood at 40.7 percent. ➔

The volume invested in **Factor Certificates** increased by 7.4 percent to EUR 343.1 million. This category accounted for 23.0 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 0.7 percent to EUR 26.3 billion in March. This took their market share to 42.9 percent.

Investment products with **indices as an underlying** followed in second place. Their volume rose by 0.8 percent, taking it to EUR 16.9 billion. This corresponded to 27.6 percent of the total volume.

Products with **equities as an underlying** were the third most popular investment category. Their share of the total volume went up by 0.7 percent and stood at EUR 16.8 billion. This represented 27.5 percent of the market.

Following at a considerable distance behind the other asset classes were investment products with **commodities as an underlying**. Their outstanding volume grew by 0.4 percent to EUR 841.4 million in March. Commodities accounted for 1.4 percent of the total volume.

Investment products with **investment funds as an underlying** had a 0.6 percent share of the market. Their volume came in at EUR 358.4 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 chartered a 9.2 percent decrease to EUR 30.9 million in the reporting month.

## Leverage products by underlying

The market volume of leverage products with **equities as an underlying** was up 7.3 percent and amounted to EUR 761.2 million. These instruments made up 51.0 percent of the total leverage products volume.

Leverage products with **indices as an underlying** grew by 6.0 percent to stand at EUR 504.7 million. This corresponded to a 33.8 percent share of the total volume.

Lagging some way behind leverage products based on equities and indices were those with **commodities as an underlying**. They lost 1.9 percent on the previous month and came in at EUR 152.0 million. Their market share was 10.2 percent.

Leverage products with **currencies as an underlying** went down 19.3 percent. Their market volume amounted to EUR 54.9 million and corresponded to a 3.7 percent share of the total volume.

Leverage products with **interest rates as an underlying** increased 2.1 percent in March and came in at EUR 19.7 million. Because they accounted for only 1.3 percent of the aggregate 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 15 leading issuers of derivatives in Germany: 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 ten sponsoring members, which include the Stuttgart and Frankfurt am Main stock exchanges, finance portals and service providers.

Office Berlin, Pariser Platz 3, 10117 Berlin

Office Frankfurt a.M., Feldbergstr. 38, 60323 Frankfurt a.M.

Please address any queries to:

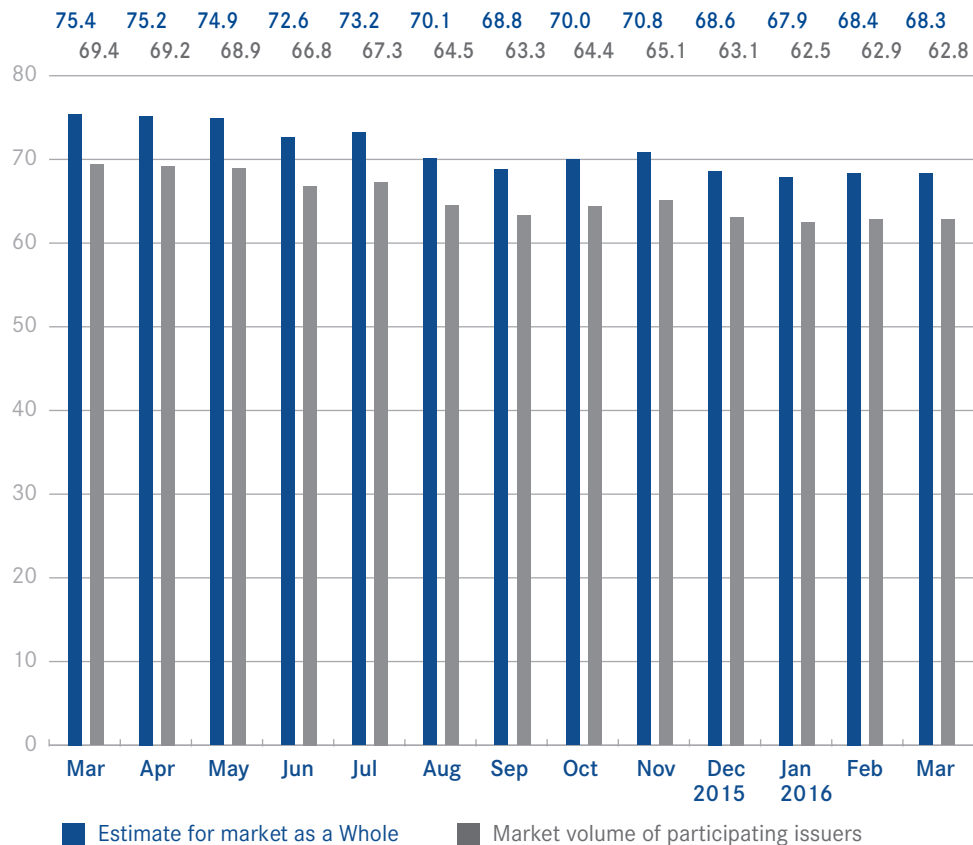
Alexander Heftrich, Press Secretary

phone: +49 (69) 244 33 03 – 70

heftrich@derivateverband.de

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

## Market volume since March 2015



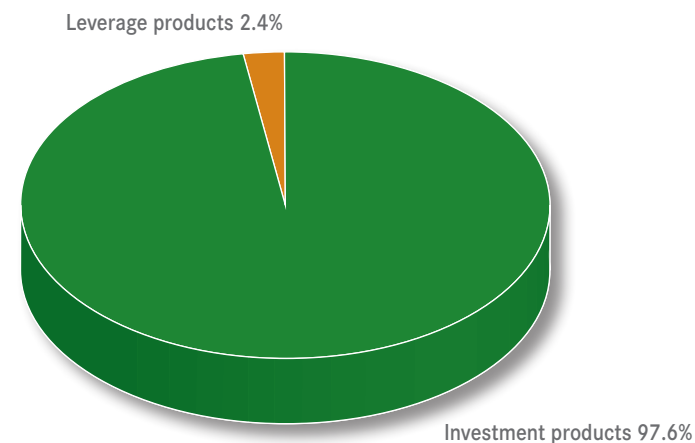
## Product classes

Market volume as at 31 March 2016

| Product classes                                | Market volume     | Share         |
|--|-------------------|---------------|
|  | T€                | %             |
| Investment products with capital protection    | 27,737,410        | 45.2%         |
| Investment products without capital protection | 33,584,143        | 54.8%         |
| <b>Total Investment products</b>               | <b>61,321,553</b> | <b>100.0%</b> |
| Leverage products without Knock-Out            | 951,030           | 63.7%         |
| Leverage products with Knock-Out               | 541,489           | 36.3%         |
| <b>Total Leverage products</b>                 | <b>1,492,519</b>  | <b>100.0%</b> |
| <b>Total Investment products</b>               | <b>61,321,553</b> | <b>97.6%</b>  |
| <b>Total Leverage products</b>                 | <b>1,492,519</b>  | <b>2.4%</b>   |
| <b>Total Derivatives</b>                       | <b>62,814,072</b> | <b>100.0%</b> |

