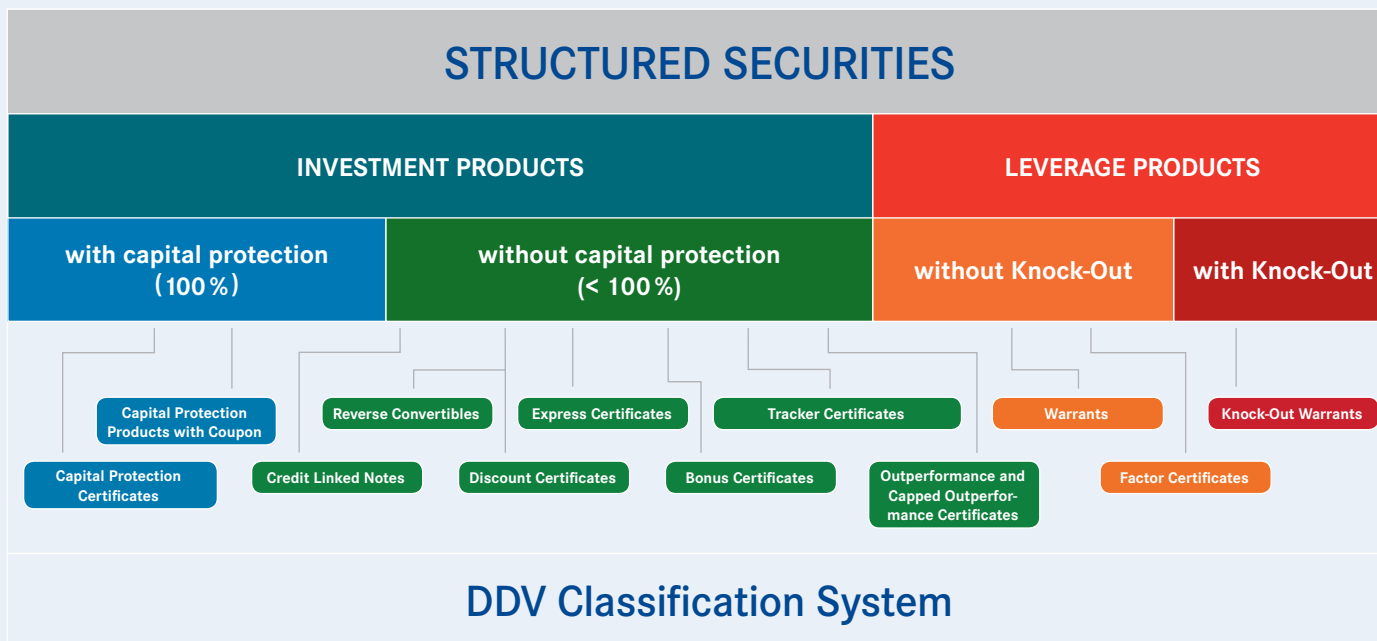


Market Volume

in Derivatives

German structured products market at EUR 69.9 billion

Leverage products in higher demand



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September | 2017

- The total volume of the German structured products market was EUR 69.9 billion in September.
- Bucking the overall trend, the market volume of leverage products rose by 6.1 percent to just under EUR 2.1 billion.
- Express Certificates saw a plus of 0.8 percent and stood at EUR 12.6 billion.
- Leverage products with equities as an underlying recorded a growth of 10.5 percent. The volume invested in these products amounted to EUR 1.2 billion.

German structured products market at EUR 69.9 billion

Leverage products in higher demand

The outstanding volume of the German structured products market was slightly lower at the end of the third quarter of the year. When the figures are extrapolated to all issuers, the total volume of the German structured products market works out at EUR 69.9 billion in September 2017. This represents a month-on-month decline of 0.5 percent, or EUR 0.4 billion. These trends are shown by the latest set of the 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 shifted slightly in favour of leverage 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 **Bonus Certificates** in particular experienced above-average reductions in volumes. The volume invested in Discount Certificates fell to EUR 4.9 billion as a result, and the market volume registered for Bonus Certificates saw a decrease to EUR 2.3 billion. **Capital Protection Products** with full capital protection bucked the trend by recording growth. A total of 36.5 percent of the market volume was invested in **Capital Protection Products with Coupon** and **Uncapped Capital Protection Certificates** in September. The figure for **Express Certificates** climbed to EUR 12.6 billion.

