Tradeweb

TRADEWEB MARKETS
HISTORICAL
TRADE
VOLUMES
AS OF MARCH 2024

## TRADEWEB MARKETS - ANNUAL

| AssetClass | Product |  | ADV(USD mm) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Total |  |  | 267,472 | 293,569 | 323,960 | 397,807 | 548,535 | 726,501 | 837,982 | 1,027,978 | 1,12,396 |
| Rates | Total |  | 173,031 | 199,268 | 219,161 | 253,307 | 353,990 | 489,547 | 530,901 | 638,091 | 684,696 |
|  | Cash | Total | 154,623 | 168,371 | 180,825 | 190,598 | 225,582 | 276,485 | 319,342 | 344,620 | 342,748 |
|  |  | U.S. Government Bonds | 35,956 | 39,74 | 43,07 | 52,052 | 70,103 | 80,486 | 91,088 | 120,429 | 132,808 |
|  |  | European Government Bonds | 15,167 | 13,159 | 12,879 | 14,310 | 19,682 | 22,231 | 26,099 | 30,464 | 35,242 |
|  |  | Mortages | 102,122 | 114,054 | 123,463 | 122,767 | 133,810 | 170,262 | 197,831 | 189,413 | 169,715 |
|  |  | Other Government Bonds | 1,378 | 1,384 | 1,476 | 1,470 | 1.987 | 3,507 | 4,324 | 4,314 | 4,983 |
|  | Deivatives | Total | 18,408 | 30,897 | 38,37 | 62,709 | 128,408 | 213,062 | 211,559 | 293,470 | 341,948 |
|  |  | Swaps/Wwaptions $\geq 1 Y$ | 16,794 | 29,586 | 37,03 | 54,288 | 110,187 | 140,917 | 141,320 | 175,705 | 209,048 |
|  |  | Swaps/Swaptions < 1 Y | 1,612 | 1,255 | 951 | 8,127 | 17,647 | 71,542 | 69,75 | 116,933 | 131,173 |
|  |  | Futures | 2 | 56 | 82 | 293 | 573 | 603 | 483 | 833 | 1,727 |
| Credit | Total |  | 4,092 | 4,543 | 5,930 | 7,552 | 12,664 | 14,795 | 22,997 | 21,512 | 27,711 |
|  | Cash | Total | 1,412 | 1,389 | 1,701 | 2.836 | 4,228 | 5,672 | 7,611 | 9,281 | 10,094 |
|  |  | U.S. High Grade - Fully Electronic | 151 | 172 | 252 | 353 | 595 | 1,083 | 1,746 | 2,788 | 3,316 |
|  |  | U.S. High Grade - Electronically Processed |  | 25 | 255 | 669 | 1,192 | 1.741 | 2.446 | 2,180 | 2.639 |
|  |  | U.S. High Yield - Fully Electronic | 49 | ${ }^{45}$ | 53 | 62 | 86 | 162 | 241 | 534 | 616 |
|  |  | U.S. High Y Yield - Electronically Processed |  | 3 | 67 | 109 | 162 | 162 | 254 | 332 | 351 |
|  |  | European Credit | 735 | 690 | 689 | 974 | 1,306 | 1,276 | 1,458 | 1,817 | 1,710 |
|  |  | Municipal Bonds | 332 | 344 | 325 | 284 | 273 | 242 | 234 | 188 | 364 |
|  |  | Chinese Bonds |  |  |  | 319 | 550 | 947 | 1,167 | 1,331 | 990 |
|  |  | Other Credit Bonds | 145 | 111 | 59 | 66 | 65 | 58 | 65 | 111 | 109 |
|  | Derivatives | Total | 2,680 | 3,154 | 4,228 | 4,715 | 8,436 | 9,123 | 14,486 | 12,231 | 17,618 |
|  |  | Swaps | 2,680 | 3,154 | 4,228 | 4,715 | 8,436 | 9,123 | 14,486 | 12,231 | 17,618 |
| Equities | Total |  | 3,491 | 5,579 | 4,517 | 4,814 | 7,796 | 7.809 | 12,284 | 15,683 | 17,785 |
|  | Cash | Total | 1,626 | 2.813 | 2.473 | 2,786 | 4,495 | 4,411 | 6,942 | 8,342 | 10,266 |
|  |  | U.S. ETFs | 1,305 | 2,317 | 1,891 | 2,062 | 3,330 | 2.823 | 4,867 | 5,870 | 7,456 |
|  |  | European ETFs | 321 | 496 | 582 | 724 | 1,165 | 1,589 | 2,075 | 2,472 | 2,809 |
|  | Derivatives | Total | 1,864 | 2,766 | 2,043 | 2,028 | 3,301 | 3,397 | 5,342 | 7,341 | 7,519 |
|  |  | Options/ Convertibles / Swaps | 679 | 850 | 524 | 531 | 975 | 1,690 | 2,155 | 3,481 | 3,858 |
|  |  | Equity Futures | 1,185 | 1,916 | 1,520 | 1,496 | 2,326 | 1,708 | 3,187 | 3,859 | 3,662 |
| Money Markets | Total |  | 86,858 | 84,180 | 94,352 | 132,134 | 174,085 | 214,351 | 272,699 | 352,692 | 399,203 |
|  | Cash | Total | ${ }^{86,558}$ | 84,180 | 94,352 | 132,134 | 174,085 | 214,351 | 272,699 | 352,692 | 399,203 |
|  |  | Repurchase Agreements (Repo) | 56,813 | 60,111 | 74,592 | 111,712 | 152,665 | 195,978 | 259,139 | 338,754 | 381,049 |
|  |  | Other Money Markets | 30,045 | 24,068 | 19,760 | 20,422 | 21,420 | 18,373 | 13,561 | 13,938 | 18,154 |


| Volume (USD mm) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| 67,008,682 | 73,808,687 | 81,150,573 | 99,615,079 | 137,236,586 | 182,283,422 | 211,219,286 | 258,938,220 | 282,031,144 |
| 43,36,680 | 50,106,792 | 54,912,057 | 63,47,977 | 88,618,996 | 122,874,201 | 133,830,187 | 160,728,052 | 171,020,263 |
| 38,73,964 | 42,326,925 | 45,283,269 | 4,723,680 | 56,31,832 | 69,25,637 | 80,280,815 | 86,615,950 | 85,42,071 |
| 8,988,964 | 9,883,210 | 10,751,651 | 13,012,948 | 17,45,656 | 20,12,409 | 22,863, | 30,22, 797 | 33,69,178 |
| 3,867,579 | 3,368,77 | 3,297,090 | 3,648,926 | 5,038,5 | 5,668,82 | 6,681,345 | 7,768,329 | 8,881,104 |
| 25,530,496 | 28,627,54 | 30,865,689 | 30,691,845 | 33,318,691 | 42,56,577 | 4, $9,55,510$ | 4,542,780 | 42,59,049 |
| 345,926 | 347,283 | 368,83 | 369,961 | 498,918 | 869,830 | 1,080,761 | 1,077,145 | 1,232,740 |
| 4,629,715 | 7,779,688 | 9,628,788 | 15,752,297 | 32,307,164 | 53,68,564 | 5,549,372 | 74,112,102 | 85,58,192 |
| 4,219,050 | 7,448,511 | 9,367,424 | 13,630,998 | 27,73,572 | 35,51,876 | 35,746,272 | 44,383,349 | 52,317,748 |
| 410,122 | 317,392 | 240,756 | 2,047,999 | 4,431,785 | 17,979,965 | 17,681,958 | 29,59,755 | 32,83,303 |
| 544 | 13,966 | 20,607 | 73,301 | 142,806 | 150,722 | 121,142 | 208,988 | 430,141 |
| 1,029,914 | 1,147,924 | 1,495,583 | 1,864,088 | 3,187,69 | 3,721,960 | 5,57, 691 | 5,419,311 | 6,922,673 |