## Product classes

Market volume as at 31 March 2016

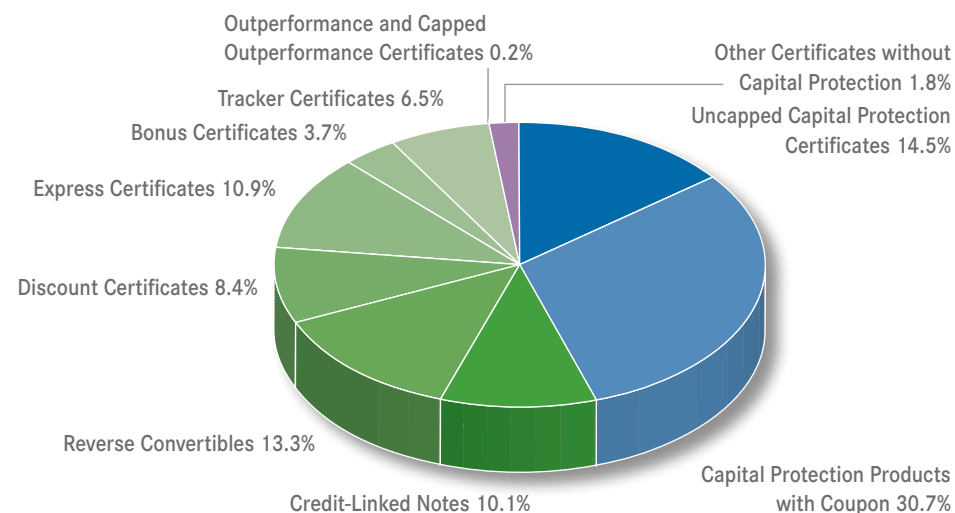


## Market volume by product category as at 31 March 2016

| Product categories                                      | Market volume     |               | Market volume price-adjusted |               | Number of Products |               |
|---|-------------------|---------------|------------------------------|---------------|--------------------|---------------|
|   | T€                | in %          | T€                           | in %          | #                  | in %          |
| ■ Uncapped Capital Protection Certificates              | 8,896,134         | 14.5%         | 8,917,633                    | 14.7%         | 2,500              | 0.5%          |
| ■ Capital Protection Products with Coupon               | 18,841,276        | 30.7%         | 18,862,251                   | 31.2%         | 2,281              | 0.4%          |
| ■ Credit-Linked Notes                                   | 6,178,308         | 10.1%         | 6,099,712                    | 10.1%         | 2,210              | 0.4%          |
| ■ Reverse Convertibles                                  | 8,126,856         | 13.3%         | 7,875,426                    | 13.0%         | 104,087            | 19.6%         |
| ■ Discount Certificates                                 | 5,149,018         | 8.4%          | 5,020,203                    | 8.3%          | 183,497            | 34.6%         |
| ■ Express Certificates                                  | 6,707,649         | 10.9%         | 6,475,728                    | 10.7%         | 7,888              | 1.5%          |
| ■ Bonus Certificates                                    | 2,252,845         | 3.7%          | 2,176,041                    | 3.6%          | 223,819            | 42.2%         |
| ■ Tracker Certificates                                  | 3,992,412         | 6.5%          | 3,899,100                    | 6.4%          | 1,870              | 0.4%          |
| ■ Outperformance and Capped Outperformance Certificates | 97,145            | 0.2%          | 94,379                       | 0.2%          | 1,117              | 0.2%          |
| ■ Other Certificates without Capital Protection         | 1,079,910         | 1.8%          | 1,072,206                    | 1.8%          | 921                | 0.2%          |
| <b>Investment products total</b>                        | <b>61,321,553</b> | <b>97.6%</b>  | <b>60,492,680</b>            | <b>97.5%</b>  | <b>530,190</b>     | <b>42.9%</b>  |
| ■ Warrants  | 607,893           | 40.7%         | 671,047                      | 43.4%         | 361,569            | 51.2%         |
| ■ Factor Certificates                                   | 343,137           | 23.0%         | 345,944                      | 22.4%         | 3,511              | 0.5%          |
| ■ Knock-Out Warrants                                    | 541,489           | 36.3%         | 530,694                      | 34.3%         | 340,658            | 48.3%         |
| <b>Leverage products total</b>                          | <b>1,492,519</b>  | <b>2.4%</b>   | <b>1,547,685</b>             | <b>2.5%</b>   | <b>705,738</b>     | <b>57.1%</b>  |
| <b>Total</b>  | <b>62,814,072</b> | <b>100.0%</b> | <b>62,040,365</b>            | <b>100.0%</b> | <b>1,235,928</b>   | <b>100.0%</b> |

