

Stock Exchange Turnover

in Derivatives



Exchange turnover totals EUR 3.4 billion in June

Brisk trading in leverage products

STRUCTURED SECURITIES



DDV Classification System

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June | 2017

- The exchanges in Stuttgart and Frankfurt generated turnover of EUR 3.4 billion with investment and leverage products in June.
- While trading in investment products was somewhat weaker, turnover from leverage products was up.
- Investors had a total of 539,027 investment certificates and 919,895 leverage products to choose from at the end of June.
- Among both investment products and leverage products, equities and indices accounted for more than 90 percent of trading by underlying.

Exchange turnover totals EUR 3.4 billion in June

Brisk trading in leverage products

Trading in structured products was more restrained on the exchanges in Stuttgart and Frankfurt in June. Exchange turnover in structured products and leverage products totalled EUR 3.4 billion. This corresponded to a month-on-month decrease of 6.0 percent. By contrast, the number of executed customer orders increased by 1.6 percent to 453,382. The average order size was EUR 7,547 – down 7.5 percent on one month earlier.

The trading volume for investment products came in at just under EUR 1.7 billion in June. This corresponded to 48.8 percent of the total turnover. The average order size was EUR 25,360.

Turnover in leverage products stood at EUR 1.8 billion in June, meaning that leverage products accounted for 51.2 percent of the total turnover. The average order size was EUR 4,523.

New issues

Banks issued 54,456 new investment products and 220,145 leverage products in June. As a result, a total of 539,027 investment products and 919,895 leverage products were available at the Stuttgart and Frankfurt Exchanges.

Exchange turnover by product category

Investment products

Following an increase in the previous month, the turnover in most product categories fell. In particular, **Discount Certificates** and **Bonus Certificates** registered clear losses in absolute terms. Turnover in Discount Certificates dropped to EUR 627.2 million in June, for instance, while trading in Bonus Certificates came in at EUR 473.9 million at the end of the first six months. **Reverse Convertibles** registered brisk trading, thereby bucking the general trend. Their turnover rose to EUR 187.7 million. Trading in **Express Certificates**

remained roughly on a par with the previous month. The exchange turnover for Capital Protection Products edged up again in June to EUR 25.0 million in total.

Leverage products

Following a sharp rise in turnover in the previous month, the picture in June remained largely bright. Turnover in **Warrants** increased slightly to EUR 438.6 million. Trading in **Knock-Out Warrants** fell to EUR 1.0 billion, while **Factor Certificates** recorded a sharp rise to EUR 293.8 million.

Exchange turnover by underlying

Investment products

Trading in products with **indices as an underlying** and **equities as an underlying** was down. Products with these two underlyings nevertheless accounted for 94.8 percent ▶▶

of turnover. Among investment products, equities were the most popular underlying, accounting for a 48.8 percent share. Products with **commodities as an underlying** saw a further fall in turnover. The figure recorded for investment products with **investment funds as an underlying** was also down, whilst an increase in turnover was registered for those with **interest rates as an underlying**.

Leverage products

The picture was mixed when it came to exchange turnover by underlying. Thanks to an increase in turnover, products with **indices as an underlying** further extended their market share to 56.9 percent. By contrast, a decrease in turnover

was registered for products with **equities as an underlying**. Demand was down for leverage products with both **commodities as an underlying** and **currencies as an underlying** in June. Together, they accounted for a 7.8 percent market share.

Exchange turnover

Stuttgart Exchange generated a turnover volume of EUR 2.2 billion in June. Its market share of the total turnover stood at 64.2 percent. Frankfurt Exchange recorded a trading volume of EUR 1.2 billion. It accounted for 35.8 percent of the total exchange turnover and 46.4 percent of customer orders, while Stuttgart Exchange handled 53.6 percent. ■



