

Market Volume

in Derivatives



Certificates market down in December

Investment certificates and leverage products in decline

The outstanding volume of the German certificates market fell sharply in December. The open interest was down by 3.0 percent or EUR 2.9 billion. This is shown by the latest figures collected each month from 16 banks by the European Derivatives Group (EDG) on behalf of Deutscher Derivate Verband (DDV), the German Derivatives Association. When looking at all certificates taken together, prices rose by 0.1 percent in December. The price-adjusted decline in open interest was 3.2 percent or EUR 3.0 billion.

When the figures collected by EDG are extrapolated to all issuers, the **total volume of the German certificates market at the end of December** was **EUR 96.7 billion**.

The **ratio of investment certificates to leverage products** remained stable in December. Investment products accounted for 98.7 percent of the market volume while leverage products accounted for 1.3 percent.

Investment products by product category

Security was of prime importance to investors in December. Consequently, the product category of investment products offering full capital protection was particularly sought after. At 69.6 percent these products accounted for well over half of the total open interest in investment products. The category of Capital Protection Products with Coupon

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Market Volume December | 2012

- The market volume of investment certificates and leverage products was down by 3.0 percent in December. The total volume of the German certificates market thus amounted to EUR 96.7 billion at the end of December.
- At 98.7 percent investment products accounted for almost the entire market volume, while leverage products only made up 1.3 percent.
- Private investors played safe in December. Investment certificates with full capital protection accounted for 69.6 percent of the entire open interest in investment products.
- While products with interest rates as an underlying dominated the market for investment certificates, indices were the predominant underlying in the case of leverage products.

lost 0.2 percent or EUR 107 million in December and had a market share of 53.5 percent. Losses in the Uncapped Capital Protection Certificates category were significantly higher, amounting to 3.3 percent or EUR 492 million and accounting for 16.1 percent of the total volume.

The category of **Reverse Convertibles**, which had achieved significant gains in previous months, also slipped back. Their outstanding volume was up by 0.6 percent or EUR 29 million. As the losses they suffered were very much below average, their share of the total volume of investment products rose from 5.4 percent in the previous month to 5.6 percent in December.

Discount Certificates suffered losses of 25.0 percent or EUR 1.3 billion, the heaviest in both relative and absolute terms. Owing to these sharp declines their share of the total volume also fell and stood at 4.5 percent.

The market volume of **Express Certificates** fell by 2.3 percent or EUR 112 million at the end of the year. This means that 5.3 percent of the total volume of investment products was invested in this category at the end of December.

The decline in the case of **Bonus Certificates** was somewhat slighter. Market volume fell by 15.5 percent or EUR 419 million. The proportion of market volume accounted for by Bonus Certificates amounted to 2.5 percent.

The downturn in volume in the **Tracker Certificates** category was 1.9 percent or EUR 111 million. Making up 6.4 percent of total market volume, they were the most popular category among investment products without full capital protection.

Market volume in the **Outperformance Certificates and Capped Outperformance Certificates** was down by 2.9 percent or EUR 2 million. However, as they accounted for only 0.1 percent of volume, this had little impact on the overall picture for investment products.

Leverage products by product category

In the case of leverage products, the decline in volume reflected the general market trend. Market volume fell by 3.0 percent or EUR 38 million. This development was entirely due to price falls of 6.7 percent.

When looked at by product category, it can be seen that both **Warrants** and leverage products suffered losses in December. The open interest in Warrants went down by 4.5 percent or EUR 24 million. They accounted for 41.3 percent of all leverage products.

The market volume of **Knock-Out Warrants** fell by 1.9 percent or EUR 14 million, representing 58.7 percent of the total volume of leverage products.

Investment products by underlying

Investment certificates with **interest rates as an underlying** remained the most popular category of underlying assets in December. This class of underlying assets accounted for 59.8 percent of the open interest in all investment certificates, particularly owing to the high outstanding volume of Reverse Convertibles and credit linked notes. In the month under review their open interest was down by 0.4 percent or EUR 206 million.

With a share of 18.9 percent, investment certificates with **indices as an underlying** were the second most popular class of underlying assets in December. The outstanding volume showed the highest loss of share, both in absolute and in relative terms, falling by 9.0 percent or EUR 1.7 billion.

The outstanding volume of investment certificates with **equities as an underlying** was also down. Their market volume declined by 4.7 percent or EUR 816 million in the month under review. Equity-based products accounted for 18.3 percent of the total volume.