Leverage products by product category

After making gains in the previous months, the market volume of **Leverage Products** increased again and stood at almost EUR 2.1 billion in September. Increases were seen in all product categories, with the strongest upsurge in Warrants.

Investment products by underlying

Structured products with **interest rates as an underlying** remained the most popular category in September. After an increase in August, their volume rose again and stood at EUR 22.2 billion. Investment products with **equities as an underlying** followed in second place. The volume invested in them totalled EUR 20.2 billion, whereas investment products with **indices as an underlying** registered negative growth and came in with a volume of EUR 18.5 billion. After a downturn in August, the volume figure for investment products with **commodities as an underlying** dropped again in September and stood at EUR 753.9 million.

Leverage products by underlying

The month of September saw a significant increase in the dominant classes of underlyings for leverage products. The market volume of leverage products with **equities as an underlying** rose to EUR 1.2 billion, while the volume invested in leverage products with **indices as an underlying** went up to EUR 590.2 million. The aggregate market volume of leverage products with **commodities as an underlying** fell to EUR 208.6 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 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.

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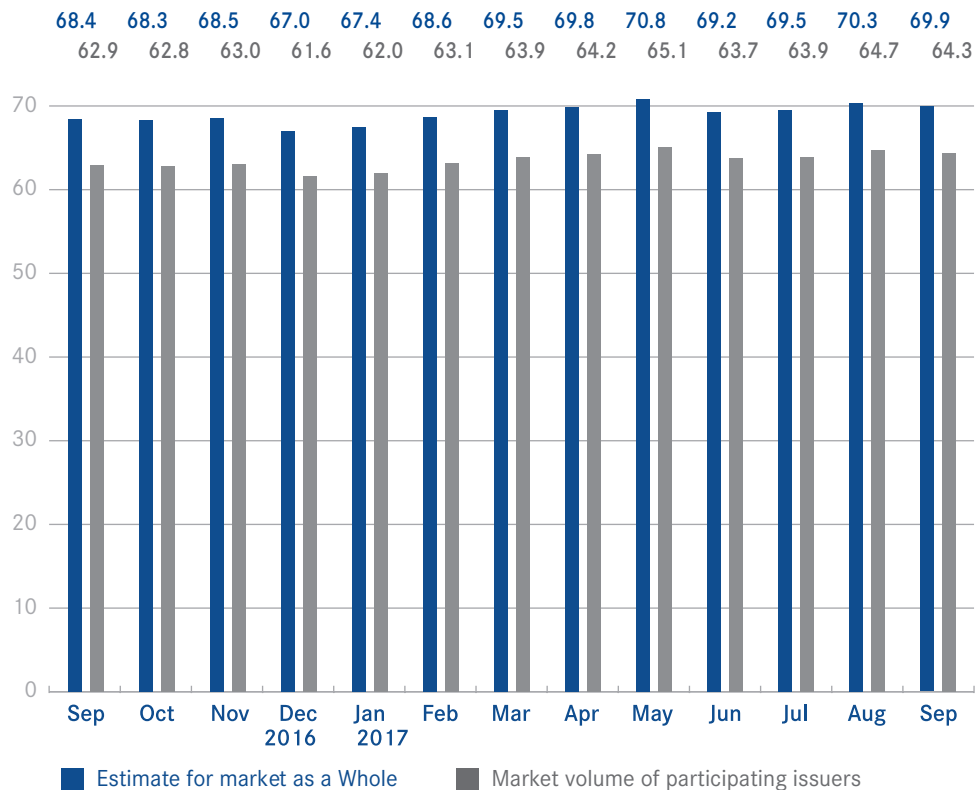
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Market volume since September 2016