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 sixteen 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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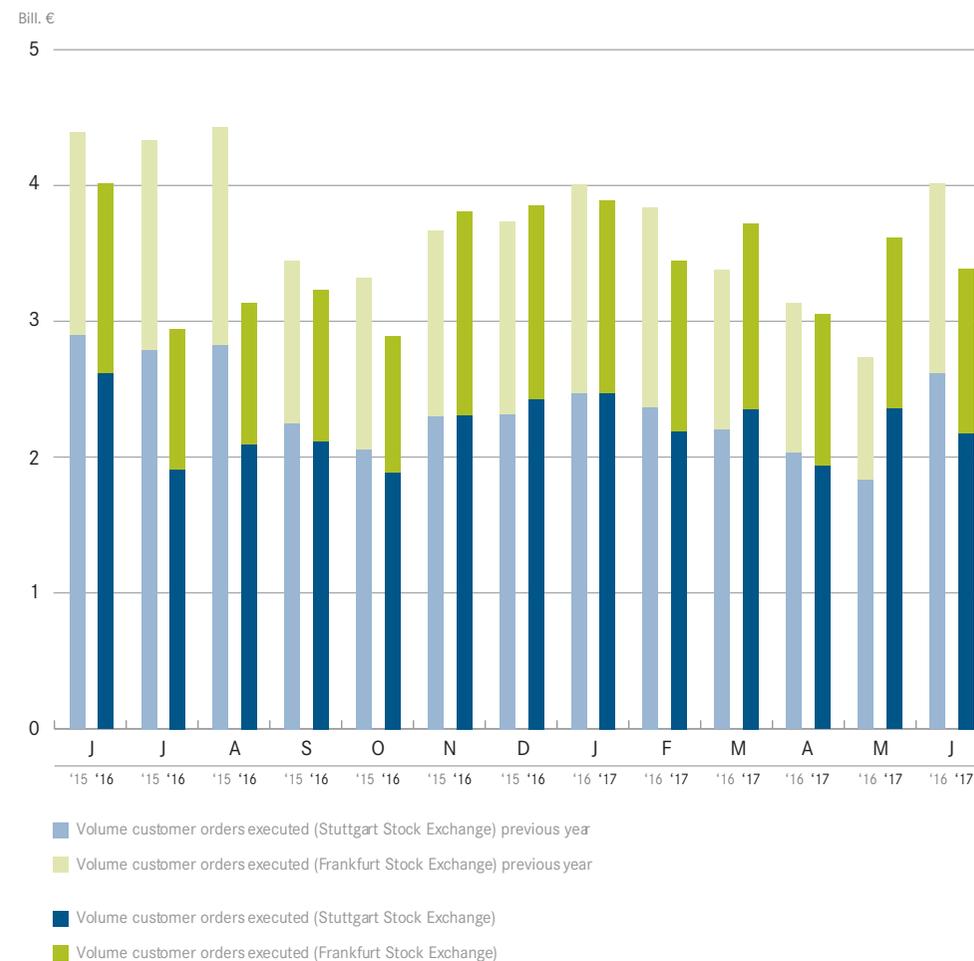
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Year Overview Stock Exchange Turnover June 2017