Following behind at some distance were investment certificates with **commodities as an underlying** which accounted for 1.8 percent of the total volume of investment certificates. The open interest was down by 7.2 percent or 127 million. ▶▶

Open interest in investment certificates with **investment funds as an underlying**, on the other hand, bucked the general market trend and rose by 2.9 percent or EUR 28 million accounting for 1.1 percent of volume.

The market volume of investment certificates with **currencies as an underlying** continued to be of little consequence for the overall development. The open interest in this investment class fell in December by 6.6 percent or EUR 8 million, but accounted for a mere 0.1 percent of volume.

Leverage products by underlying

In December the most popular investment class in the case of leverage products was still products with **indices as an underlying**, accounting for 38.5 percent of volume. In absolute terms it was here that the strongest growth could be observed with figures standing at 1.8 percent or EUR 8 million.

Volume was also up in the case of leverage products with **equities as an underlying**. The open interest grew by

0.8 percent or EUR 4 million. This category accounted for 37.2 percent of volume.

Despite a decline of 17.6 percent, or EUR 50 million, leverage products with **commodities as an underlying** constituted the third largest category, accounting for 18.8 percent of the total volume.

Leverage products with **currencies as an underlying** showed the strongest gains in relative terms. Their open interest increased by 2.7 percent or EUR 1 million and their share of the total volume of leverage products was 3.6 percent.

Open interest in leverage products with **interest rates as an underlying** fell in December by 6.8 percent or EUR 2 million, which meant that leverage products with interest rates as an underlying held on to their share of 1.9 percent.

Investment funds as an underlying played only a minor role in December as far as leverage products are concerned. They constituted less than 0.1 percent of volume. ■

The following companies contributed to the market volume statistics:



Deutscher Derivate Verband (DDV)

Deutscher Derivate Verband (DDV), the German Derivatives Association, is the industry representative body for the 17 leading issuers of derivatives in Germany: Barclays, BNP Paribas, Citigroup, Commerzbank, Deutsche Bank, DZ BANK, Goldman Sachs, HSBC Trinkaus, HypoVereinsbank, J.P. Morgan, LBBW, MACQUARIE, Royal Bank of Scotland, Société Générale, UBS, Vontobel and WestLB. 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.

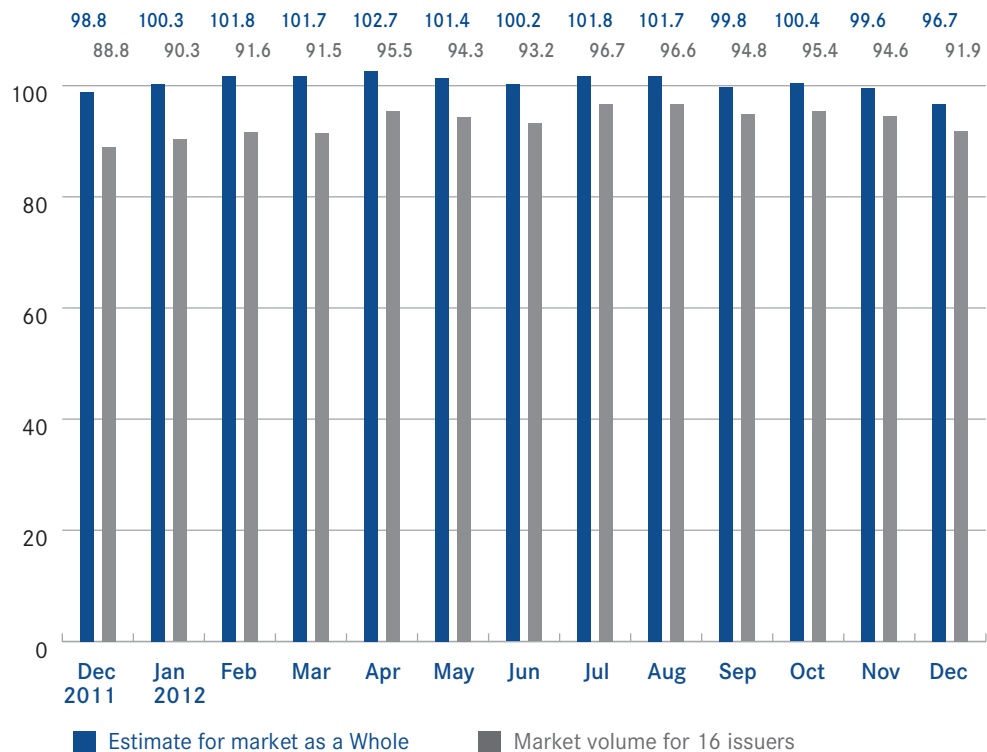
Office Berlin, Pariser Platz 3, 10117 Berlin
Office Frankfurt a.M., Feldbergstr. 38, 60323 Frankfurt a.M.