| 356,83 | 352,214 | 429,582 | 675,85 | 1,058,863 | 1,419,843 | 1,908,521 | 2,326,499 | 2,510,794 |
| 37,886 | 43,113 | 63,115 | 88,260 | 148,123 | 270,677 | 438,139 | 699,724 | 825,645 |
|  | 6,304 | 6,834 | 167,348 | 96,855 | 435,350 | 14,064 | 57,206 | 657,078 |
| 12,266 | 11,212 | 13,388 | 15,502 | 21,367 | 40,561 | 60,382 | 134,123 | 153,465 |
|  | 765 | 16,684 | 27,346 | 40,247 | 40,598 | 63,832 | 83,373 | 87,327 |
| 187,549 | 176,612 | 176,421 | 248,03 | 334,248 | 325,489 | 373,166 | 463,422 | 430,927 |
| 83,014 | 86,350 | 81,23 | 70,902 | 67,940 | 6,601 | 58,668 | 47,262 | 90,528 |
|  |  |  | 41,462 | 133,639 | 232,010 | 283,673 | 323,314 | 238,532 |
| 36,322 | 27,856 | 14,968 | 6,629 | 16,445 | 14,555 | 16,597 | 28,075 | 27,292 |
| 673,077 | 795,711 | 1,066,001 | 1,188,236 | 2,128,806 | 2,302,118 | 3,671,170 | 3,092,812 | 4,411,879 |
| 67,077 | 795,711 | 1,066,001 | 1,188,236 | 2,128,806 | 2,302,118 | 3,671,170 | 3,092,812 | 4,411,879 |
| 882,638 | 1,414,938 | 1,142,445 | 1,213,461 | 1,968,046 | 1,976,776 | 3,17,069 | 3,963,035 | 4,467,552 |
| 410,837 | 713,139 | 625,562 | 702,26 | 1,134,041 | 1,116,456 | 1,762,505 | 2,109,573 | 2,599,478 |
| 328,928 | 586,203 | 476,466 | 517,561 | 835,876 | 711,369 | 1,231,226 | 1,479,194 | 1,87, 550 |
| 81,908 | 126,936 | 149,096 | 184,735 | 298,165 | 405,087 | 531,279 | 630,379 | 707,928 |
| 471,802 | 701,799 | 516,883 | 511,165 | 834,05 | 800,320 | 1,354,564 | 1,85,462 | 1,888,074 |
| 172,954 | 216,899 | 133,692 | 135,374 | 249,181 | 429,353 | 547,935 | 880,50 | 968,703 |
| 298,847 | 484,900 | 383,191 | 375,92 | 584,825 | 430,967 | 806,229 | 972,911 | 919,371 |
| 21,733,450 | 21,139,033 | 23,600,488 | 33,061,54 | 43,461,874 | 53,70,485 | 68,992,339 | 88,827,823 | 99,620,656 |
| 21,733,450 | 21,139,033 | 23,600,488 | 33,061,54 | 43,461,874 | 53,71,485 | 68,92,339 | 8,8827,823 | 99,62,656 |
| 14,203,272 | 15,088,210 | 18,651,523 | 27,946,783 | 38,118,466 | 49,11,504 | 65,24,561 | 85,327,644 | 95,98,834 |
| 7,530,178 | 6,050,823 | 4,948,966 | 5,114,771 | 5,343,408 | 4,598,980 | 3,407,77 | 3,50, 179 | 4,521,83 |


| Blended Trade Days |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| 250.53 | 25.14 | 250.50 | 250.41 | 250.19 | 250.91 | 252.06 | 251.89 | 249.72 |
| 250.61 | 251.45 | 250.56 | 250.59 | 250.34 | 251.00 | 222.08 | 251.89 | 24978 |
| 250.50 | 251.39 | 250.43 | 250.39 | 24.63 | 250.38 | 251.39 | 25 |  |
| 250.00 | 251.00 | 250.00 | 250.00 | 249.00 | 250.0 | 251.00 | 251.0 |  |
| 255.00 | 256.00 | 256.00 | 255.00 | 256.00 | 255.0 | 256.00 | 255. | 250 |
| 250.00 | 251.00 | 250.00 | 250.00 | 249.00 | 250.00 | 251.00 | 251.0 |  |
| 250.96 | 250.99 | 249.86 | 251.71 | 251.08 | 248.04 | 249.95 | 24.70 | 247.4 |
| 251.51 | 25.180 | 25.116 | 251.20 | 251.60 | 251.8 | 25.12 | 25.54 | 250.2 |
| 251.22 | 251.76 | 251.12 | 251.09 | 55.69 | 252.05 | 252.95 | 252 | 2507 |
| 254.47 | 25.83 | 253.13 | 251.99 | 251.13 | 251.32 | 253.48 | 25.45 | 250.28 |
| 250.00 | 251.00 | 250.01 | 250.00 | 249.05 | 250.01 | 251.00 | 25.01 | 249.0 |
| 251.66 | 252.70 | 252.22 | 248.85 | 251.71 | 25.15 | 252.51 | 251.92 | 2498 |
| 252.67 | 253.55 | 25.50 | 238.27 | 250.43 | 250.3 | 250.75 | 250.6 | 24875 |
| 250.00 | 251.00 | 250.00 | 250.00 | 24900 | 250.0 | 251.00 | 251.00 | 249.0 |
|  | 251.00 | 250.00 | 250.00 | 249.00 | 250.0 | 251.00 | 251.00 |  |
| 250.00 | 251.00 | 250.00 | 250.00 | 249.00 | 250.0 | 251.00 | 251.00 |  |
|  | 251.00 | 250.00 | 250.00 | 249.00 | 250.0 | 251.00 | 251.00 |  |
| 255.00 | 256.00 | 256.00 | 255.00 | 256.00 | 255.00 | 256.00 | 25.00 | 252.0 |
| 250.00 | 251.00 | 250.00 | 250.00 | 249.0 | 250.0 | 251.00 | 251.00 |  |
|  |  |  | 130.00 | 243.00 | 245.0 | 243.00 | 243.00 |  |
| 250.67 | 251.87 | 252.01 | 252.12 | 252.27 | 252.9 | 253.62 | 253.27 |  |
| 251.13 | 252.32 | 252.10 | 252.00 | 252.36 | 252.35 | 253.43 | 252.87 |  |
| 251.13 | 252.32 | 252.10 | 22.00 | 252.36 | 252.35 | 253.43 | 252.87 | 250.4 |
| 252.84 | 253.63 | 252.94 | 225.07 | 252.43 | 253.16 | 253.75 | 25.70 | 251.2 |
| 252.59 | 25.53 | 252.94 | 252.04 | 252.30 | 253.08 | 253.90 | 252.89 |  |
| 252.00 | 253.00 | 252.00 | 251.00 | 251.00 | 252.00 | 253.00 | 252.00 | 251.0 |
| 255.00 | 256.00 | 256.00 | 255.00 | 256.00 | 255.00 | 256.00 | 25.00 | 25.0 |
| 253.06 | 253.74 | 252.95 | 252.11 | 25.62 | 253.25 | 253.57 | 252.49 | 251.0 |
| 254.72 | 255.23 | 25.17 | 254.75 | 255.46 | 254.13 | 254.21 | 25.93 | 251.1 |
| 252.11 | 253.08 | 252.18 | 251.16 | 251.43 | 252.39 | 253.13 | 25.08 | 251.07 |
| 250.22 | 25.12 | 250.13 | 250.21 | 249.66 | 250.57 | 251.90 | 251.86 | 249.5 |
| 250.22 | 251.12 | 250.13 | 250.21 | 249.66 | 250.5 | 251.90 | 25 | 2495 |
| 250.00 | 251.00 | 250.05 | 250.17 | 249.69 | 250.60 | 251.93 | 251.8 | 249.5 |
| 250.63 | 251.40 | 250.45 | 250.45 | 249.46 | 250.31 | 251.29 | 251.12 |  |