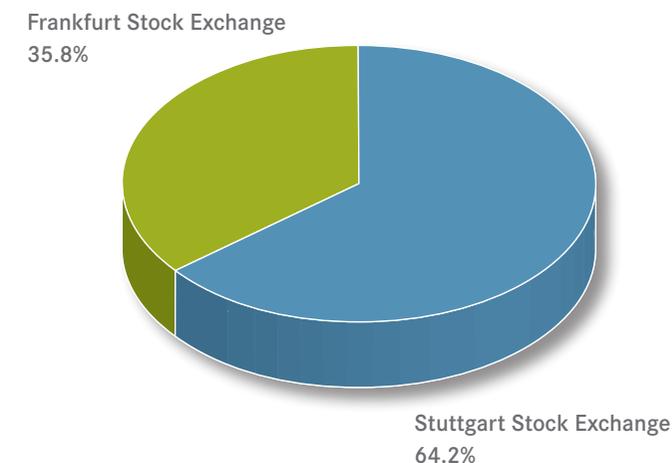
| Month | Total | | Stuttgart Stock Exchange | | Frankfurt Stock Exchange | |
|----------------|-----------|------------------|--------------------------|------------------|--------------------------|------------------|
| | in T€ | Number of orders | in T€ | Number of orders | in T€ | Number of orders |
| June 2016 | 4,021,008 | 457,267 | 2,623,690 | 278,213 | 1,397,317 | 179,054 |
| July 2016 | 2,974,922 | 394,014 | 1,925,547 | 235,776 | 1,049,375 | 158,238 |
| August 2016 | 3,165,917 | 391,002 | 2,116,181 | 234,734 | 1,049,736 | 156,268 |
| September 2016 | 3,265,298 | 395,186 | 2,139,617 | 233,212 | 1,125,681 | 161,974 |
| October 2016 | 2,922,886 | 371,796 | 1,908,930 | 212,139 | 1,013,956 | 159,657 |
| November 2016 | 3,844,342 | 473,587 | 2,327,843 | 262,943 | 1,516,499 | 210,644 |
| December 2016 | 3,893,990 | 417,756 | 2,450,053 | 227,392 | 1,443,937 | 190,364 |
| January 2017 | 3,925,127 | 464,407 | 2,497,422 | 253,889 | 1,427,706 | 210,518 |
| February 2017 | 3,479,234 | 437,876 | 2,214,075 | 238,716 | 1,265,159 | 199,160 |
| March 2017 | 3,757,006 | 474,302 | 2,376,315 | 257,601 | 1,380,691 | 216,701 |
| April 2017 | 3,073,798 | 361,755 | 1,951,579 | 203,176 | 1,122,220 | 158,579 |
| May 2017 | 3,640,768 | 446,440 | 2,376,169 | 244,843 | 1,264,600 | 201,597 |
| June 2017 | 3,421,454 | 453,382 | 2,196,531 | 243,120 | 1,224,923 | 210,262 |



Turnover volume by stock exchange June 2017

| | Stuttgart Stock Exchange | | Frankfurt Stock Exchange | | Total | |
|--|--------------------------|---------------|--------------------------|---------------|------------------|---------------|
| | Volume | Share | Volume | Share | Volume | Share |
| Investment products with capital protection | 7,505 | 0.3% | 17,537 | 1.4% | 25,042 | 0.7% |
| Investment products without capital protection | 1,117,990 | 50.9% | 525,194 | 42.9% | 1,643,184 | 48.0% |
| Investment products total | 1,125,495 | 51.2% | 542,731 | 44.3% | 1,668,226 | 48.8% |
| Leverage products without knock-out | 560,215 | 25.5% | 460,593 | 37.6% | 1,020,809 | 29.8% |
| Leverage products with knock-out | 510,821 | 23.3% | 221,598 | 18.1% | 732,419 | 21.4% |
| Leverage products total | 1,071,037 | 48.8% | 682,191 | 55.7% | 1,753,228 | 51.2% |
| Total | 2,196,531 | 100.0% | 1,224,923 | 100.0% | 3,421,454 | 100.0% |

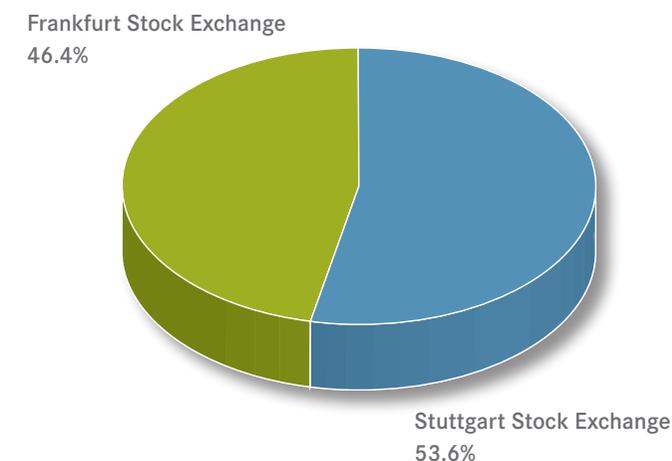
Turnover volume by stock exchange as a percentage