Please address any queries to:

Barbara Wiesneth, Consultant of Public Relations
phone: +49 (69) 244 33 03 – 70, mobile phone: +49 (172) 724 21 53
wiesneth@derivateverband.de

www.derivateverband.de

Market volume since December 2011



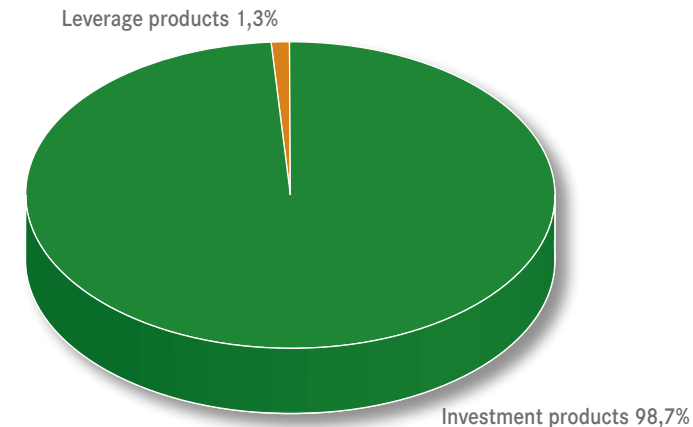
Product classes

Market volume as at 31 December 2012

Product classes	Market volume	Share
	T€	%
Investment products	90,630,861	98.7%
Leverage products	1,237,834	1.3%
Total Derivatives	91,868,695	100.0%