## Investment products by product category

Market volume as at 31 March 2016

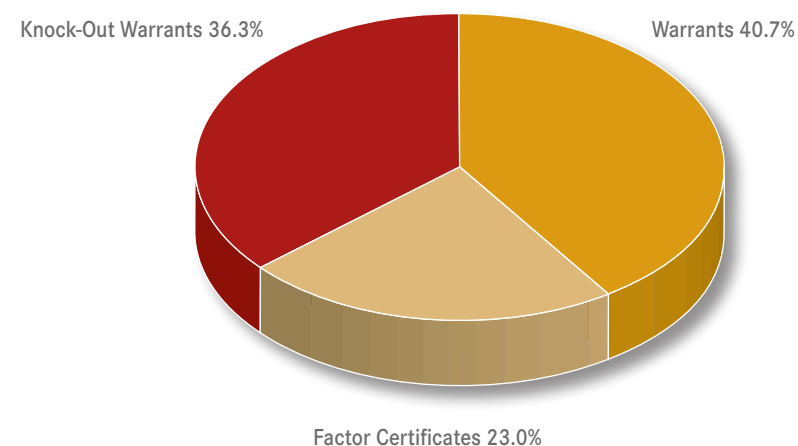


## Change in market volume by product category in comparison with previous month

| Product categories                                      | Change          |              | Change price-adjusted |              | Price effect |
|---|-----------------|--------------|-----------------------|--------------|--------------|
|   | T€              | in %         | T€                    | in %         |              |
| ■ Uncapped Capital Protection Certificates              | -405,384        | -4.4%        | -383,886              | -4.1%        | -0.2%        |
| ■ Capital Protection Products with Coupon               | -365,201        | -1.9%        | -344,225              | -1.8%        | -0.1%        |
| ■ Credit-Linked Notes                                   | 212,825         | 3.6%         | 134,229               | 2.3%         | 1.3%         |
| ■ Reverse Convertibles                                  | 115,592         | 1.4%         | -135,838              | -1.7%        | 3.1%         |
| ■ Discount Certificates                                 | -88,237         | -1.7%        | -217,052              | -4.1%        | 2.5%         |
| ■ Express Certificates                                  | 576,042         | 9.4%         | 344,122               | 5.6%         | 3.8%         |
| ■ Bonus Certificates                                    | -103,263        | -4.4%        | -180,067              | -7.6%        | 3.3%         |
| ■ Tracker Certificates                                  | -184,806        | -4.4%        | -278,118              | -6.7%        | 2.2%         |
| ■ Outperformance and Capped Outperformance Certificates | 13,054          | 15.5%        | 10,289                | 12.2%        | 3.3%         |
| ■ Other Certificates without Capital Protection         | 8,139           | 0.8%         | 436                   | 0.0%         | 0.7%         |
| <b>Investment products total</b>                        | <b>-221,238</b> | <b>-0.4%</b> | <b>-1,050,111</b>     | <b>-1.7%</b> | <b>1.3%</b>  |
| ■ Warrants  | -16,850         | -2.7%        | 46,304                | 7.4%         | -10.1%       |
| ■ Factor Certificates                                   | 23,532          | 7.4%         | 26,339                | 8.2%         | -0.9%        |
| ■ Knock-Out Warrants                                    | 57,533          | 11.9%        | 46,739                | 9.7%         | 2.2%         |
| <b>Leverage products total</b>                          | <b>64,215</b>   | <b>4.5%</b>  | <b>119,381</b>        | <b>8.4%</b>  | <b>-3.9%</b> |
| <b>Total</b>  | <b>-157,023</b> | <b>-0.2%</b> | <b>-930,730</b>       | <b>-1.5%</b> | <b>1.2%</b>  |

## Leverage products by product category

Market volume as at 31 March 2016



## Market volume by underlying asset as at 31 March 2016

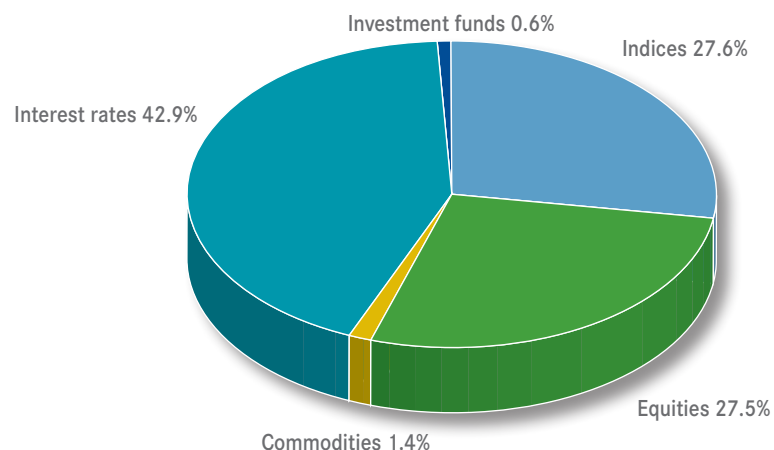
| Underlying                 | Market volume     |               | Market volume price-adjusted* |               | Number of Products |               |
|----------------------------|-------------------|---------------|-------------------------------|---------------|--------------------|---------------|
|                            | T€                | %             | T€                            | %             | #                  | %             |
| <b>Investment products</b> |                   |               |                               |               |                    |               |
| Indices                    | 16,943,200        | 27.6%         | 16,671,921                    | 27.6%         | 132,630            | 25.0%         |
| Equities                   | 16,837,539        | 27.5%         | 16,341,584                    | 27.0%         | 390,421            | 73.6%         |
| Commodities                | 841,127           | 1.4%          | 830,339                       | 1.4%          | 2,302              | 0.4%          |
| Currencies                 | 30,930            | 0.1%          | 29,906                        | 0.0%          | 60                 | 0.0%          |
| Interest rates             | 26,310,344        | 42.9%         | 26,255,197                    | 43.4%         | 4,675              | 0.9%          |
| Investment funds           | 358,413           | 0.6%          | 363,733                       | 0.6%          | 102                | 0.0%          |
|                            | <b>61,321,553</b> | <b>97.6%</b>  | <b>60,492,680</b>             | <b>97.5%</b>  | <b>530,190</b>     | <b>42.9%</b>  |
| <b>Leverage products</b>   |                   |               |                               |               |                    |               |
| Indices                    | 504,660           | 33.8%         | 554,797                       | 35.8%         | 182,933            | 25.9%         |
| Equities                   | 761,220           | 51.0%         | 739,743                       | 47.8%         | 452,483            | 64.1%         |
| Commodities                | 151,964           | 10.2%         | 157,271                       | 10.2%         | 36,082             | 5.1%          |
| Currencies                 | 54,916            | 3.7%          | 76,351                        | 4.9%          | 31,009             | 4.4%          |
| Interest rates             | 19,734            | 1.3%          | 19,498                        | 1.3%          | 3,221              | 0.5%          |
| Investment funds           | 26                | 0.0%          | 26                            | 0.0%          | 10                 | 0.0%          |
|                            | <b>1,492,519</b>  | <b>2.4%</b>   | <b>1,547,685</b>              | <b>2.5%</b>   | <b>705,738</b>     | <b>57.1%</b>  |
| <b>Total</b>               | <b>62,814,072</b> | <b>100.0%</b> | <b>62,040,365</b>             | <b>100.0%</b> | <b>1,235,928</b>   | <b>100.0%</b> |