Number of customer orders by stock exchange June 2017

| | Stuttgart Stock Exchange | | Frankfurt Stock Exchange | | Total | |
|--|--------------------------|---------------|--------------------------|---------------|----------------|---------------|
| | Number | Share | Number | Share | Number | Share |
| Investment products with capital protection | 388 | 0.2% | 672 | 0.3% | 1,060 | 0.2% |
| Investment products without capital protection | 43,092 | 17.7% | 21,630 | 10.3% | 64,722 | 14.3% |
| Investment products total | 43,480 | 17.9% | 22,302 | 10.6% | 65,782 | 14.5% |
| Leverage products without knock-out | 124,090 | 51.0% | 127,833 | 60.8% | 251,923 | 55.6% |
| Leverage products with knock-out | 75,550 | 31.1% | 60,127 | 28.6% | 135,677 | 29.9% |
| Leverage products total | 199,640 | 82.1% | 187,960 | 89.4% | 387,600 | 85.5% |
| Total | 243,120 | 100.0% | 210,262 | 100.0% | 453,382 | 100.0% |

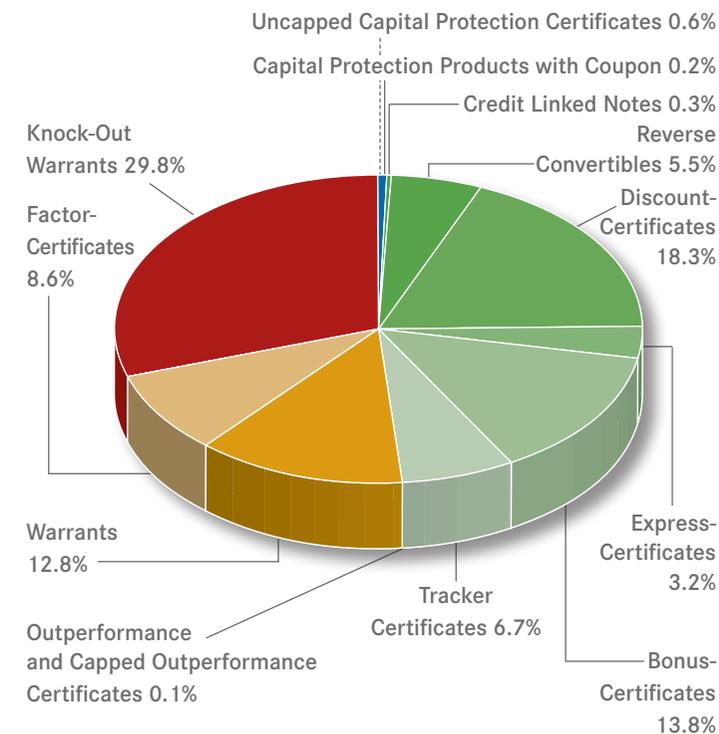
Number of customer orders by stock exchange as a percentage



