

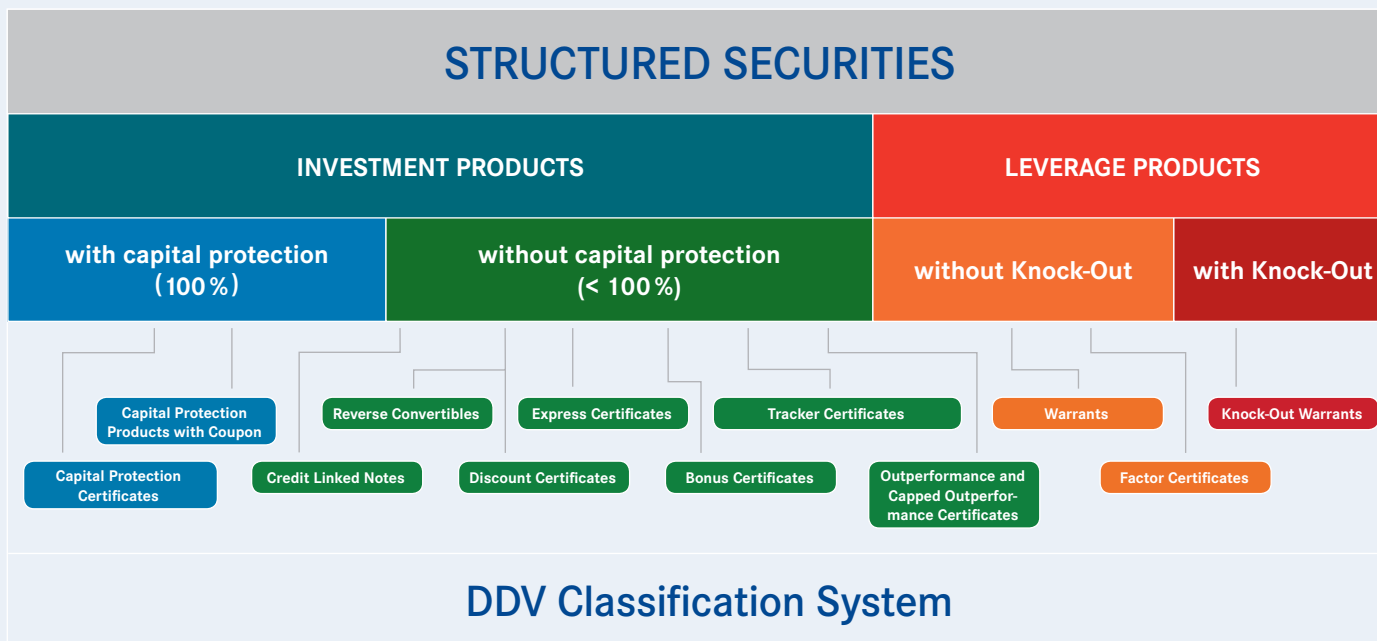
Market Volume

in Derivatives



German structured products market totals EUR 68.9 billion

Growth in Capital Protection Products with Coupon



CONTENTS

| | |
|-------------------------------------------------|---|
| Market volume since December 2016 | 3 |
| Market volume by product class | 3 |
| Market volume by product category | 4 |
| Change in the market volume by product category | 4 |
| Investment products by product category | 4 |
| Leverage products by product category | 4 |
| Market volume by underlying | 5 |
| Change in market volume by underlying | 5 |
| Investment products by underlying | 5 |
| Leverage products by underlying | 5 |
| Collection, validation and analysis methodology | 6 |

December | 2017

- In December, the total volume of the German structured products market fell to EUR 68.9 billion.
- Leverage products saw a sharper reduction – 6.7 percent – than the overall market.
- Capital Protection Products with Coupon bucked the general trend, increasing slightly by 0.6 percent to EUR 17.1 billion.
- Investment products with currencies as an underlying recorded a clear rise of 39.3 percent to come in at EUR 146.9 million.

German structured products market totals EUR 68.9 billion

Growth in Capital Protection Products with Coupon

The outstanding volume of the German structured products market fell at the end of 2017. Almost all product categories were affected by this decrease. Extrapolating the figures to all issuers puts the total volume of the German structured products market at EUR 68.9 billion in December 2017. This corresponds to a loss of 2.5 percent or EUR 1.6 billion 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 slightly in favour of investment products.

