# Stock Exchange Turnover



## Rise in turnover on the structured products market

Significant growth in Reverse Convertibles and Express Certificates

## STRUCTURED SECURITIES INVESTMENT PRODUCTS LEVERAGE PRODUCTS with capital protection without capital protection without Knock-Out with Knock-Out (100%) (< 100%) Capital Protection Tracker Certificates **Reverse Convertibles Express Certificates Knock-Out Warrants** Products with Coup Factor Certificates **Credit Linked Notes Discount Certificates Bonus Certificates** Capped Outperformance Certificates **DDV Classification System**

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## March I 2017

- In total, the exchanges in Stuttgart and Frankfurt recorded turnover of FUR 3.8 billion in March.
- Investment products saw a sharper rise in exchange turnover (up 11.2 percent) than the overall market. They made up 51.3 percent of the trading turnover.
- Meanwhile, the turnover in Express Certificates rose by 28.4 percent to EUR 116.7 million.
- Investment products with indices as an underlying registered turnover growth of 24.8 percent to EUR 915.2 million.

# Rise in turnover on the structured products market

Significant growth in Reverse Convertibles and Express Certificates

Developments on the capital markets prompted an increase in trading in structured products on the exchanges in Stuttgart and Frankfurt in March. Exchange turnover in structured and leverage products totalled almost EUR 3.8 billion. This corresponded to a month-on-month increase of 8.0 percent. 474,302 customer orders were executed, 8.3 percent more than in February. The average order volume fell slightly by 0.3 percent to EUR 7,921.

The trading volume for investment products stood at EUR 1.9 billion in March - up 11.2 percent compared with one month earlier. They made up 51.3 percent of the total volume. The exchanges in Stuttgart and Frankfurt executed 70,148 customer orders, corresponding to an increase of 9.0 percent. The average order size was EUR 27,450, and thus exceeded the previous month's size by 2.1 percent.

At EUR 1.8 billion, the turnover in leverage products was 4.8 percent higher than in February. This product category accounted for 48.7 percent of the total turnover as a result. 8.2 percent more customer orders were executed, taking the number to 404,154. The average order size was EUR 4,532 - down 3.2 percent on one month earlier.

### **New issues**

Banks issued 65,097 new investment products and 256,416 new leverage products in March. As a result, a total of 562,602 investment products and 850,622 leverage products were available at the exchanges in Stuttgart and Frankfurt.

## Exchange turnover by product category **Investment products**

Turnover in Discount Certificates rose by 10.0 percent in March, taking it to EUR 792.7 million. The trading volume of Bonus Certificates increased by 9.7 percent to EUR 528.6 million. The turnover generated from Tracker Certificates stood at EUR 235.1 million - up 6.0 percent on February's figure. Reverse Convertibles chalked up a turnover of EUR 201.2 million, corresponding to an increase of 16.9 percent on the previous month. Meanwhile, the trading volume for Express Certificates jumped significantly by 28.4 percent

and stood at EUR 116.7 million. Capital Protection Products with Coupon recorded turnover of EUR 8.5 million, corresponding to a month-on-month fall of 1.1 percent. The turnover generated from trading in Uncapped Capital Protection Certificates increased by 20.6 percent and stood at EUR 22.5 million in March. Credit Linked Notes saw their turnover increase sharply from EUR 11.6 million in February to EUR 15.3 million in March. Outperformance and Capped Outperformance Certificates notched up a trading volume of EUR 5.0 million. This corresponded to growth of 2.3 percent on the previous month. However, given their limited volume, they do not have a major impact on the overall market.

## Leverage products

Trading by retail investors was brisker than in the previous month. Turnover in Warrants increased by 11.9 percent to EUR 464.0 million. The turnover from trading in Knock-Out Warrants stood at EUR 1.1 billion. This marked a slight, 0.2 percent drop compared with February. A clear, 17.8 percent rise was recorded for Factor Certificates, taking their figure to EUR 241.4 million.