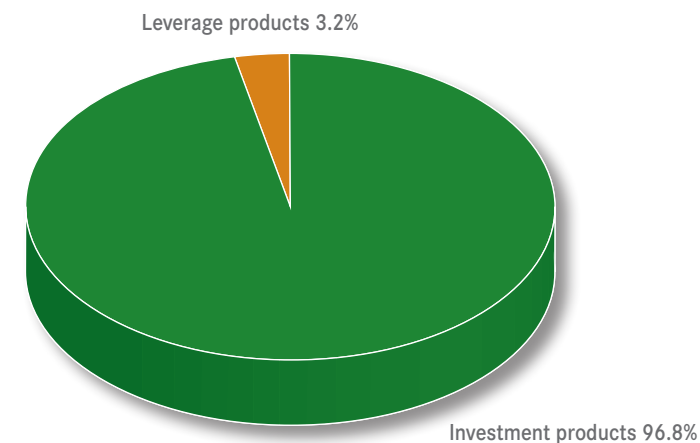
Product classes

Market volume as at 30 September 2017

Product classes	Market volume	Share
	T€	%
Investment products with capital protection	22,698,960	36.4%
Investment products without capital protection	39,587,851	63.6%
Total Investment products	62,286,810	100.0%
Leverage products without Knock-Out	1,081,692	52.7%
Leverage products with Knock-Out	969,997	47.3%
Total Leverage products	2,051,689	100.0%
Total Investment products	62,286,810	96.8%
Total Leverage products	2,051,689	3.2%
Total Derivatives	64,338,500	100.0%

Product classes

Market volume as at 30 September 2017

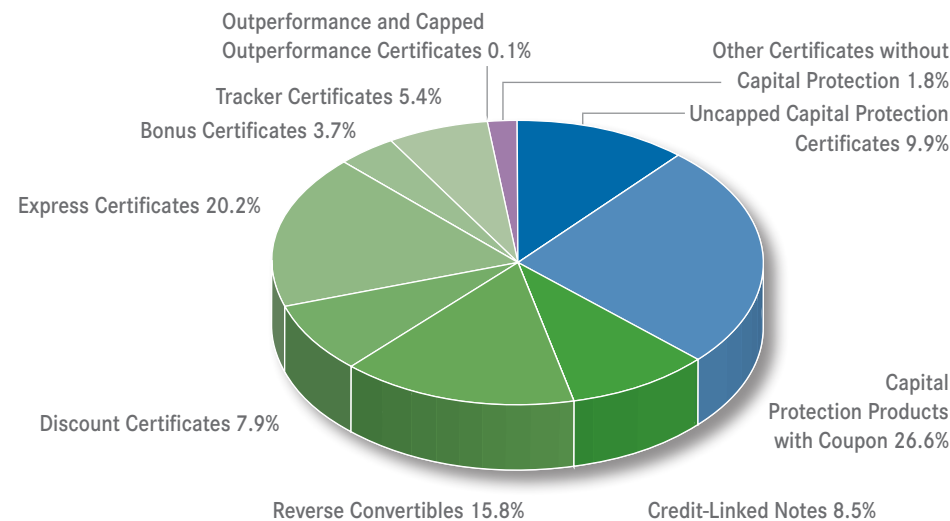


Market volume by product category as at 30 September 2017

Product categories	Market volume		Market volume price-adjusted		Number of Products	
	T€	in %	T€	in %	#	in %
■ Uncapped Capital Protection Certificates	6,148,929	9.9%	6,090,676	9.9%	1,720	0.3%
■ Capital Protection Products with Coupon	16,550,031	26.6%	16,595,200	26.9%	2,918	0.6%
■ Credit-Linked Notes	5,301,803	8.5%	5,296,669	8.6%	2,343	0.4%
■ Reverse Convertibles	9,851,430	15.8%	9,717,384	15.8%	132,180	25.4%
■ Discount Certificates	4,916,750	7.9%	4,844,125	7.9%	155,202	29.8%
■ Express Certificates	12,595,110	20.2%	12,319,932	20.0%	10,918	2.1%
■ Bonus Certificates	2,329,464	3.7%	2,297,305	3.7%	212,365	40.7%
■ Tracker Certificates	3,355,682	5.4%	3,270,287	5.3%	1,521	0.3%
■ Outperformance and Capped Outperformance Certificates	91,473	0.1%	87,725	0.1%	1,276	0.2%
■ Other Certificates without Capital Protection	1,146,139	1.8%	1,126,081	1.8%	872	0.2%
Investment products total	62,286,810	96.8%	61,645,384	96.9%	521,315	34.7%
■ Warrants	738,854	36.0%	724,576	36.7%	544,739	55.6%
■ Factor Certificates	342,838	16.7%	339,519	17.2%	5,200	0.5%
■ Knock-Out Warrants	969,997	47.3%	910,572	46.1%	430,276	43.9%
Leverage products total	2,051,689	3.2%	1,974,667	3.1%	980,215	65.3%
Total	64,338,500	100.0%	63,620,051	100.0%	1,501,530	100.0%