Turnover by product category June 2017

| Product categories | Change in comparison with previous month | | | Number of orders | Change in comparison with previous month | | | Change in comparison with previous month | |
|---|--|--------------|--------------|------------------|--|--------------|---------------|--|-------|
| | Volume | Share | Share | | Volume per order | Share | Share | Volume | Share |
| | in T € | in % | in % | | # | in % | in % | in T € | in % |
| ■ Uncapped Capital Protection Certificates | 19,527 | -1.8 | 0.6 | 742 | -18.0 | 0.2 | 26,317 | 19.8 | |
| ■ Capital Protection Products with Coupon | 5,515 | 20.1 | 0.2 | 318 | 15.2 | 0.1 | 17,344 | 4.2 | |
| ■ Credit Linked Notes | 11,436 | 13.3 | 0.3 | 459 | 7.7 | 0.1 | 24,915 | 5.2 | |
| ■ Reverse Convertibles | 187,703 | 4.6 | 5.5 | 9,617 | 14.6 | 2.1 | 19,518 | -8.8 | |
| ■ Discount Certificates | 627,247 | -19.7 | 18.3 | 15,263 | -26.4 | 3.4 | 41,096 | 9.1 | |
| ■ Express Certificates | 109,668 | -1.8 | 3.2 | 5,276 | 4.6 | 1.2 | 20,786 | -6.0 | |
| ■ Bonus Certificates | 473,867 | -14.8 | 13.8 | 14,536 | -16.4 | 3.2 | 32,600 | 1.9 | |
| ■ Tracker Certificates | 230,934 | -7.3 | 6.7 | 19,480 | -1.2 | 4.3 | 11,855 | -6.2 | |
| ■ Outperformance and Capped Outperformance Certificates | 2,329 | -72.6 | 0.1 | 91 | -55.0 | 0.0 | 25,592 | -39.3 | |
| Investment products | 1,668,226 | -13.1 | 48.8 | 65,782 | -10.0 | 14.5 | 25,360 | -3.5 | |
| ■ Warrants | 438,624 | 0.1 | 12.8 | 102,427 | 2.2 | 22.6 | 4,282 | -2.1 | |
| ■ Factor Certificates | 293,795 | 25.2 | 8.6 | 33,250 | -4.3 | 7.3 | 8,836 | 30.9 | |
| ■ Knock-Out Warrants | 1,020,809 | -2.5 | 29.8 | 251,923 | 5.7 | 55.6 | 4,052 | -7.8 | |
| Leverage products | 1,753,228 | 1.9 | 51.2 | 387,600 | 3.8 | 85.5 | 4,523 | -1.8 | |
| Total | 3,421,454 | -6.0 | 100.0 | 453,382 | 1.6 | 100.0 | 7,547 | -7.5 | |