## TRADEWEB MARKETS - ANNUAL




## TRADEWEB MARKETS - QUARTERLY ADV (USD mm)

| Asset Class | Product |  | Q12017 | Q22017 | Q32017 | 042017 | Q1 2018 | Q22018 | Q32018 | 042018 | Q1 2019 | Q22019 | Q32019 | 042019 | Q12020 | Q22020 | Q32020 | Q42020 | Q12021 | Q22021 | Q32021 | Q4 2021 | Q12022 | Q22022 | Q3 2022 | 042022 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total |  |  | 381,47 | 377,17 | 393,721 | 437,804 | 533,446 | 539,259 | 532,214 | 589,796 | 645,647 | 752,297 | 816,74 | 685,830 | 897,295 | 778,30 | 780,26 | 897,913 | 1,058,992 | 96,762 | 964,120 | 1,114,537 | 1,174,800 | 1,176,333 | 1,098,663 | 1,068,886 |
| Rates | Total |  | 246,178 | 236,391 | 251,631 | 279,189 | 343,796 | 351,033 | 342,50 | 378,803 | 429,26 | 509,914 | 563,416 | 451,276 | 590,767 | 506,759 | 490,087 | 577,308 | 666,27 | 575,644 | 583,813 | 729,023 | 748,546 | 708,971 | 652,804 | 629,206 |
|  | Cash | Total | 188,634 | 180,682 | 187,125 | 206,164 | 232,055 | 222,191 | 208,879 | 239,972 | 274,976 | 278,341 | 284,622 | 267,714 | 341,577 | 297,599 | 311,03 | 327,86 | 378,50 | 318,996 | 336,832 | 344,509 | 387,505 | 341,367 | 324,168 | 318,194 |
|  |  | U.S. Government Bonds | 50,316 | 51,290 | 50,126 | 56.518 | 71,79 | 64,516 | 65,558 | 78,983 | 82,128 | 80,554 | 82,124 | 77,007 | 93,518 | 92,260 | 86,956 | 91,733 | 115,375 | 106,904 | 124,638 | 135,018 | 149,564 | 131,935 | 123,736 | 126,182 |
|  |  | European Government Bonds | 14,065 | 14,239 | ${ }^{13,823}$ | 15,17 | 19,848 | 21,047 | 17,745 | 20,134 | 23,033 | 22,871 | 23,372 | 19,644 | 28,119 | 27,105 | 24,317 | 24,942 | 31,613 | 30,515 | 28.800 | 30,999 | 38,945 | 35,439 | 33,377 | 33,305 |
|  |  | Mortages | 122,90 | 113,74 | 121,63 | 133,031 | 138,382 | 134,623 | 123,600 | 138,930 | 166,277 | 171,100 | 175,476 | 167,950 | 214,947 | 173,51 | 195,986 | 207,291 | 226,368 | 177,443 | 179,636 | 175,54 | 193,844 | 168,603 | 162,542 | 153,847 |
|  |  | Other Goverrment Bonds | 1,463 | 1,404 | 1.513 | 1,498 | 2.045 | 2,005 | 1,976 | 1,925 | 3,537 | 3,715 | 3,651 | 3,113 | 4,973 | 4.682 | 3,774 | 3.899 | 5,993 | 4,135 | 3,757 | 3,987 | 5,151 | 5,389 | 4,544 | 4,860 |
|  | Derivatives | Total | 57,544 | 55,709 | ${ }^{64,506}$ | 73,024 | 111,741 | 128,843 | 133,670 | 138,831 | 154,251 | 231,54 | 278,74 | 183,562 | 249,209 | 209,160 | 179,054 | 209,42 | 287,477 | 256,648 | 246,981 | 383,514 | 361,041 | 367,64 | 328,36 | 311,012 |
|  |  | Swass/Swaptions 1 IY | 51,275 | 51,058 | 53,274 | 61,585 | 101,499 | 109,876 | 104,880 | 125,138 | 142,263 | 133,895 | 148,230 | 138,75 | 159,508 | 140,99 | 122,341 | 142,921 | 182,088 | 165,825 | 154,970 | 200,495 | 210,50 | 221,191 | 203,038 | 201,759 |
|  |  | Swaps/Swaptions < 1 Y | 5,977 | 4,383 | 11,010 | 11,047 | 9,618 | 18,375 | 29,103 | 13,101 | 11,486 | 96,993 | 129,82 | 44,165 | 89,091 | 67,67 | 56,317 | 65.988 | 104,542 | 89,975 | 91,240 | 182,152 | 148,430 | 145,04 | 123,817 | 107,597 |
|  |  | Futures | 292 | 267 | 222 | 393 | 624 | 591 | 488 | 592 | 502 | 686 | 582 | 639 | 611 | 395 | 396 | 534 | 847 | 848 | 770 | 867 | 2,060 | 1,410 | 1,780 | 1,656 |
| Credit |  |  | 7.614 | 5,908 | 9,028 | 6,996 | 15,003 | 11.800 | 11,893 | 12,036 | 16,386 | 12,253 | 17,218 | 13,233 | 32,996 | 17,944 | 19,543 | 17,915 | 27,072 | 18,085 | 22,237 | 18,725 | 33,227 | 26,673 | 29,320 | 21,563 |
|  |  | Total | 2,314 | 2.411 | 2.774 | 3,213 | 4,329 | 4,314 | 3,958 | 4,325 | 5,631 | 5,583 | 5,455 | 6,015 | 7,255 | 7.812 | 7.036 | 8.328 | 10,383 | 9,519 | 8.440 | 8,839 | 10,807 | 10,196 | 9,300 | 10,120 |
|  |  | U.S. High Grade - Fully Electronic | 315 | 349 | 343 | 405 | 555 | 517 | 565 | 747 | 857 | 1,051 | 991 | 1,431 | 1,465 | 1,677 | 1.613 | 2,234 | 2.864 | 2,857 | 2.602 | 2.833 | 3,083 | 3,260 | 3,293 | 3,634 |
|  |  | U.S. High Grade - Electronically Processed | 477 | 558 | 760 | 883 | 1.121 | 1,188 | 1,146 | 1,316 | 1,955 | 1,738 | 1,492 | 1,792 | 2.441 | 2.977 | 2.208 | 2,159 | 2.718 | 2.231 | 1,775 | 2.017 | 2.838 | 2.652 | 2.475 | 2.595 |
|  |  | U.S. High hield - Fully Electronic | 51 | 51 | 58 | 89 | 94 | 76 | 75 | 99 | 118 | 151 | 161 | 217 | 229 | 171 | 202 | 362 | 458 | 477 | 539 | 664 | 773 | 652 | 463 | 581 |
|  |  | U.S. High Yield - Electronically Processed | 144 | 98 | 86 | 110 | 160 | 157 | 158 | 171 | 211 | 132 | 168 | 140 | 257 | 315 | 204 | 242 | 362 | 359 | 296 | 313 | 410 | 353 | 351 | 288 |
|  |  | European Credit | 956 | 1,010 | 916 | 1.017 | 1.601 | 1,364 | 1.098 | 1,171 | 1,321 | 1,287 | 1,203 | 1,299 | 1,658 | 1,364 | 1,270 | 1,541 | 2.066 | 1,911 | 1,707 | 1,597 | 2,109 | 1,762 | 1,390 | 1,591 |
|  |  | Municipal Bonds | 299 | 286 | 264 | 286 | 278 | 266 | 256 | 292 | 279 | 249 | 226 | 217 | 289 | 247 | 201 | 199 | 204 | 193 | 173 | 183 | 249 | 394 | 354 | 458 |
|  |  | Chinese Bonds |  |  | 285 | 353 | 432 | 676 | 603 | 484 | 833 | 915 | 1,157 | 864 | 857 | 1,010 | 1,277 | 1.501 | 1,594 | 1.373 | 1,233 | 1,141 | 1,252 | 1,001 | 863 | 863 |
|  |  | Other Credit Bonds | 72 | 60 | 62 | 70 | 88 | 70 | 58 | 45 | 57 | 60 | 57 | 56 | 60 | 50 | 61 | 91 | 118 | 118 | 116 | 91 | 92 | 122 | 110 | 111 |