Investment products by product category

Market volume as at 30 September 2017

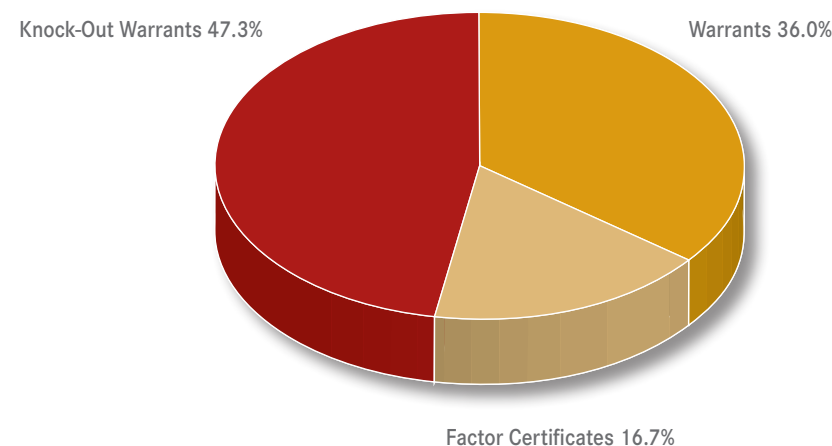


Change in market volume by product category in comparison with previous month

Product categories	Change		Change price-adjusted		Price effect	
	T€	in %	T€	in %	T€	in %
■ Uncapped Capital Protection Certificates	-54,982	-0.9%	-113,234	-1.8%	0.9%	
■ Capital Protection Products with Coupon	95,656	0.6%	140,825	0.9%	-0.3%	
■ Credit-Linked Notes	-19,618	-0.4%	-24,752	-0.5%	0.1%	
■ Reverse Convertibles	-83,772	-0.8%	-217,818	-2.2%	1.3%	
■ Discount Certificates	-226,407	-4.4%	-299,032	-5.8%	1.4%	
■ Express Certificates	104,439	0.8%	-170,739	-1.4%	2.2%	
■ Bonus Certificates	-134,547	-5.5%	-166,705	-6.8%	1.3%	
■ Tracker Certificates	-143,619	-4.1%	-229,014	-6.5%	2.4%	
■ Outperformance and Capped Outperformance Certificates	3,245	3.7%	-503	-0.6%	4.2%	
■ Other Certificates without Capital Protection	14,727	1.3%	-5,332	-0.5%	1.8%	
Investment products total	-444,879	-0.7%	-1,086,304	-1.7%	1.0%	
■ Warrants	47,875	6.9%	33,598	4.9%	2.1%	
■ Factor Certificates	8,659	2.6%	5,340	1.6%	1.0%	
■ Knock-Out Warrants	60,640	6.7%	1,214	0.1%	6.5%	
Leverage products total	117,175	6.1%	40,152	2.1%	4.0%	
Total	-327,704	-0.5%	-1,046,152	-1.6%	1.1%	