## Exchange turnover by underlying

## Investment products

Trading in products with equities as an underlying rose by 2.7 percent in March to EUR 916.0 million. They therefore accounted for 47.6 percent of the total turnover. The turnover generated from investment products with indices as an underlying stood at EUR 915.2 million - up 24.8 percent on the previous month. They accounted for 47.5 percent of the trading turnover in March. Turnover in products with commodities as an underlying decreased by 6.6 percent, taking it to EUR 44.7 million. They made up 2.3 percent of the total turnover. Investment products with interest rates as an underlying recorded an 18.4 percent rise in turnover, which consequently stood at EUR 18.1 million. This corresponded to a market share of 0.9 percent. The turnover generated from investment products with investment funds as an underlying stood at EUR 13.5 million - down 45.3 percent on the previous month. They accounted for 0.7 percent of the total turnover as a result.

## Leverage products

The turnover generated from trading in leverage products amounted to EUR 1.8 billion in March. Turnover in products with indices as an underlying grew by 1.8 percent, taking

it to EUR 963.9 million. They accounted for 52.6 percent of the total turnover. Products with equities as an underlying recorded a 10.8 percent rise in turnover in March, which consequently stood at EUR 638.1 million. They therefore accounted for a market share of 34.8 percent. Turnover from leverage products with commodities as an underlying decreased by 5.9 percent to EUR 146.0 million. Their share stood at 8.0 percent. At EUR 58.1 million, the trading volume for leverage products with currencies as an underlying was 16.3 percent higher than in the previous month. They made up 3.2 percent of the total turnover. Trading in products with interest rates as an underlying rose by 20.3 percent to EUR 22.8 million. This corresponded to 1.2 percent of the total turnover.

## **Exchange turnover**

The exchange in Stuttgart generated a turnover volume of EUR 2.4 billion in March. Its market share of the total turnover stood at 63.3 percent. Boerse Stuttgart executed 257,601 customer orders.

Frankfurt's exchange recorded a trading volume of EUR 1.4 billion. It accounted for 36.7 percent of the total exchange turnover and executed 216,701 customer orders.































#### **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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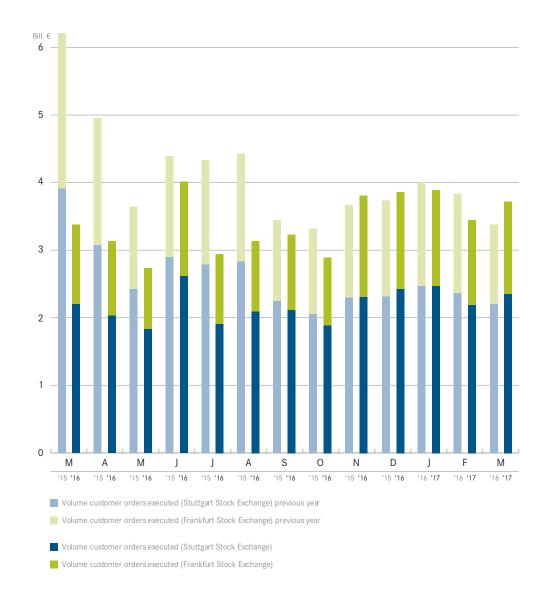
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## Year Overview Stock Exchange Turnover March 2017

| Month          |           | Total            | Stuttgart Stoc | k Exchange       | Frankfurt Stock Exchange |                  |  |  |
|----------------|-----------|------------------|----------------|------------------|--------------------------|------------------|--|--|
|                | in T€     | Number of orders | in T€          | Number of orders | in T€                    | Number of orders |  |  |
| March 2016     | 3,379,659 | 443,979          | 2,200,445      | 267,798          | 1,179,214                | 176,181          |  |  |
| April 2016     | 3,139,046 | 423,401          | 2,031,717      | 251,537          | 1,107,329                | 171,864          |  |  |
| May 2016       | 2,753,359 | 361,591          | 1,850,179      | 219,614          | 903,180                  | 141,977          |  |  |
| 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          |  |  |