|  | Derivatives | Total | 5,300 | 3,497 | 6,254 | 3,783 | 10,674 | 7,486 | 7.935 | 7.711 | 10,755 | 6,670 | ${ }^{11,763}$ | 7.218 | 25,71 | 10,132 | 12.507 | 9,587 | 16,690 | ${ }^{8,566}$ | 13,796 | 9,886 | 22,420 | 16,477 | 20,020 | 11,433 |
|  |  | Swaps | 5,300 | 3,497 | 6,254 | 3,783 | 10,674 | 7,486 | 7,935 | 7,711 | 10,755 | 6,670 | 11,663 | 7,218 | 25,71 | 10,132 | 12.507 | 9,587 | 16,690 | 8,566 | 13,796 | 9,886 | 22,420 | 16,477 | 20,020 | 11,443 |
| Equities | Total |  | 4,483 | 4.522 | 4,015 | 6,239 | 9,967 | 6,976 | 5,796 | 8,533 | 7,771 | 7,119 | 7.345 | 8,988 | 17,800 | 9,996 | 9,066 | 12,39 | 16,176 | 16,055 | 14,543 | 15,986 | 21,499 | 16,706 | 15,813 | 17,232 |
|  | Cash | Total | 2,650 | 2,585 | 2.448 | 3,462 | 5,656 | 4,006 | 3,162 | 5,202 | 4,479 | 4,116 | 4,499 | 4,547 | 9,225 | 6,329 | 5.442 | ${ }_{6}^{6,826}$ | 9,022 | 8,239 | 7,551 | 8,579 | 12,766 | 9,945 | 8,804 | 9,595 |
|  |  | U.S. ETFs | 1,902 | 1,828 | 1,770 | 2,746 | 4,458 | 2.806 | 2,182 | 3,918 | 2,979 | 2,587 | 2,755 | 2,974 | 6,527 | 4,480 | 3,849 | 4,656 | ${ }^{6,046}$ | 5.885 | 5,421 | 6,136 | 9,050 | 7,202 | 6,299 | 7,314 |
|  |  | European ETFs | 748 | 758 | 678 | 716 | 1,199 | 1,200 | 979 | 1,283 | 1,499 | 1,529 | 1,744 | 1,573 | 2,698 | 1.849 | 1,592 | 2,170 | 2.976 | 2,355 | 2,130 | 2.443 | 3,716 | 2.743 | 2.504 | 2,881 |
|  | Derivatives | Total | 1,833 | 1,937 | 1,567 | 2,777 | 4,310 | 2,970 | 2,634 | 3,331 | 3,292 | 3,002 | 2.846 | 4.440 | 8,576 | 3,667 | 3,624 | 5.568 | 7,154 | 7.815 | 6,992 | 7,407 | 8,683 | 6,761 | 7,009 | 7,637 |
|  |  | Options / Converibles / Swaps | 406 | 611 | ${ }^{413}$ | 700 | 755 | 925 | 1,253 | 961 | 1,438 | 1,404 | 1,275 | 2,628 | 3,973 | 849 | 1,188 | 2.639 | 3,054 | 3,850 | 3,559 | 3,455 | 3,370 | 3,273 | 4,384 | 4,377 |
|  |  | Equity Futures | 1,427 | 1,325 | 1,155 | 2,078 | 3,555 | 2,045 | 1,381 | 2,371 | 1,854 | 1,599 | 1.571 | 1,812 | 4,602 | 2.819 | 2.436 | 2,929 | 4,101 | 3,965 | 3,433 | 3,952 | 5,314 | 3,488 | 2,625 | 3,260 |
| Money <br> Markets | Total |  | 123,22 | 130,896 | 129,047 | 145,39 | 164,680 | 169,49 | 171,975 | 190,423 | 192,264 | 223,011 | 228,795 | 212,33 | 255,732 | 243,681 | 261,590 | 330,26 | 349,517 | 366,978 | 343,528 | 350,803 | 371,588 | 423,84 | 400,726 | 400,884 |
|  | Cash | Total | 123,222 | 130,896 | 129,047 | 145,379 | 164,680 | 169,49 | 171,975 | 190,423 | 192,264 | 223,011 | 228,95 | 212,33 | 255,732 | 243,881 | 261,590 | 330,296 | 349,517 | 366,978 | 343,528 | 350,803 | 371,578 | 423,84 | 400,726 | 400,884 |
|  |  | Repurchase Agreements (Repo) | 102,312 | 110,194 | 109,189 | 125,139 | 141,009 | 147,45 | 152,140 | 170,176 | 173,522 | 204,217 | 210,96 | 194,193 | 236,750 | 230,978 | 250,039 | 319,216 | 333,520 | 355,361 | 329,366 | 336,820 | 353,820 | 405,62 | 382,040 | 383,070 |
|  |  | Other Money Markets | 20,910 | 20,722 | 19,858 | 20,240 | 23,671 | 21,974 | 19,836 | 20,247 | 18,742 | 18,794 | 17,827 | 18,40 | 18,982 | 12,703 | 11,551 | 11,800 | 13,996 | 13,617 | 14,162 | 13,984 | 17,758 | 18,332 | 18,686 | 17,813 |

## TRADEWEB MARKETS - QUARTERLY ADV (USD mm)

| Asset | Product |  | Q12023 | Q22023 | Q3 2023 | Q42023 | Q12024 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total |  |  | 1,365,620 | 1,296,607 | 1,424,253 | 1,676,764 | 1,899,641 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rates | Total |  | 87,381 | 773,959 | 855,316 | 1,087,679 | 1,260,697 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 362,707 | 344,674 | 361,432 | 397,946 | 461,826 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. Goverrment Bonds | 144,109 | 135,128 | 142,641 | 162,335 | 196,469 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | European Government Bonds | 42,36 | 40,94 | 37,251 | 40,491 | 50,67 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Mortages | 170,263 | 163,359 | 174,436 | 185,883 | 204,083 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Other Goverrment Bonds | 5,699 | 5,493 | 7,104 | 9,236 | 11,007 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 508,675 | 429,285 | 491,883 | 689,733 | 798,871 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Swaps/Wwaptions 1 IY | 285,896 | 273,533 | 326,175 | 459,964 | 502,364 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Swaps/Wwaptions < 1Y | 221,202 | 154,332 | 163,393 | 226,275 | 288,54 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Futures | 1,577 | 1,420 | 2,316 | 3,494 | 8,003 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Credit | $\frac{\text { Total }}{\text { Cash }}$ |  | 32,303 | 18,989 | 29,36 | 24,155 | 34,220 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Total | 11,47 | 10,627 | 12,981 | 14,292 | 17,418 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Grade - Fully Electronic | 4,134 | 3,963 | 4,228 | 5,134 | 6,709 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Grade - Electronically Processed | 3,137 | 2.694 | 2,339 | 2.500 | 3,413 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Yield - Fully flectronic | 674 | 568 | 611 | 642 | 749 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Y Yield - Electronically Processed | 373 | 317 | 217 | 300 | 324 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | European Credit | 2,046 | 1,958 | 1,869 | 2,044 | 2.519 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Municipal Bonds | 311 | 308 | 334 | 454 | 323 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Chinese Bonds | 714 | 720 | 3,231 | 2,984 | 3,094 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Other Credit Bonds | 109 | 98 | 152 | 233 | 287 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 20,806 | 8.362 | 16,955 | 9,864 | 17.502 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Swaps | 20,806 | 8,362 | 16,955 | 9,864 | 17,502 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Equities | Total |  | 19,534 | 19,366 | 18,926 | 23,527 | 27,45 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 10,49 | 9,913 | 9,475 | 11,054 | 12,613 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. EtFs | 7,663 | 7,547 | 7.402 | 8.308 | 9,771 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | European ETFs | 2,828 | 2,366 | 2,073 | 2,746 | 2.842 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 9,043 | 9,444 | 9,451 | 12,474 | 14,838 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Options / Converitiles / Swaps | 6,056 | 6,340 | 6,285 | 8,495 | 10,364 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Equity futures | 2,987 | 3,103 | 3,166 | 3,979 | 4,475 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Money <br> Markets | Total |  | 442,401 | 484,304 | 522,075 | 541,403 | 576,573 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 422,401 | 484,304 | 522,075 | 541,403 | 576,573 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Repurchase Agreements (Repo) | 426,145 | 465,955 | 505,191 | 524,267 | 557,39 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Other Money Markets | 16,257 | 18,39 | 16,884 | 17,136 | 19,180 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## TRADEWEB MARKETS - QUARTERLY VOLUMES (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Clas } \end{aligned}$ | Product |  | 012017 | Q22017 | Q32017 | 042017 | Q1 2018 | Q22018 | 032018 | 042018 | Q12019 | Q22019 | Q32019 | Q42019 | 012020 | Q22020 | Q32020 | 042020 | Q1 2021 | Q22021 | Q32021 | Q42021 | Q12022 | Q22022 | Q32022 | 242022 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total |  |  | 23,718,684 | 23,758,156 | 24,897,893 | 27,20,347 | 32,695,247 | 34,411,488 | 33,713,697 | 36,416,204 | 39,618,954 | 47,256,782 | 52,602,097 | 42,80,589 | 55,97,541 | 48,85,443 | 50,264,805 | 56,130,47 | 65,07,5,53 | 62,03, 861 | 62,117,331 | 69,713,476 | 73,103,404 | 72,62,618 | 70,56,565 | 65,750,558 |
| Rates | Total |  | 15,312,990 | 14,862,812 | 15,92,0,38 | 17,36, 137 | 21,085,405 | 22,390,47 | 21,71,832 | 23,432,292 | 26,357,344 | 32,018,431 | 36,307,193 | 28,191,232 | 36,86,062 | 31,79,020 | 31,563,593 | 33,602,512 | 40,940,635 | 36,556,150 | 37,603,048 | 45,628,219 | 46,592,263 | 43,74,3,31 | 41,93, 4,50 | 38,752,29 |
|  | Cash | Total | 11,724,408 | 11,367,495 | 11,817,718 | 12,84,059 | 14,195,919 | 14,196,50 | 13,196,047 | 14,723,316 | 16,819,267 | 17,506,534 | 18,260,540 | 16,63, 296 | 21,29,660 | 18,71,824 | 19,951,302 | 20,382,30 | 23,169,513 | 20,34,393 | 21,610,725 | 21,489,319 | 24,060,508 | 21,126,389 | 20,74,062 | 19,48, ,112 |
|  |  | U.S. Goverrment Bonds | 3,119,613 | 3,231,270 | 3,157,944 | 3,504,121 | 4,378,515 | 4,129,01 | 4,130,170 | 4,817,956 | 5,009,806 | 5,081,221 | 5,255,922 | 4,774,459 | 5,798,129 | 5,812,399 | 5,665,202 | 5,687,470 | 7,037,857 | 841,88 | 7,976,85 | 8,371,14 | 9,27,997 | 8,179,963 | 7,919,082 | 7,697,129 |
|  |  | European Government Bonds | 900,133 | 882,837 | 898,481 | 967,45 | 1,250,451 | 1,325,969 | 1,153,418 | 1,308,730 | 1,451,106 | 1,417,983 | 1,542,537 | 1,257,195 | 1,999,627 | 1,680,500 | 1,604,918 | 1.596,300 | 1,991,630 | 1,89,937 | 1,900,795 | 1,983,966 | 2,453,565 | 2,161,803 | 167,535 | 2,098,195 |
|  |  | Mortages | 7,612,989 | 7,16,157 | 7,664,761 | 8,247,938 | 8,441,328 | 8,615,844 | 7,786,799 | 8,474,720 | 10,142,913 | 10,779,318 | 11,230,39 | 10,412,907 | 13,326,710 | 10,93,713 | 12,543,075 | 12,852,011 | 13,808,465 | 11,356,32 | 11,496,734 | 10,881,259 | 12,018,311 | 10,45,370 | 10,402,677 | 9,384,660 |
|  |  | Other Goverrment Bonds | 91,673 | 87,231 | 96,533 | 94,525 | 125,625 | 125,723 | 125,659 | 121,911 | 215,422 | 228,011 | 231,642 | 194,735 | 305,194 | 291,211 | 238,107 | 246,248 | 331,561 | 256,293 | 236,337 | 252,953 | 315,605 | 331,24 | 284,76 | 301,128 |
|  | Derivatives | Total | 3,588,582 | 3,495,317 | 4,10, 320 | 4,562,078 | 6,889,486 | 8,193,917 | 8,514,786 | 8,70,976 | 9,538,077 | 14,511,988 | 18,046,53 | 11,55,936 | 15,63,402 | 13,08, 196 | 11,612,291 | 13,220,482 | 17,771,122 | 16,20, 757 | 15,992,32: | 24,138,90 | 22,531,75 | 2616,932 | 21,158,388 | 19,271,17 |