Product classes

Market volume as at 31 December 2012

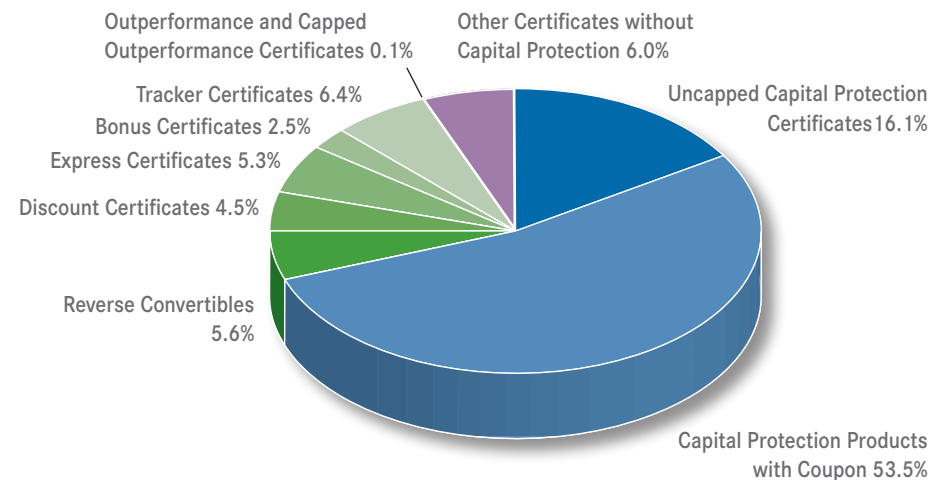


Market volume by product category as at 31 December 2012

Product categories	Market volume		Market volume price-adjusted		Number of Products	
	T€	in %	T€	in %	#	in %
■ Uncapped Capital Protection Certificates	14,594,981	16.1%	14,543,982	16.1%	3,434	1.1%
■ Capital Protection Products with Coupon	48,456,110	53.5%	48,431,964	53.6%	2,356	0.7%
■ Reverse Convertibles	5,109,785	5.6%	5,090,286	5.6%	40,223	12.4%
■ Discount Certificates	4,051,757	4.5%	4,026,604	4.5%	140,294	43.2%
■ Express Certificates	4,837,943	5.3%	4,787,566	5.3%	2,635	0.8%
■ Bonus Certificates	2,284,435	2.5%	2,286,585	2.5%	131,265	40.4%
■ Tracker Certificates	5,773,363	6.4%	5,755,774	6.4%	2,759	0.8%
■ Outperformance and Capped Outperformance Certificates	69,738	0.1%	68,717	0.1%	594	0.2%
■ Other Certificates without Capital Protection	5,452,748	6.0%	5,429,723	6.0%	1,255	0.4%
Investment products total	90,630,861	98.7%	90,421,201	98.6%	324,815	45.1%
■ Warrants	511,536	41.3%	541,886	40.9%	256,371	64.9%
■ Knock-Out Warrants	726,298	58.7%	781,697	59.1%	138,591	35.1%
Leverage products total	1,237,834	1.3%	1,323,584	1.4%	394,962	54.9%
Total	91,868,695	100.0%	91,744,785	100.0%	719,777	100.0%

Investment products by product category

Market volume as at 31 December 2012

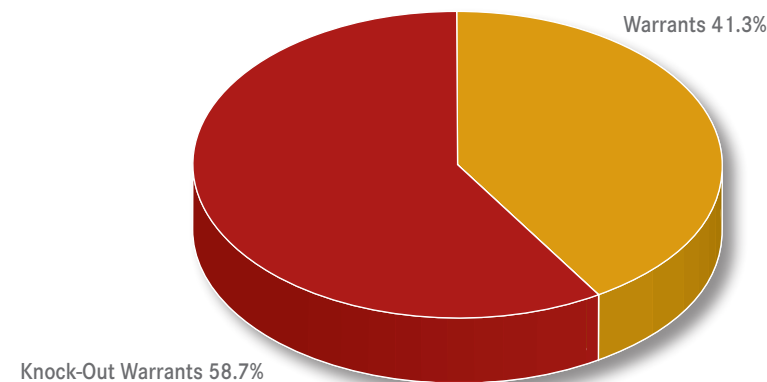


Change in market volume by product category in comparison with previous month

Product categories	Change		Change price-adjusted		Price effect
	T€	in %	T€	in %	
■ Uncapped Capital Protection Certificates	-492,250	-3.3%	-543,249	-3.6%	0.3%
■ Capital Protection Products with Coupon	-106,882	-0.2%	-131,028	-0.3%	0.0%
■ Reverse Convertibles	-29,162	-0.6%	-48,661	-0.9%	0.4%
■ Discount Certificates	-1,347,192	-25.0%	-1,372,344	-25.4%	0.5%
■ Express Certificates	-112,317	-2.3%	-162,694	-3.3%	1.0%
■ Bonus Certificates	-418,577	-15.5%	-416,428	-15.4%	-0.1%
■ Tracker Certificates	-110,743	-1.9%	-128,332	-2.2%	0.3%
■ Outperformance and Capped Outperformance Certificates	-2,106	-2.9%	-3,127	-4.4%	1.4%
■ Other Certificates without Capital Protection	-206,421	-3.6%	-229,446	-4.1%	0.4%
Investment products total	-2,825,650	-3.0%	-3,035,309	-3.2%	0.2%
■ Warrants	-24,160	-4.5%	6,190	1.2%	-5.7%
■ Knock-Out Warrants	-14,039	-1.9%	41,360	5.6%	-7.5%
Leverage products total	-38,200	-3.0%	47,550	3.7%	-6.7%
Total	-2,863,849	-3.0%	-2,987,759	-3.2%	0.1%