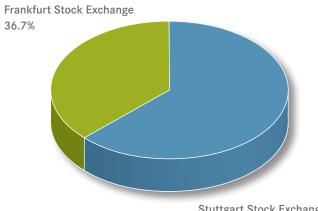
## Turnover volume by stock exchange March 2017

|  | Stuttgart Stock | Exchange | Frankfurt Stock | Exchange |           | Total  |
|--|-----------------|----------|-----------------|----------|-----------|--------|
|  | Volume          | Share    | Volume          | Share    | Volume    | Share  |
| Investment products with capital protection    | 12,609          | 0.5%     | 18,391          | 1.3%     | 31,000    | 0.8%   |
| Investment products without capital protection | 1,295,563       | 54.5%    | 598,981         | 43.4%    | 1,894,544 | 50.4%  |
| Investment products total                      | 1,308,171       | 55.1%    | 617,372         | 44.7%    | 1,925,544 | 51.3%  |
| Leverage products without knock-out            | 617,858         | 26.0%    | 508,143         | 36.8%    | 1,126,002 | 30.0%  |
| Leverage products with knock-out               | 450,286         | 18.9%    | 255,175         | 18.5%    | 705,461   | 18.8%  |
| Leverage products total                        | 1,068,144       | 44.9%    | 763,319         | 55.3%    | 1,831,463 | 48.7%  |
| Total  | 2,376,315       | 100.0%   | 1,380,691       | 100.0%   | 3,757,006 | 100.0% |

## Number of customer orders by stock exchange March 2017

|  | Stuttgart Stock | Exchange | Frankfurt Stock | Exchange |         | Total  |  |
|--|-----------------|----------|-----------------|----------|---------|--------|--|
|  | Number          | Share    | Number          | Share    | Number  | Share  |  |
| Investment products with capital protection    | 488             | 0.2%     | 1,007           | 0.5%     | 1,495   | 0.3%   |  |
| Investment products without capital protection | 45,739          | 17.8%    | 22,914          | 10.6%    | 68,653  | 14.5%  |  |
| Investment products total                      | 46,227          | 17.9%    | 23,921          | 11.0%    | 70,148  | 14.8%  |  |
| Leverage products without knock-out            | 135,851         | 52.7%    | 132,398         | 61.1%    | 268,249 | 56.6%  |  |
| Leverage products with knock-out               | 75,523          | 29.3%    | 60,382          | 27.9%    | 135,905 | 28.7%  |  |
| Leverage products total                        | 211,374         | 82.1%    | 192,780         | 89.0%    | 404,154 | 85.2%  |  |
| Total  | 257,601         | 100.0%   | 216,701         | 100.0%   | 474,302 | 100.0% |  |

## Turnover volume by stock exchange as a percentage



Stuttgart Stock Exchange 63.3%

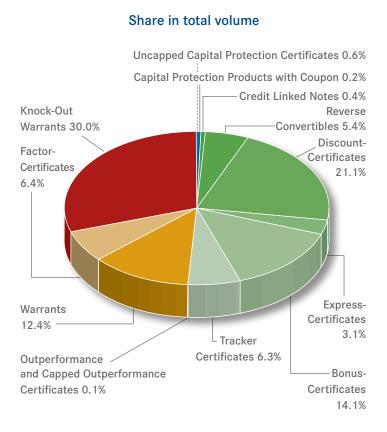
## Number of customer orders by stock exchange as a percentage