Investment products by product category

The negative overall trend meant that demand was down on the previous month in almost all product categories. **Discount Certificates** and **Reverse Convertibles** in particular experienced above-average reductions in volumes. The volume invested in Reverse Convertibles fell to EUR 9.5 billion as a result. The market volume for **Tracker Certificates** also decreased. **Capital Protection Products** bucked the trend by recording slight growth. 37.5 percent of the market volume was invested in **Capital Protection Products with Coupon** and **Uncapped Capital Protection Certificates** in December. The volume invested in Express Certificates also edged up slightly.

Leverage products by product category

After making gains in the previous months, the market volume of **leverage products** was down considerably at

EUR 2.2 billion in December. Factor Certificates recorded growth, while substantial losses were registered in Knock-Out Warrants and Warrants.

Investment products by underlying

Structured products with **interest rates as an underlying** remained the most popular category in December. Having risen in the previous month, their volume increased again slightly to EUR 22.4 billion. Despite some losses, investment products with **equities as an underlying** followed in second place. The volume invested in them totalled EUR 19.9 billion. Investment products with **indices as an underlying** also registered negative growth. Interest in investment products with **commodities as an underlying** fell again at the end of the year, taking their total to EUR 676.4 million. Investment products with **currencies as an underlying** posted above-average growth again. At 39.3 percent, this increase took them to EUR 146.9 million.

Leverage products by underlying

Marked losses were seen in the main classes of leverage products in December. The market volume of leverage products with **equities as an underlying** decreased to EUR 1.3 billion, while the volume invested in leverage products with **indices as an underlying** fell to EUR 616.4 million. By contrast, significant growth was seen in leverage products with **commodities** or **currencies as an underlying**. ■



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

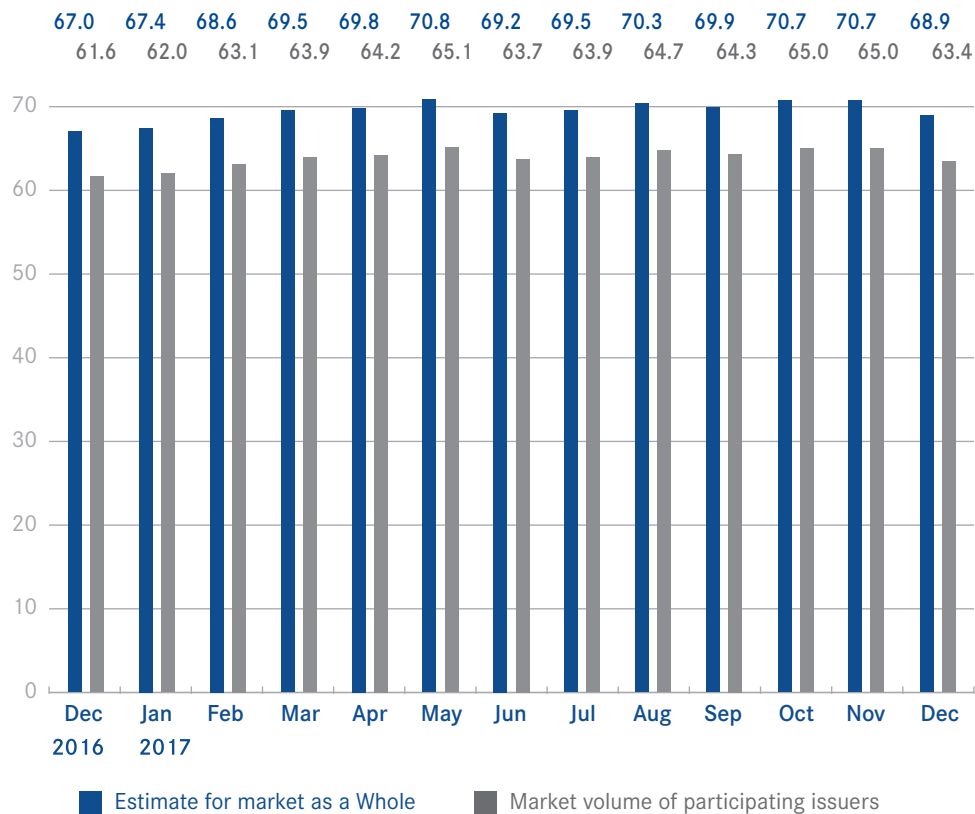
Office Berlin, Pariser Platz 3, 10117 Berlin, Germany
Office Frankfurt a.M., Feldbergstr. 38, 60323 Frankfurt a.M., Germany