Leverage products by product category

Market volume as at 31 December 2012



Market volume by underlying asset as at 31 December 2012

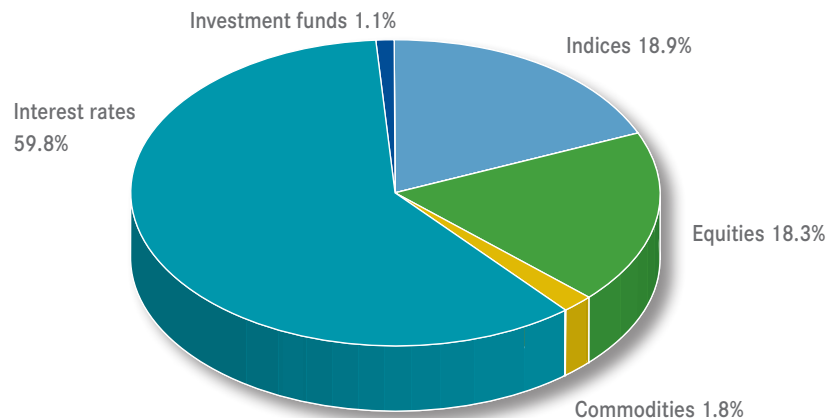
Underlying	Market volume		Market volume price-adjusted*		Number of Products	
	T€	%	T€	%	#	%
Investment products						
Indices	17,090,048	18.9%	16,993,817	18.8%	94,936	29.2%
Equities	16,607,892	18.3%	16,492,331	18.2%	223,645	68.9%
Commodities	1,633,890	1.8%	1,688,195	1.9%	2,409	0.7%
Currencies	109,588	0.1%	109,681	0.1%	47	0.0%
Interest rates	54,191,588	59.8%	54,143,464	59.9%	3,211	1.0%
Investment funds	997,855	1.1%	993,714	1.1%	567	0.2%
	90,630,861	98.7%	90,421,201	98.6%	324,815	45.1%
Leverage products						
Indices	476,808	38.5%	493,262	37.3%	93,530	23.7%
Equities	460,916	37.2%	468,697	35.4%	242,214	61.3%
Commodities	232,506	18.8%	291,763	22.0%	26,216	6.6%
Currencies	44,423	3.6%	42,277	3.2%	30,881	7.8%
Interest rates	23,000	1.9%	27,411	2.1%	2,065	0.5%
Investment funds	182	0.0%	173	0.0%	56	0.0%
	1,237,834	1.3%	1,323,584	1.4%	394,962	54.9%
Total	91,868,695	100.0%	91,744,785	100.0%	719,777	100.0%

*Market volume adjusted for price changes = quantity outstanding as at 31 December 2012 x price as at 30 November 2012

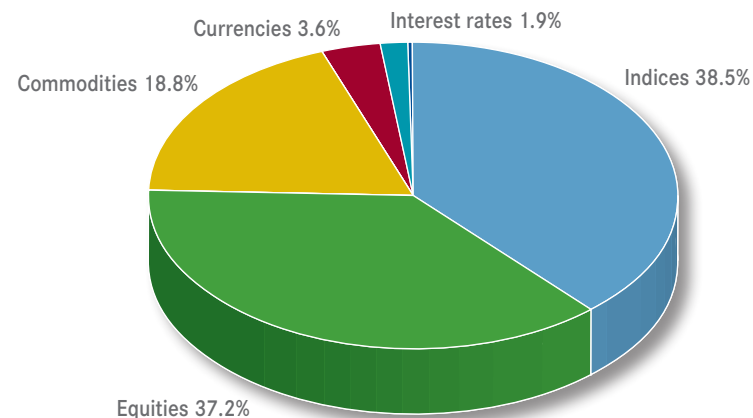
Change in the market volume by underlying asset in comparison with previous month

Underlying	Change		Change price-adjusted		Price effect
	T€	%	T€	%	
Investment products					
Indices	-1,697,346	-9.0%	-1,793,577	-9.5%	0.5%
Equities	-815,631	-4.7%	-931,192	-5.3%	0.7%
Commodities	-127,056	-7.2%	-72,751	-4.1%	-3.1%
Currencies	-7,719	-6.6%	-7,627	-6.5%	-0.1%
Interest rates	-205,626	-0.4%	-253,750	-0.5%	0.1%
Investment funds	27,729	2.9%	23,588	2.4%	0.4%
	-2,825,650	-3.0%	-3,035,309	-3.2%	0.2%
Leverage products					
Indices	8,464	1.8%	24,918	5.3%	-3.5%
Equities	3,686	0.8%	11,466	2.5%	-1.7%
Commodities	-49,792	-17.6%	9,466	3.4%	-21.0%
Currencies	1,157	2.7%	-988	-2.3%	5.0%
Interest rates	-1,670	-6.8%	2,742	11.1%	-17.9%
Investment funds	-45	-20.0%	-54	-23.7%	3.7%
	-38,200	-3.0%	47,550	3.7%	-6.7%
Total	-2,863,849	-3.0%	-2,987,759	-3.2%	0.1%

Investment products by underlying asset Market volume as at 31 December 2012



Leverage products by underlying asset Market volume as at 31 December 2012



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.

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