|  |  | Swas//wwaptions $21 Y$ | 3,198,068 | 3,203,280 | 3,380,916 | 3,88,734 | 6,261,338 | 6,986,313 | 6,635,855 | 7,849,067 | 8,794,997 | 8,370,807 | 9,612,484 | 8,739,588 | 10,013,379 | 3,811,975 | 7,919,286 | 9,001,633 | 11,262,405 | 10,41, 873 | 10,039,311 | 12,639,759 | 13,143,966 | 13,602,492 | 13,06,309 | 2,504,981 |
|  |  | Swass/Swaptions < IY | 372,399 | 275,190 | 711,424 | 8,985 | 590,053 | 1,169,74 | 1,848,185 | 823,773 | 712,44 | 6,097,897 | 8,396,929 | 2,772,698 | 5,587,159 | 4,241,352 | 3,667,678 | 4,185,76 | 6,457,053 | 5,713,63 | 5,903,993 | 11,445,372 | 9,260,040 | 8,927,043 | 78,143 | 6,665,075 |
|  |  | Futures | 18,115 | 16,847 | 13,980 | 24,359 | 38,096 | 37,830 | 30,745 | 36,136 | 30,638 | 43,194 | 37,240 | 39,650 | 37,865 | 24,870 | 25,327 | 33,80 | 51,663 | 54,248 | 49,317 | 53,79 | 127,74 | 87,395 | 113,366 | 01,061 |
| Credit | Total |  | 478,271 | 369,734 | 57,054 | 440,030 | 927,033 | 747,414 | 760,717 | 752,505 | 1,010,037 | 766,798 | 1,117,129 | 827,96 | 2,070,787 | 1,120,317 | 1,269,058 | 1,119,529 | 1,666,133 | 1,140,350 | 1,439,626 | 1,173,202 | 2,069,121 | 1,639,309 | 1,887,479 | 1,326,763 |
|  | Cash | Total | 145,420 | 150,838 | 177,215 | 202,39 | 266,519 | 272,017 | 252,205 | 268,122 | 343,725 | 349,479 | 352,72 | 373,866 | 449,796 | 486,716 | 455,496 | 516,514 | 632881 | 599,766 | 543,735 | 550,188 | 667,192 | 626,27 | 597,520 | ${ }^{619,806}$ |
|  |  | U.S. High Grade - Fully flectronic | 19,560 | 21,961 | 21,620 | 25,118 | 33,834 | 33, 108 | 35,598 | 45,54 | 52,277 | 66,200 | 63,416 | 88.744 | 90,799 | 105,632 | 103,230 | 138,478 | 174,692 | 182,873 | 166,536 | 175,623 | 191,135 | 202,10 | 210,757 | 221,647 |
|  |  | U.S. High Grade - Electronically Processed | 29,570 | 35,139 | 47,886 | 54,753 | 68,370 | 76,045 | 72,177 | 80,262 | 119,276 | 109,480 | 95,505 | 111,089 | 151,343 | 187,524 | 141,339 | ${ }^{133,857}$ | 165,769 | 142,70 | 113,615 | 125,052 | 175,975 | 164,397 | 158,411 | 158,294 |
|  |  | u.s. High Yield - Fully flectronic | 3,146 | 3,195 | 3,626 | 5,535 | 5.742 | 4.864 | 4,697 | 6,063 | 7,214 | 9,544 | 10,330 | 13,473 | 14,200 | 10,791 | 12,940 | 22,451 | 27,928 | ${ }^{30,506}$ | 34,519 | 41,169 | 47,948 | 40,43 | 29,62 | 35,463 |
|  |  | U.S. High Y Yield - Electronically Processed | 8,936 | 6,175 | 5,425 | 6,811 | 9,788 | 10,078 | 9,938 | 10,43 | 12,875 | 8,301 | 10,742 | 8,679 | 15,934 | 19,857 | 13,038 | 15,03 | 22,058 | 22,975 | 18,28 | 19,412 | 25,33 | 21,910 | 22,482 | 17,543 |
|  |  | European Credit | 61,64 | 62,632 | 59,530 | 65,076 | 100,885 | 85,905 | 71,357 | 76,100 | 83,203 | 79,70 | 79,409 | 83,106 | 106,115 | ${ }^{84,598}$ | 83831 | 98,623 | 130,134 | 118,454 | 112,653 | 102,180 | 132,856 | 107,496 | 90,371 | 100,203 |
|  |  | Municipal Bonds | 18,514 | 17,999 | 16,445 | 743 | 16,974 | 17,001 | 5,134 | .831 | 2027 | 15,715 | 1,433 | 13,426 | 17,902 | (5,566 | 12,851 | 12,350 | 12,465 | 12,3 | 11,056 | 11,374 | 15,49 | 24,44 | 22,673 | 962 |
|  |  | Chinese Bonds |  |  | 18,523 | 22,938 | 25,41 | 40,575 | 38,571 | 29,013 | 48,23 | 56,75 | 75,201 | 51,812 | 49,715 | 59,608 | 84,292 | 90,057 | 92,477 | 82,377 | 78,893 | 69,57 | 72,641 | 58,04 | 56,068 | 51,81 |
|  |  | Other Credit Bonds | 4,530 | 3,736 | 3,958 | 4,404 | 5.445 | 4,44 | 3,732 | 2.827 | 3,560 | 3,723 | 3,735 | 3,537 | 3,788 | 3,139 | 3,975 | 5,695 | 7,307 | 7.44 | 7,534 | 5,790 | 5,794 | 7.449 | , 135 | 6,914 |
|  | Derivatives | Total | 332.851 | 218,896 | 398,839 | 237,650 | 660,515 | 475,397 | 508,512 | 484,383 | 666,312 | 417,319 | 764,357 | 454,130 | 1,620,991 | 633,602 | 813,562 | 603,015 | 1,033,323 | 540,54 | 895,89 | 623,01 | 1,401,929 | 1,013,032 | 1,289,959 | 706,958 |
|  |  | Swaps | 332,851 | 218,896 | 398,839 | 237,650 | 660,515 | 475,397 | 508,512 | 484,383 | 666,312 | 417,319 | 764,357 | 454,130 | 1,620,991 | 633,602 | 813,562 | 603,015 | 1,033,323 | 540,54 | 895,891 | 623,015 | 1,401,929 | 1,013,032 | 1,289,959 | 706,958 |
| Equities | Total |  | 280,303 | 283,478 | 255,167 | 394,513 | 611,928 | 444,164 | 369,725 | 544,229 | 479,937 | 445,485 | 476,130 | 575,22 | 1,111,733 | 627,197 | 584,950 | 793,190 | 995,672 | 1,007,530 | 936,751 | 1,023,081 | 1,334,773 | 1,032,390 | 1,015,143 | 1,085,646 |
|  | Cash | Total | 165,789 | 162,127 | 155,558 | 218,822 | 347,430 | 255,195 | 201,138 | 330,279 | 276,207 | 257,802 | 291,410 | 291,036 | 57,340 | 396,849 | 351,468 | ${ }^{436,848}$ | 556,282 | 516,731 | 487,508 | 549,052 | 795,184 | ${ }^{613,843}$ | 565,934 | 604,516 |
|  |  | U.S. ETFs | 117,942 | 115,136 | 111,49 | 173,04 | 271,919 | 179,614 | 137,485 | 246,858 | 181,745 | 162,980 | 176,292 | 190,351 | 404,658 | 282,235 | 246,367 | 297,966 | 368,822 | 370,742 | 346,950 | 392,680 | 561,091 | 446,499 | 403,162 | 460,799 |
|  |  | European ETFs | 47,848 | 46,992 | 44,078 | 45,818 | 75,511 | 75,581 | 63,653 | 83,420 | 94,462 | 94,822 | 115,118 | 100,685 | 172,683 | 114,614 | 105,101 | 138,82 | 187,459 | 145,988 | 140,558 | 156,373 | 234,094 | 167,34 | 162,72 | 143,718 |