Your contact:

Alexander Heftrich, Media Relations Officer
phone: +49 (0)69 244 33 03 70, mobile phone: +49 (0)160 805 30 34
heftrich@derivateverband.de

Under the heading Presse (Media) our website www.derivateverband.de provides not only our latest media releases but also audio and video recordings for reporting (presently only available on the German website).

Market volume since December 2016



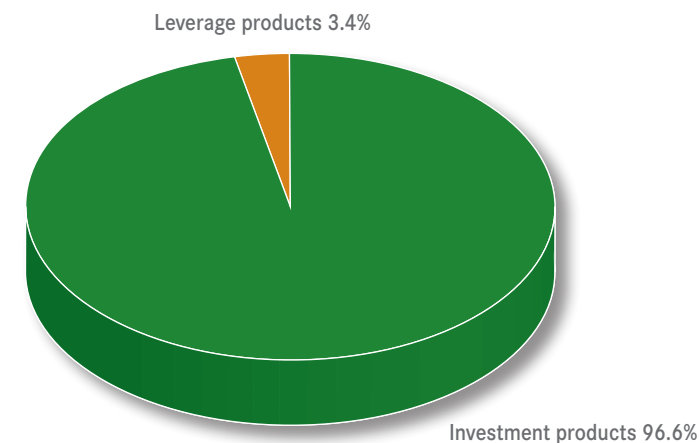
Product classes

Market volume as at 31 December 2017

| Product classes | Market volume | Share |
|------------------------------------------------|-------------------|---------------|
| | T€ | % |
| Investment products with capital protection | 22,973,499 | 37.5% |
| Investment products without capital protection | 38,243,571 | 62.5% |
| Total Investment products | 61,217,070 | 100.0% |
| Leverage products without Knock-Out | 1,166,901 | 53.4% |
| Leverage products with Knock-Out | 1,018,857 | 46.6% |
| Total Leverage products | 2,185,758 | 100.0% |
| Total Investment products | 61,217,070 | 96.6% |
| Total Leverage products | 2,185,758 | 3.4% |
| Total Derivatives | 63,402,828 | 100.0% |