\*Market volume adjusted for price changes = quantity outstanding as at 31 March 2016 x price as at 29 February 2016

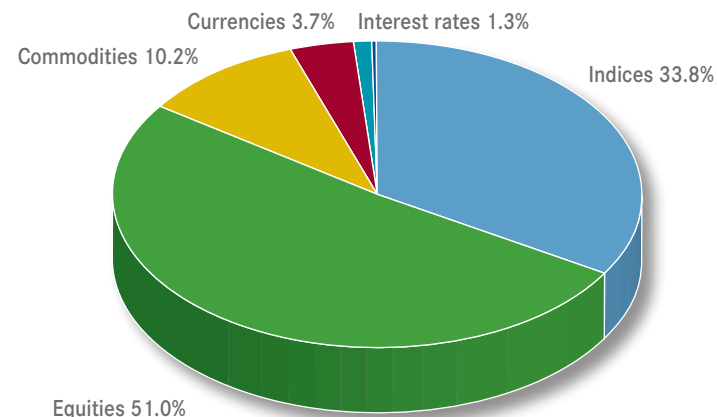
## Change in the market volume by underlying asset in comparison with previous month

| Underlying                 | Change          |              | Change price-adjusted |              | Price effect |
|----------------------------|-----------------|--------------|-----------------------|--------------|--------------|
|                            | T€              | %            | T€                    | %            |              |
| <b>Investment products</b> |                 |              |                       |              |              |
| Indices                    | 134,259         | 0.8%         | -137,020              | -0.8%        | 1.6%         |
| Equities                   | 113,606         | 0.7%         | -382,349              | -2.3%        | 3.0%         |
| Commodities                | 2,996           | 0.4%         | -7,792                | -0.9%        | 1.3%         |
| Currencies                 | -3,131          | -9.2%        | -4,156                | -12.2%       | 3.0%         |
| Interest rates             | -194,536        | -0.7%        | -249,683              | -0.9%        | 0.2%         |
| Investment funds           | -274,432        | -43.4%       | -269,112              | -42.5%       | -0.8%        |
|                            | <b>-221,238</b> | <b>-0.4%</b> | <b>-1,050,111</b>     | <b>-1.7%</b> | <b>1.3%</b>  |
| <b>Leverage products</b>   |                 |              |                       |              |              |
| Indices                    | 28,460          | 6.0%         | 78,597                | 16.5%        | -10.5%       |
| Equities                   | 51,507          | 7.3%         | 30,030                | 4.2%         | 3.0%         |
| Commodities                | -3,007          | -1.9%        | 2,300                 | 1.5%         | -3.4%        |
| Currencies                 | -13,157         | -19.3%       | 8,277                 | 12.2%        | -31.5%       |
| Interest rates             | 413             | 2.1%         | 178                   | 0.9%         | 1.2%         |
| Investment funds           | 0               | 0.0%         | 0                     | 0.0%         | 0.0%         |
|                            | <b>64,215</b>   | <b>4.5%</b>  | <b>119,381</b>        | <b>8.4%</b>  | <b>-3.9%</b> |
| <b>Total</b>               | <b>-157,023</b> | <b>-0.2%</b> | <b>-930,730</b>       | <b>-1.5%</b> | <b>1.2%</b>  |

### Investment products by underlying asset Market volume as at 31 March 2016



### Leverage products by underlying asset Market volume as at 31 March 2016



## 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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