|  | Derivatives | Total | 114,514 | 121,351 | 99,609 | 175,691 | 266,498 | 188,969 | 168,588 | 211,951 | 203,730 | 187,683 | 184,720 | 284,188 | 534,392 | 230,34 | 233,482 | 356,342 | 439,390 | 490,800 | 449,24 | 474 | 539,189 | 418,547 | 449,209 | 481,130 |
|  |  | Options / Converitiles / Swaps | 25,954 | 37,916 | 26,777 | 44,727 | 47,435 | 58,372 | 81,97 | 62,176 | 90,194 | 87,241 | 83,725 | 168,192 | 248,646 | 52,941 | 77,469 | 168,879 | 189,032 | 241,04 | 229,356 | 221,114 | 209,391 | 202,57 | 281,00 | 25,727 |
|  |  | Equity Futures | 88,500 | 83,435 | 72,8 | 964 | 217,062 | 130,597 | 87,391 | 149,774 | 535 | 441 | 100,96 | 995 | 746 | 407 | 5,014 | 187,463 | 250,358 | 72 | 219,886 | 915 | 8 | 215,968 | 168,20 | 205,40: |
| Money <br> Markets | Total |  | 7,647,120 | 8,422,132 | 8,142,635 | 9,029,667 | 10,070,881 | 10,829,393 | 10,872,422 | 11,689,178 | 11,771,636 | 14,026,068 | 14,701,645 | 13,211,137 | 15,919,960 | 15,30,908 | 16,847,205 | 20,615,266 | 21,474,112 | 23,326,831 | 22,137,906 | 21,888,973 | 23,107,67 | 26,205,59 | 25,72, ,992 | 24,58,9,99 |
|  | Cash | Total | 7,647,120 | 8,242,132 | 8,142,635 | 9,029,6 | 10,070,881 | 10,829,393 | 10,872,422 | 11,689,178 | 11,771,636 | 14,02,068 | 1,645 | 13,21, 137 | 15,919,960 | 15,30,908 | 78,20 | 20,61,266 | 21,474,112 | 23,326,831 | 2, 37,906 | 21,88,973 | 107,687 | 26,20,599 | 25,72, ,492 | 24,585,919 |
|  |  | Repurchase Agreements (Repo) | 6,346,611 | 6,940,099 | 6,887,90 | 7,772,163 | 8,623,648 | 9,424,716 | 9,620,102 | 10,450,00 | 10,26,099 | 12,843,046 | 13,558,366 | 12,084,04 | 14,74,541 | 14,50, 278 | 16,106,55 | 19,927,191 | 20,618,992 | 22,456,390 | 21,231,148 | 21,021,413 | 22,006,261 | 25,06,414 | 24,55, 135 | 23,498,24 |
|  |  | Other Money Markets | 1,300,508 | 1,302,033 | 1,254,725 | 1,257,505 | 1,447,234 | 1,404,676 | 1,252,320 | 1,239,178 | 1,145,538 | 1,183,022 | 1,143,289 | 1,127,132 | 1,179,419 | 799,630 | 740,653 | 688,075 | 855,420 | 870,411 | 906,758 | 867,560 | 1,101,386 | 1,136,185 | 1,196,357 | 1,087,895 |

## TRADEWEB MARKETS - QUARTERLY VOLUMES (USD mm)



## TRADEWEB MARKETS - QUARTERLY BLENDED TRADE DAYS

| Asset Class | Product |  | 012017 | Q22017 | Q32017 | 042017 | Q12018 | Q22018 | Q32018 | 042018 | Q12019 | Q22019 | Q32019 | Q42019 | Q12020 | Q22020 | Q32020 | Q42020 | Q1 2021 | Q22021 | Q3 2021 | Q4 2021 | 012022 | Q22022 | Q3 2022 | Q42022 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total |  |  | 62.17 | 62.90 | 63.24 | 62.22 | 61.29 | 63.81 | 63.35 | 61.74 | 61.36 | 62.82 | 64.40 | 62.41 | 62.38 | 62.76 | 64.42 | 62.51 | 61.45 | 63.51 | 64.43 | 62.55 | 62.23 | 61.73 | 64.22 | 61.51 |
| Rates | Total |  | 62.20 | 62.87 | 63.28 | 62.24 | 61.33 | 63.78 | 63.38 | 61.86 | 61.41 | 62.79 | 64.44 | 62.47 | 62.41 | 62.74 | 64.40 | 62.54 | 61.45 | 63.50 | 64.41 | 62.59 | 62.24 | 61.70 | 64.23 | 61.59 |
|  | Cash | Total | 62.15 | 62.91 | 63.15 | 62.15 | 61.17 | 63.89 | 63.18 | 61.35 | 61.17 | 62.90 | 64.16 | 62.15 | 62.16 | 62.90 | 64.15 | 62.17 | 61.17 | 63.78 | 64.16 | 62.20 | 62.09 | 61.89 | 64.08 | 61.22 |
|  |  | U.S. Government Bonds | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 | 64.00 | 63.00 | 61.00 | 61.00 | 63.00 | 64.00 | 62.00 | 62.00 | 63.00 | 64.00 | 62.00 | 61.00 | 64.00 | 64.00 | 62.00 | 62.00 | 62.00 | 64.00 | 61.00 |
|  |  | European Government Bonds | 64.00 | 62.00 | 65.00 | 64.00 | 63.00 | 63.00 | 65.00 | 65.00 | 63.00 | 62.00 | 66.00 | 64.00 | 64.00 | 62.00 | 66.00 | 64.00 | ${ }^{63.00}$ | 62.00 | 66.00 | 64.00 | 63.00 | 61.00 | 65.00 | 63.00 |
|  |  | Mortages | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 | 64.00 | 63.00 | 61.00 | 61.00 | 63.00 | 64.00 | 62.00 | 62.00 | 63.00 | 64.00 | 62.00 | 61.00 | 64.00 | 64.00 | 62.00 | 62.00 | 62.00 | 64.00 | 61.00 |
|  |  | Other Goverrment Bonds | 62.67 | 62.12 | 63.81 | 63.09 | 61.43 | 62.70 | 63.58 | 63.32 | 60.91 | 61.37 | 63.45 | 62.56 | 61.37 | 62.19 | 63.99 | 63.15 | 61.47 | 61.98 | 62.91 | 63.45 | 61.27 | 61.46 | 62.67 | 61.97 |
|  | Derivatives | Total | 62.36 | 62.74 | 63.66 | 62.47 | ${ }^{61.66}$ | 63.60 | 63.70 | 62.73 | 61.83 | 62.67 | 64.73 | 62.93 | 62.75 | 62.53 | 64.85 | 63.12 | 61.82 | 63.16 | 64.75 | 62.94 | 62.41 | 61.53 | 64.38 | 61.96 |
|  |  | Swaps/Swaptions 1 Y | 62.37 | 62.74 | ${ }^{63.46}$ | 62.50 | ${ }^{61.69}$ | 63.58 | 63.76 | 62.72 | 61.82 | 62.52 | 64.85 | 62.98 | 62.78 | 62.50 | 64.73 | 62.88 | 61.85 | 62.97 | 64.78 | 63.04 | 62.43 | 61.50 | 64.35 | 61.98 |
|  |  | Swaps/waptions < 1 Y | 62.30 | 62.79 | 64.62 | 62.37 | ${ }^{61.35}$ | 63.66 | 63.51 | 62.88 | 62.03 | 62.87 | 64.60 | 62.78 | 62.71 | 62.59 | 65.13 | 63.43 | 61.77 | ${ }^{63.50}$ | 64.70 | 62.83 | 62.39 | 61.56 | 64.43 | 61.94 |
|  |  | Futures | 62.00 | 63.00 | 63.01 | 62.00 | 61.01 | 63.99 | 63.02 | 61.02 | 61.01 | 6.00 | 64.00 | 62.01 | 62.00 | 63.00 | 64.00 | 62.00 | 61.01 | 64.00 | 64.01 | 62.00 | 62.00 | 62.00 | 64.00 | 61.01 |