Stuttgart Stock Exchange 54.3%

## Turnover by product category March 2017

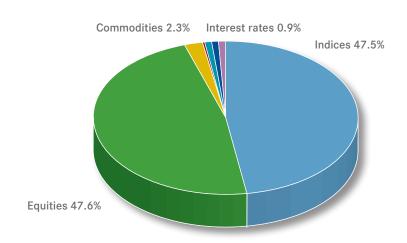
| Prod | duct categories   | Volume    | Change in comparison with previous month | Share | Number of orders | Change in comparison with previous month | Share | Volume<br>per order | Change in<br>comparison<br>with previous<br>month |
|------|---|-----------|--|-------|------------------|--|-------|---------------------|---|
|      |   | in T €    | in %                                     | in %  | #                | in %                                     | in %  | in T €              | in %  |
|      | Uncapped Capital Protection Certificates                      | 22,463    | 20.6                                     | 0.6   | 946              | 10.4                                     | 0.2   | 23,745              | 9.2   |
|      | Capital Protection Products with Coupon                       | 8,537     | -1.1                                     | 0.2   | 549              | 17.1                                     | 0.1   | 15,550              | -15.5   |
|      | Credit Linked Notes   | 15,307    | 32.3                                     | 0.4   | 587              | 7.9                                      | 0.1   | 26,077              | 22.6  |
|      | Reverse Convertibles  | 201,198   | 16.9                                     | 5.4   | 10,211           | 15.0                                     | 2.2   | 19,704              | 1.6   |
|      | Discount Certificates   | 792,654   | 10.0                                     | 21.1  | 18,752           | 2.0                                      | 4.0   | 42,270              | 7.8   |
|      | Express Certificates  | 116,688   | 28.4                                     | 3.1   | 5,503            | 8.3                                      | 1.2   | 21,204              | 18.5  |
|      | Bonus Certificates  | 528,642   | 9.7                                      | 14.1  | 15,706           | 8.4                                      | 3.3   | 33,659              | 1.2   |
|      | Tracker Certificates  | 235,072   | 6.0                                      | 6.3   | 17,674           | 13.9                                     | 3.7   | 13,300              | -6.9  |
|      | Outperformance<br>and Capped Outper-<br>formance Certificates | 4,983     | 2.3                                      | 0.1   | 220              | 73.2                                     | 0.0   | 22,649              | -40.9   |
|      | Investment products   | 1,925,544 | 11.2                                     | 51.3  | 70,148           | 9.0                                      | 14.8  | 27,450              | 2.1   |
|      | Warrants  | 464,047   | 11.9                                     | 12.4  | 103,978          | 11.5                                     | 21.9  | 4,463               | 0.4   |
|      | Factor Certificates   | 241,414   | 17.8                                     | 6.4   | 31,927           | 7.9                                      | 6.7   | 7,561               | 9.1   |
|      | Knock-Out Warrants  | 1,126,002 | -0.2                                     | 30.0  | 268,249          | 7.0                                      | 56.6  | 4,198               | -6.8  |
|      | Leverage products   | 1,831,463 | 4.8                                      | 48.7  | 404,154          | 8.2                                      | 85.2  | 4,532               | -3.2  |
|      | Total   | 3,757,006 | 8.0                                      | 100.0 | 474,302          | 8.3                                      | 100.0 | 7,921               | -0.3  |



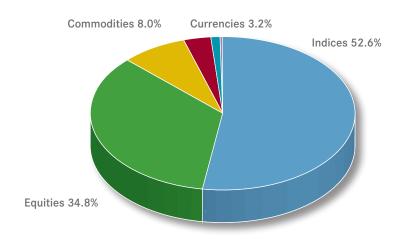
## Turnover by underlying March 2017

| Underlying                | Volume    | Change in comparison with previous month | Share  |  |
|---------------------------|-----------|--|--------|--|
|                           | in T €    | in %                                     | in %   |  |
| Investment products       |           |  |        |  |
| Indices                   | 915,190   | 24.8%                                    | 47.5%  |  |
| ■ Equities                | 916,007   | 2.7%                                     | 47.6%  |  |
| Commodities               | 44,747    | -6.6%                                    | 2.3%   |  |
| Currencies                | 3,570     | 39.0%                                    | 0.2%   |  |
| Interest rates            | 18,140    | 18.4%                                    | 0.9%   |  |
| Investment funds          | 13,546    | -45.3%                                   | 0.7%   |  |
| Other                     | 14,344    | -6.6%                                    | 0.7%   |  |
| Investment products total | 1,925,544 | 11.2%                                    | 100.0% |  |
| Leverage products         |           |  |        |  |
| Indices                   | 963,903   | 1.8%                                     | 52.6%  |  |
| Equities                  | 638,055   | 10.8%                                    | 34.8%  |  |
| Commodities               | 146,008   | -5.9%                                    | 8.0%   |  |
| Currencies                | 58,119    | 16.3%                                    | 3.2%   |  |
| Interest rates            | 22,821    | 20.3%                                    | 1.2%   |  |
| ■ Investment funds        | 0         | 0.0%                                     | 0.0%   |  |
| Other                     | 2,557     | 58.5%                                    | 0.1%   |  |
| Leverage products total   | 1,831,463 | 4.8%                                     | 100.0% |  |
| Total                     | 3,757,006 | 8.0                                      |        |  |