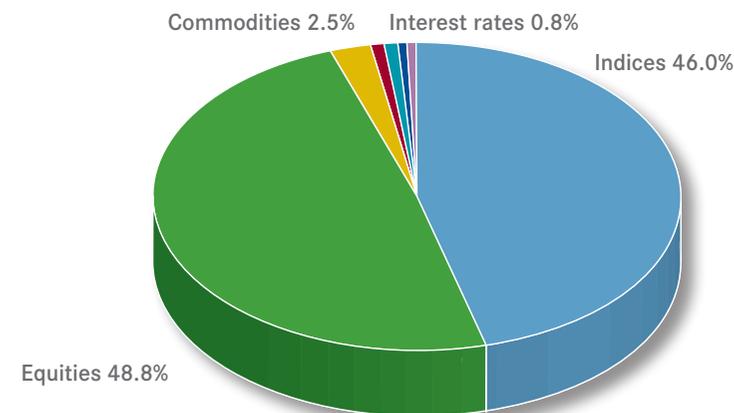
Share in total volume



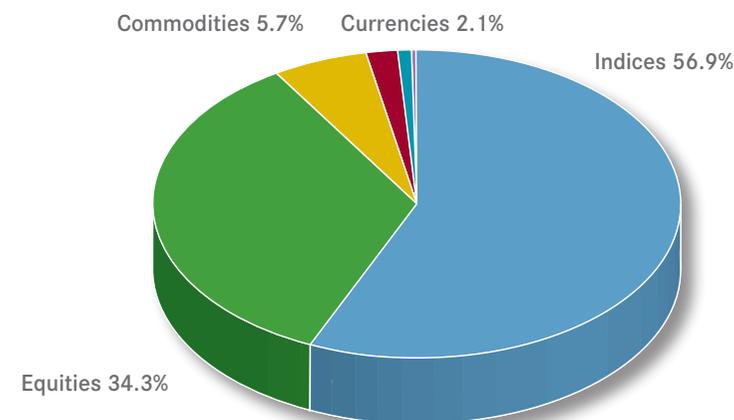
Turnover by underlying June 2017

| Underlying | Volume | Change in comparison with previous month | Share |
|----------------------------------|------------------|---|---------------|
| | in T € | in % | in % |
| Investment products | | | |
| Indices | 767,695 | -4.8% | 46.0% |
| Equities | 813,932 | -19.2% | 48.8% |
| Commodities | 41,807 | -17.5% | 2.5% |
| Currencies | 12,809 | 12.7% | 0.8% |
| Interest rates | 13,508 | 12.6% | 0.8% |
| Investment funds | 11,091 | -46.9% | 0.7% |
| Other | 7,384 | -33.4% | 0.4% |
| Investment products total | 1,668,226 | -13.1% | 100.0% |
| Leverage products | | | |
| Indices | 997,915 | 11.0% | 56.9% |
| Equities | 601,208 | -4.9% | 34.3% |
| Commodities | 100,708 | -21.6% | 5.7% |
| Currencies | 37,132 | -14.8% | 2.1% |
| Interest rates | 14,318 | 13.7% | 0.8% |
| Investment funds | 0 | 0.0% | 0.0% |
| Other | 1,948 | -52.3% | 0.1% |
| Leverage products total | 1,753,228 | 1.9% | 100.0% |
| Total | 3,421,454 | -6.0% | |

Investment products by underlying



Leverage products by underlying



Number of new issues June 2017

| Month | Investment products | | | | | | | | | Leverage products | | | Total | |
|---------------|--|---|----------------------------|----------------------|-----------------------|----------------------|--------------------|----------------------|---|-------------------|---------------------|--------------------|-----------|-----------|
| | With capital protection | | Without capital protection | | | | | | | Without knock-out | With knock-out | | | |
| | Uncapped Capital Protection Certificates | Capital Protection Products with Coupon | Credit Linked Notes | Reverse Convertibles | Discount Certificates | Express Certificates | Bonus Certificates | Tracker Certificates | Outperformance and Capped Outperformance Certificates | Warrants | Factor Certificates | Knock-Out Warrants | | |
| January 2017 | 7 | | 2 | 15,438 | 22,256 | 254 | 24,131 | 133 | | 61,867 | 507 | 156,913 | 281,508 | |
| February 2017 | 7 | | 1 | 14,125 | 14,565 | 282 | 26,837 | 390 | 52 | 61,844 | 3,377 | 119,679 | 241,159 | |
| March 2017 | 8 | | 7 | 10,676 | 18,926 | 377 | 34,587 | 222 | 294 | 67,495 | 254 | 188,667 | 321,513 | |
| April 2017 | 7 | | 18 | 7,394 | 10,607 | 305 | 18,625 | 205 | 40 | 60,865 | 534 | 149,348 | 247,948 | |
| May 2017 | 7 | | 14 | 13,835 | 13,921 | 359 | 21,777 | 225 | 54 | 77,097 | 298 | 160,953 | 288,540 | |
| June 2017 | 5 | | 24 | 12,417 | 14,618 | 369 | 26,845 | 149 | 29 | 61,159 | 1,386 | 157,600 | 274,601 | |
| 1/17 - 6/17 | 41 | 0 | 66 | 73,885 | 94,893 | 1,946 | 152,802 | 1,324 | 469 | 390,327 | 6,356 | 933,160 | 1,655,269 | |
| 1/17 - 6/17 | 41 | | 325,385 | | | | | | | 396,683 | | | 933,160 | 1,655,269 |
| | | | 325,426 | | | | | | | 1,329,843 | | | 1,655,269 | |