Product classes

Market volume as at 31 December 2017

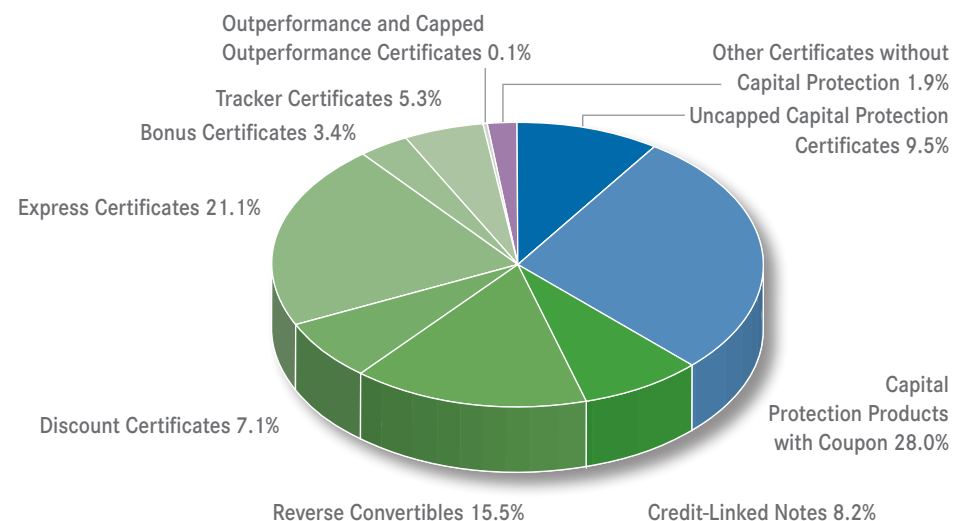


Market volume by product category as at 31 December 2017

| Product categories | Market volume | | Market volume price-adjusted | | Number of Products | |
|---------------------------------------------------------|-------------------|---------------|------------------------------|---------------|--------------------|---------------|
| | T€ | in % | T€ | in % | # | in % |
| ■ Uncapped Capital Protection Certificates | 5,833,580 | 9.5% | 5,854,062 | 9.6% | 1,640 | 0.4% |
| ■ Capital Protection Products with Coupon | 17,139,919 | 28.0% | 17,176,302 | 28.0% | 3,099 | 0.7% |
| ■ Credit-Linked Notes | 4,991,722 | 8.2% | 5,006,900 | 8.2% | 2,340 | 0.5% |
| ■ Reverse Convertibles | 9,483,806 | 15.5% | 9,504,023 | 15.5% | 123,046 | 26.7% |
| ■ Discount Certificates | 4,369,382 | 7.1% | 4,362,809 | 7.1% | 137,173 | 29.8% |
| ■ Express Certificates | 12,903,800 | 21.1% | 12,931,811 | 21.1% | 11,043 | 2.4% |
| ■ Bonus Certificates | 2,067,693 | 3.4% | 2,062,828 | 3.4% | 177,839 | 38.7% |
| ■ Tracker Certificates | 3,227,763 | 5.3% | 3,155,078 | 5.2% | 1,479 | 0.3% |
| ■ Outperformance and Capped Outperformance Certificates | 61,539 | 0.1% | 61,929 | 0.1% | 1,572 | 0.3% |
| ■ Other Certificates without Capital Protection | 1,137,866 | 1.9% | 1,143,849 | 1.9% | 876 | 0.2% |
| Investment products total | 61,217,070 | 96.6% | 61,259,592 | 96.4% | 460,107 | 31.0% |
| ■ Warrants | 781,250 | 35.7% | 835,078 | 36.4% | 577,698 | 56.4% |
| ■ Factor Certificates | 385,651 | 17.6% | 414,039 | 18.1% | 5,658 | 0.6% |
| ■ Knock-Out Warrants | 1,018,857 | 46.6% | 1,043,908 | 45.5% | 440,355 | 43.0% |
| Leverage products total | 2,185,758 | 3.4% | 2,293,025 | 3.6% | 1,023,711 | 69.0% |
| Total | 63,402,828 | 100.0% | 63,552,617 | 100.0% | 1,483,818 | 100.0% |