Leverage products by product category

Market volume as at 30 September 2017



Market volume by underlying asset as at 30 September 2017

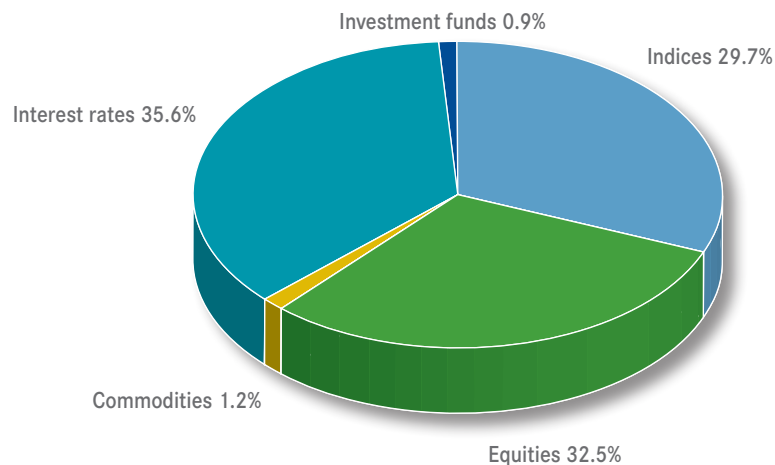
Underlying	Market volume		Market volume price-adjusted*		Number of Products	
	T€	%	T€	%	#	%
Investment products						
Indices	18,501,760	29.7%	18,254,739	29.6%	118,009	22.6%
Equities	20,235,726	32.5%	19,812,467	32.1%	395,123	75.8%
Commodities	753,892	1.2%	741,314	1.2%	2,631	0.5%
Currencies	43,709	0.1%	46,437	0.1%	28	0.0%
Interest rates	22,163,999	35.6%	22,204,466	36.0%	5,332	1.0%
Investment funds	587,724	0.9%	585,962	1.0%	192	0.0%
	62,286,810	96.8%	61,645,384	96.9%	521,315	34.7%
Leverage products						
Indices	590,249	28.8%	600,748	30.4%	215,377	22.0%
Equities	1,215,780	59.3%	1,095,410	55.5%	648,796	66.2%
Commodities	160,061	7.8%	193,977	9.8%	49,820	5.1%
Currencies	48,516	2.4%	50,269	2.5%	60,720	6.2%
Interest rates	37,059	1.8%	34,240	1.7%	5,494	0.6%
Investment funds	24	0.0%	23	0.0%	8	0.0%
	2,051,689	3.2%	1,974,667	3.1%	980,215	65.3%
Total	64,338,500	100.0%	63,620,051	100.0%	1,501,530	100.0%

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

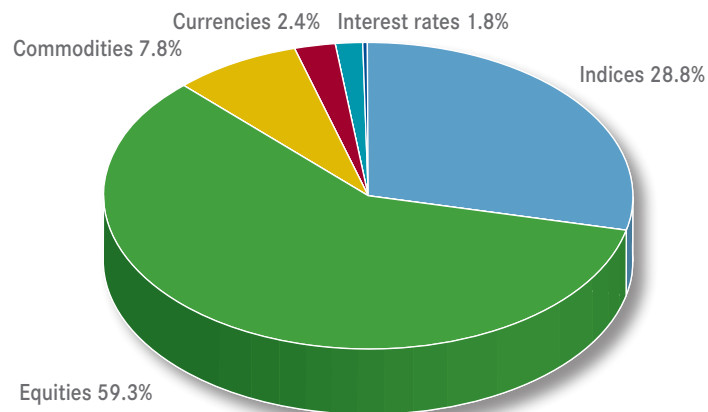
Change in the market volume by underlying asset in comparison with previous month

Underlying	Change		Change price-adjusted		Price effect
	T€	%	T€	%	
Investment products					
Indices	-472,705	-2.5%	-719,726	-3.8%	1.3%
Equities	21,560	0.1%	-401,699	-2.0%	2.1%
Commodities	-34,957	-4.4%	-47,535	-6.0%	1.6%
Currencies	-12,519	-22.3%	-9,792	-17.4%	-4.9%
Interest rates	60,106	0.3%	100,572	0.5%	-0.2%
Investment funds	-6,363	-1.1%	-8,125	-1.4%	0.3%
	-444,879	-0.7%	-1,086,304	-1.7%	1.0%
Leverage products					
Indices	29,532	5.3%	40,031	7.1%	-1.9%
Equities	115,326	10.5%	-5,044	-0.5%	10.9%
Commodities	-27,169	-14.5%	6,747	3.6%	-18.1%
Currencies	-2,391	-4.7%	-639	-1.3%	-3.4%
Interest rates	1,876	5.3%	-943	-2.7%	8.0%
Investment funds	1	2.8%	0	0.0%	2.8%
	117,175	6.1%	40,152	2.1%	4.0%
Total	-327,704	-0.5%	-1,046,152	-1.6%	1.1%

Investment products by underlying asset Market volume as at 30 September 2017



Leverage products by underlying asset Market volume as at 30 September 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.

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