Total number of products June 2017

| Month | Investment products | | | | | | | | | Leverage products | | | Total |
|----------------|--|---|----------------------------|----------------------|-----------------------|----------------------|--------------------|----------------------|---|-------------------|---------------------|--------------------|------------------|
| | With capital protection | | Without capital protection | | | | | | | Without knock-out | With knock-out | | |
| | Uncapped Capital Protection Certificates | Capital Protection Products with Coupon | Credit Linked Notes | Reverse Convertibles | Discount Certificates | Express Certificates | Bonus Certificates | Tracker Certificates | Outperformance and Capped Outperformance Certificates | Warrants | Factor Certificates | Knock-Out Warrants | |
| June 2016 | 1,734 | 230 | 1,418 | 92,185 | 178,414 | 5,052 | 248,923 | 7,756 | 974 | 383,272 | 4,403 | 305,620 | 1,229,981 |
| July 2016 | 1,670 | 217 | 1,430 | 93,217 | 188,371 | 5,246 | 267,845 | 7,899 | 971 | 418,569 | 4,578 | 332,052 | 1,322,065 |
| August 2016 | 1,631 | 199 | 1,458 | 97,593 | 183,486 | 5,440 | 273,314 | 7,993 | 971 | 431,963 | 4,942 | 345,375 | 1,354,365 |
| September 2016 | 1,636 | 188 | 1,456 | 92,947 | 172,760 | 5,589 | 247,231 | 8,265 | 600 | 397,372 | 4,958 | 330,267 | 1,263,269 |
| October 2016 | 1,595 | 181 | 1,411 | 98,790 | 177,512 | 5,681 | 256,722 | 8,339 | 629 | 419,873 | 5,058 | 348,164 | 1,323,955 |
| November 2016 | 1,568 | 175 | 1,419 | 104,867 | 183,460 | 5,839 | 259,488 | 8,395 | 963 | 458,274 | 5,182 | 355,243 | 1,384,873 |
| December 2016 | 1,528 | 164 | 1,421 | 101,351 | 171,253 | 5,759 | 244,505 | 8,431 | 1,434 | 449,896 | 5,686 | 339,791 | 1,331,219 |
| January 2017 | 1,494 | 159 | 1,407 | 111,872 | 186,198 | 5,619 | 256,801 | 8,463 | 1,429 | 472,839 | 5,620 | 352,164 | 1,404,065 |
| February 2017 | 1,453 | 153 | 1,408 | 121,579 | 190,192 | 5,544 | 256,027 | 8,791 | 1,478 | 495,664 | 8,836 | 358,619 | 1,449,744 |
| March 2017 | 1,393 | 143 | 1,414 | 116,254 | 179,902 | 5,574 | 247,335 | 8,902 | 1,685 | 479,398 | 8,886 | 362,338 | 1,413,224 |
| April 2017 | 1,352 | 137 | 1,416 | 115,138 | 184,384 | 5,636 | 251,119 | 9,052 | 1,629 | 508,820 | 9,353 | 372,441 | 1,460,477 |
| May 2017 | 1,318 | 129 | 1,427 | 123,720 | 190,046 | 5,607 | 252,882 | 9,153 | 1,582 | 551,388 | 9,583 | 396,656 | 1,543,491 |
| June 2017 | 1,285 | 118 | 1,449 | 118,897 | 172,643 | 5,483 | 228,607 | 9,204 | 1,341 | 525,563 | 10,962 | 383,370 | 1,458,922 |
| June 2017 | 1,403 | | 537,624 | | | | | | | 525,563 | 10,962 | 383,370 | 1,458,922 |
| | | | 539,027 | | | | | | | 919,895 | | | 1,458,922 |

The statistics include the turnover in derivatives at the stock exchanges in Stuttgart (EUWAX) and Frankfurt (Börse Frankfurt Zertifikate). The turnover figures are taken from Xetra and XONTRO (Xontro Order). The number of customer orders executed was integrated into the EUWAX statistics. The statistics cover all orders entered into the system by customers (not issuers or market makers) and executed by price determination. Issuers' market making activities (provision of liquidity for own securities) are not taken into account. Orders routed via an order flow provider offering an intermediary service are only counted once. Each partial execution of an order counts as an order. Later corrections made in stock exchange systems (e.g. a cancellation following a mistrade) are not taken into account. The securities are allocated using securities master data from WM Gruppe (Wertpapier-Mittelungen), the German numbering agent and provider of securities information, as well as the securities master data from boerse-stuttgart AG. This allows the best possible classification of the turnover data by stock exchange, product group and issuer. From January 2010, the derivatives are classified according to the product classification developed by Deutscher Derivate Verband (DDV).

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