Investment products by product category

Market volume as at 31 December 2017

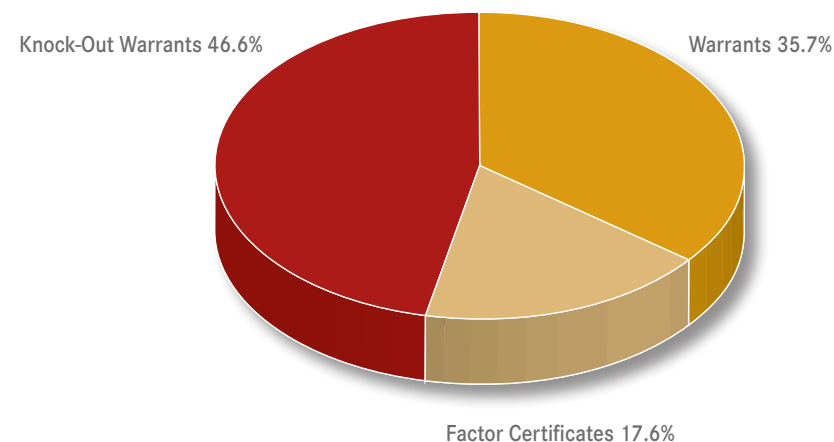


Change in market volume by product category in comparison with previous month

| Product categories | Change | | Change price-adjusted | | Price effect | |
|---------------------------------------------------------|-------------------|--------------|-----------------------|--------------|-----------------|--------------|
| | T€ | in % | T€ | in % | T€ | in % |
| ■ Uncapped Capital Protection Certificates | -98,261 | -1.7% | -77,778 | -1.3% | -20,483 | -0.3% |
| ■ Capital Protection Products with Coupon | 106,722 | 0.6% | 143,105 | 0.8% | 36,383 | -0.2% |
| ■ Credit-Linked Notes | -34,825 | -0.7% | -19,646 | -0.4% | -15,179 | -0.3% |
| ■ Reverse Convertibles | -382,430 | -3.9% | -362,213 | -3.7% | -20,217 | -0.2% |
| ■ Discount Certificates | -542,655 | -11.0% | -549,227 | -11.2% | -6,572 | 0.1% |
| ■ Express Certificates | 63,180 | 0.5% | 91,190 | 0.7% | 28,010 | -0.2% |
| ■ Bonus Certificates | -299,030 | -12.6% | -303,895 | -12.8% | -4,865 | 0.2% |
| ■ Tracker Certificates | -225,211 | -6.5% | -297,896 | -8.6% | -72,685 | 2.1% |
| ■ Outperformance and Capped Outperformance Certificates | -19,437 | -24.0% | -19,047 | -23.5% | 390 | -0.5% |
| ■ Other Certificates without Capital Protection | -11,827 | -1.0% | -5,844 | -0.5% | -5,983 | -0.5% |
| Investment products total | -1,443,774 | -2.3% | -1,401,252 | -2.2% | -42,522 | -0.1% |
| ■ Warrants | -89,750 | -10.3% | -35,922 | -4.1% | -53,828 | -6.2% |
| ■ Factor Certificates | 5,700 | 1.5% | 34,088 | 9.0% | 28,388 | -7.5% |
| ■ Knock-Out Warrants | -73,902 | -6.8% | -48,850 | -4.5% | -25,052 | -2.3% |
| Leverage products total | -157,951 | -6.7% | -50,684 | -2.2% | -107,267 | -4.6% |
| Total | -1,601,725 | -2.5% | -1,451,936 | -2.2% | -149,789 | -0.2% |

Leverage products by product category

Market volume as at 31 December 2017



Market volume by underlying asset as at 31 December 2017

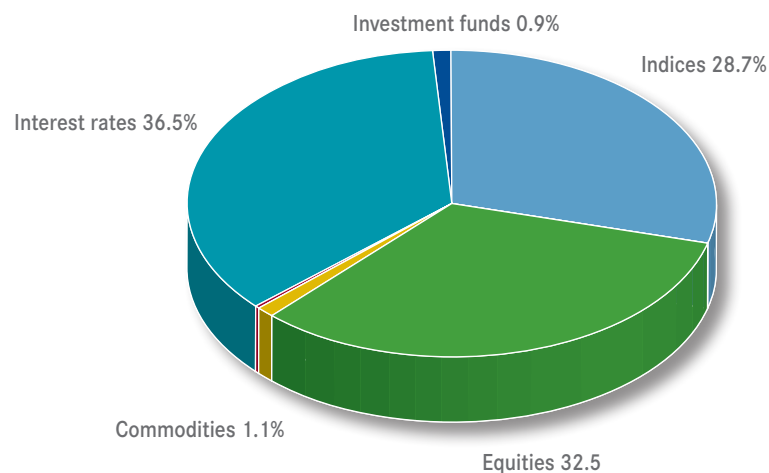
| Underlying | Market volume | | Market volume price-adjusted* | | Number of Products | |
|----------------------------|-------------------|---------------|-------------------------------|---------------|--------------------|---------------|
| | T€ | % | T€ | % | # | % |
| Investment products | | | | | | |
| Indices | 17,564,142 | 28.7% | 17,605,835 | 28.7% | 106,673 | 23.2% |
| Equities | 19,895,841 | 32.5% | 19,906,524 | 32.5% | 345,259 | 75.0% |
| Commodities | 676,383 | 1.1% | 656,231 | 1.1% | 2,451 | 0.5% |
| Currencies | 146,949 | 0.2% | 106,463 | 0.2% | 18 | 0.0% |
| Interest rates | 22,359,716 | 36.5% | 22,411,552 | 36.6% | 5,501 | 1.2% |
| Investment funds | 574,038 | 0.9% | 572,986 | 0.9% | 205 | 0.0% |
| | 61,217,070 | 96.6% | 61,259,592 | 96.4% | 460,107 | 31.0% |
| Leverage products | | | | | | |
| Indices | 616,351 | 28.2% | 675,199 | 29.4% | 216,367 | 21.1% |
| Equities | 1,313,506 | 60.1% | 1,368,905 | 59.7% | 694,759 | 67.9% |
| Commodities | 165,922 | 7.6% | 159,097 | 6.9% | 51,939 | 5.1% |
| Currencies | 56,291 | 2.6% | 58,279 | 2.5% | 54,514 | 5.3% |
| Interest rates | 33,688 | 1.5% | 31,547 | 1.4% | 6,132 | 0.6% |
| Investment funds | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| | 2,185,758 | 3.4% | 2,293,025 | 3.6% | 1,023,711 | 69.0% |
| Total | 63,402,828 | 100.0% | 63,552,617 | 100.0% | 1,483,818 | 100.0% |