## Investment products by underlying



## Leverage products by underlying



## Number of new issues March 2017

| Month         |   | Investment products Leverage products            |                           |                         |                          |                         |                       |                         |     |                      |                             |                       |         |
|---------------|---|--|---------------------------|-------------------------|--------------------------|-------------------------|-----------------------|-------------------------|-----|----------------------|-----------------------------|-----------------------|---------|
|               | With capital                                      | protection                                       |                           |                         | Wi                       | thout capital p         | rotection             |                         |     | Without<br>knock-out |                             | With<br>knock-out     |         |
|               | Uncapped<br>Capital<br>Protection<br>Certificates | Capital<br>Protection<br>Products<br>with Coupon | Credit<br>Linked<br>Notes | Reverse<br>Convertibles | Discount<br>Certificates | Express<br>Certificates | Bonus<br>Certificates | Tracker<br>Certificates | •   | Warrants             | Factor<br>Certifica-<br>tes | Knock-Out<br>Warrants | Total   |
| 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 |
| 1/17 - 3/17   | 22  | 0  | 10                        | 40,239                  | 55,747                   | 913                     | 85,555                | 745                     | 346 | 191,206              | 4,138                       | 465,259               | 844,180 |
| 1/17 - 3/17   |   | 22   |                           |                         |                          | 183,555                 | ,                     |                         |     | 19                   | 95,344                      | 465,259               | 844,180 |
|               |   |  |                           |                         | 183,577                  |                         |                       |                         |     |                      | 660,60                      | )3                    | 844,180 |

## Total number of products March 2017

| Month               | Investment products                               |  |                           |         |                          |                         |                       |                         |  |               | Leverage products           |                       |           |  |
|---------------------|---|--|---------------------------|---------|--------------------------|-------------------------|-----------------------|-------------------------|--|---------------|-----------------------------|-----------------------|-----------|--|
|                     | With capital                                      | protection                                       |                           |         | Wi                       | thout capital p         | rotection             |                         | ·  | With<br>knock | With<br>knock-out           |                       |           |  |
|                     | Uncapped<br>Capital<br>Protection<br>Certificates | Capital<br>Protection<br>Products<br>with Coupon | Credit<br>Linked<br>Notes |         | Discount<br>Certificates | Express<br>Certificates | Bonus<br>Certificates | Tracker<br>Certificates | Outperformance<br>and Capped<br>Outperformance<br>Certificates | Warrants      | Factor<br>Certifica-<br>tes | Knock-Out<br>Warrants | Total     |  |
| March 2016          | 1,855   | 262  | 1,327                     | 100,437 | 206,820                  | 4,388                   | 254,273               | 7,302                   | 1,122  | 381,976       | 4,241                       | 326,710               | 1,290,713 |  |
| April 2016          | 1,810   | 254  | 1,340                     | 105,842 | 208,969                  | 4,583                   | 274,969               | 7,304                   | 1,044  | 411,280       | 4,365                       | 333,276               | 1,355,036 |  |
| May 2016            | 1,782   | 242  | 1,385                     | 103,763 | 208,062                  | 4,850                   | 276,680               | 7,528                   | 1,064  | 433,951       | 4,363                       | 344,750               | 1,388,420 |  |
| 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 |  |
| Marrah 2017         | 1   | ,536   |                           |         |                          | 561,066                 |                       |                         |  | 479,398       | 8,886                       | 362,338               | 1,413,224 |  |
| March <b>2017</b> - |   |  |                           |         | 562,602                  |                         |                       |                         | -  |               | 850,622                     |                       | 1,413,224 |  |

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-Mitteilungen), 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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