*Market volume adjusted for price changes = quantity outstanding as at 31 December 2017 x price as at 30 November 2017

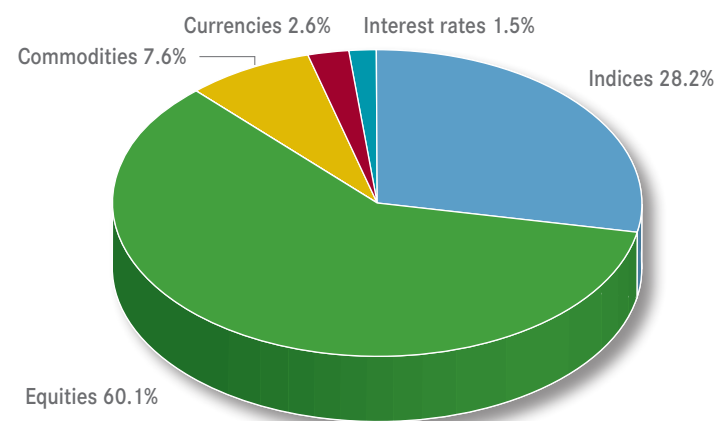
Change in the market volume by underlying asset in comparison with previous month

| Underlying | Change | | Change price-adjusted | | Price effect |
|----------------------------|-------------------|--------------|-----------------------|--------------|--------------|
| | T€ | % | T€ | % | |
| Investment products | | | | | |
| Indices | -756,620 | -4.1% | -714,927 | -3.9% | -0.2% |
| Equities | -710,081 | -3.4% | -699,398 | -3.4% | -0.1% |
| Commodities | -21,285 | -3.1% | -41,437 | -5.9% | 2.9% |
| Currencies | 41,469 | 39.3% | 982 | 0.9% | 38.4% |
| Interest rates | 22,384 | 0.1% | 74,220 | 0.3% | -0.2% |
| Investment funds | -19,641 | -3.3% | -20,693 | -3.5% | 0.2% |
| | -1,443,774 | -2.3% | -1,401,252 | -2.2% | -0.1% |
| Leverage products | | | | | |
| Indices | -44,328 | -6.7% | 14,520 | 2.2% | -8.9% |
| Equities | -121,794 | -8.5% | -66,396 | -4.6% | -3.9% |
| Commodities | 11,324 | 7.3% | 4,499 | 2.9% | 4.4% |
| Currencies | 4,592 | 8.9% | 6,580 | 12.7% | -3.8% |
| Interest rates | -7,721 | -18.6% | -9,863 | -23.8% | 5.2% |
| Investment funds | -24 | -100.0% | -24 | -100.0% | 0.0% |
| | -157,951 | -6.7% | -50,684 | -2.2% | -4.6% |
| Total | -1,601,725 | -2.5% | -1,451,936 | -2.2% | -0.2% |

Investment products by underlying asset Market volume as at 31 December 2017



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

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.

Copyright

These statistics may not be copied, used or quoted without reference to the source text (Deutscher Derivate Verband: The German Derivatives Market, December 2017).