| Credit | Total |  | 62.82 | 62.58 | 63.81 | 62.90 | 61.79 | 63.34 | 63.96 | 62.52 | 61.64 | 62.58 | 64.88 | 62.57 | 62.76 | 62.44 | 64.94 | 62.49 | 61.54 | 63.05 | 64.74 | 62.65 | 62.27 | 61.46 | 64.37 | 61.53 |
|  | Cash | Total | 62.86 | 62.57 | 63.88 | 62.98 | 61.56 | 63.05 | 63.72 | 61.99 | ${ }^{61.04}$ | 62.60 | 64.66 | 62.16 | 62.00 | 62.30 | 64.73 | 62.02 | 6.95 | 63.01 | 64.42 | 62.25 | 61.74 | 61.43 | 64.25 | 61.24 |
|  |  | U.S. High Grade - Fully Electronic | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 | 64.00 | 63.00 | 61.00 | 61.00 | 63.00 | 64.00 | 62.00 | 62.00 | 63.00 | 64.00 | 62.00 | 61.00 | 64.00 | 64.00 | 62.00 | 62.00 | 62.00 | 64.00 | 61.00 |
|  |  | U.S. High Grade - Electronically Processed | 62.00 | 63.00 | 63.00 | 62.00 | ${ }^{61.00}$ | 64.00 | 63.00 | 61.00 | 61.00 | 63.00 | 64.00 | 62.00 | 62.00 | 63.00 | 64.00 | 62.00 | 61.00 | 64.00 | 64.00 | 62.00 | 62.00 | 62.00 | 64.00 | 61.00 |
|  |  | U.S. High hield - Fully Electronic | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 | 64.00 | 63.00 | 61.00 | 61.00 | 63.00 | 64.00 | 62.00 | 62.00 | 63.00 | 64.00 | 62.00 | 61.00 | 64.00 | 64.00 | 62.00 | 62.00 | 62.00 | 64.00 | 61.00 |
|  |  | U.S. High Yield - Electronically Processed | 62.00 | 63.00 | 63.00 | 62.00 | ${ }^{61.00}$ | 64.00 | 63.00 | 61.00 | 61.00 | 63.00 | 64.00 | 62.00 | 62.00 | 63.00 | 64.00 | 62.00 | ${ }^{61.00}$ | 64.00 | 64.00 | 62.00 | 62.00 | 62.00 | 64.00 | 61.00 |
|  |  | European Credit | 64.00 | 62.00 | 65.00 | 64.00 | ${ }^{63.00}$ | 63.00 | 65.00 | 65.00 | 63.00 | 62.00 | 66.00 | 64.00 | 64.00 | 62.00 | 66.00 | 64.00 | ${ }^{63.00}$ | 62.00 | 66.00 | 64.00 | 63.00 | 61.00 | 65.00 | 63.00 |
|  |  | Municipal Bonds | 62.00 | 63.00 | ${ }^{63.00}$ | 62.00 | 61.00 | 64.00 | 63.00 | 61.00 | 61.00 | ${ }^{63.00}$ | 64.00 | 62.00 | 62.00 | 63.00 | 64.00 | 62.00 | 61.00 | 64.00 | 64.00 | 62.00 | 62.00 | 62.00 | 64.00 | 61.00 |
|  |  | Chinese Bonds |  |  | 65.00 | 65.00 | 59.00 | 60.00 | 64.00 | 60.00 | 58.00 | 62.00 | 65.00 | 60.00 | 58.00 | 59.00 | 66.00 | 60.00 | 58.00 | 60.00 | 64.00 | 61.00 | 58.00 | 58.00 | 65.00 | 60.00 |
|  |  | Other Credit Bonds | 62.94 | 62.50 | 63.83 | 62.75 | 62.00 | 63.55 | 63.96 | 63.12 | 62.18 | 62.39 | 65.11 | 63.24 | 63.29 | 62.32 | 65.20 | 62.87 | 62.04 | 62.96 | 65.18 | 63.32 | 62.69 | 61.27 | 64.74 | 62.40 |
|  | Derivatives | Total | 62.80 | 62.59 | 63.77 | 62.82 | ${ }^{61.88}$ | 63.51 | 64.08 | 62.82 | 61.95 | 62.57 | 64.98 | 62.91 | 62.97 | 62.54 | 65.05 | 62.90 | 61.91 | 63.11 | 64.94 | 63.02 | 62.53 | 61.48 | 64.43 | 61.78 |
|  |  | Swaps | 62.80 | 62.59 | 63.77 | 62.82 | 61.88 | 63.51 | 64.08 | 62.82 | 61.95 | 62.57 | 64.98 | 62.91 | 62.97 | 62.54 | 65.05 | 62.90 | 61.91 | 63.11 | 64.94 | 63.02 | 62.53 | 61.48 | 64.43 | 61.78 |
| Equities | Total |  | 62.53 | 62.69 | 63.55 | 63.23 | 61.40 | 63.67 | 63.79 | 63.54 | 61.76 | 62.58 | 64.82 | 64.00 | 62.46 | 62.74 | 64.52 | 64.00 | 61.55 | 62.76 | 64.41 | 64.00 | 62.21 | 61.80 | 64.20 | 63.00 |
|  | Cash | Total | 62.56 | 62.71 | 63.55 | 63.21 | ${ }^{61.42}$ | 63.70 | 63.62 | 63.49 | 61.67 | 62.63 | 64.78 | 64.00 | 62.58 | 62.71 | 64.59 | 64.00 | 61.66 | 62.71 | 64.56 | 64.00 | 62.29 | 61.72 | 64.28 | 63.00 |
|  |  | U.S. ETFs | 62.00 | ${ }^{63.00}$ | ${ }^{63.00}$ | ${ }^{63.00}$ | 61.00 | 64.00 | 63.00 | 63.00 | 61.00 | ${ }^{63.00}$ | 64.00 | 64.00 | 62.00 | 63.00 | 64.00 | 64.00 | 61.00 | ${ }^{63.00}$ | 64.00 | 64.00 | 62.00 | 62.00 | 64.00 | 63.00 |
|  |  | European ETFs | 64.00 | 62.00 | 65.00 | 64.00 | 63.00 | 63.00 | 65.00 | 65.00 | 63.00 | 62.00 | 66.00 | 64.00 | 64.00 | 62.00 | 66.00 | 64.00 | 63.00 | 62.00 | 66.00 | 64.00 | 63.00 | 61.00 | 65.00 | 63.00 |
|  | Derivatives | Total | 62.48 | 62.66 | 63.55 | ${ }^{63.26}$ | 61.36 | 63.62 | 64.00 | 63.62 | 61.89 | 62.51 | 64.90 | 64.00 | 62.32 | 62.81 | 64.43 | 64.00 | 61.42 | 62.80 | 64.25 | 64.00 | 62.10 | 61.90 | 64.09 | 63.00 |
|  |  | Options / Converibles / Swaps | ${ }^{6} 3.86$ | 62.03 | 64.89 | 63.91 | 62.79 | 63.08 | 64.78 | 64.72 | 62.72 | 62.14 | 65.66 | 64.00 | 62.58 | 62.37 | 65.19 | 64.00 | 61.90 | 62.62 | 64.44 | 64.00 | 62.14 | 61.89 | 64.09 | 63.00 |
|  |  | Equity Futures | 62.08 | 62.95 | 63.07 | 63.04 | 61.06 | 63.86 | 63.29 | 63.18 | 61.25 | 62.83 | 64.27 | 64.00 | 62.09 | 62.94 | 64.05 | 64.00 | 61.05 | 62.98 | 64.05 | 64.00 | 62.07 | 61.92 | 64.08 | 63.00 |
| Money <br> Markets | Total |  | 62.06 | 62.97 | 63.10 | 62.11 | 61.15 | 63.91 | 63.22 | 61.39 | 61.23 | 62.89 | 64.26 | 62.22 | 62.25 | 62.83 | 64.40 | 62.41 | 61.44 | ${ }^{63.56}$ | 64.44 | 62.40 | 62.19 | 61.81 | 64.19 | 61.33 |
|  | Cash | Total | 62.06 | 62.97 | ${ }^{63.10}$ | 62.11 | 61.15 | 63.91 | 63.22 | ${ }^{61} 39$ | 61.23 | 62.89 | ${ }^{64.26}$ | 62.22 | 62.25 | 6283 | 64.40 | 62.41 | 61.44 | ${ }^{63.56}$ | 64.44 | 62.40 | 62.19 | 61.81 | 64.19 | 61.33 |
|  |  | Repurchase Agreements (Repo) | 62.03 | 62.88 | ${ }^{63.08}$ | 62.11 | 61.16 | 63.91 | 63.23 | 61.41 | 61.24 | 62.89 | 64.27 | 62.23 | ${ }^{62.26}$ | 62.82 | 64.42 | 62.43 | 61.45 | ${ }^{63.55}$ | 64.46 | 62.41 | 62.20 | 61.80 | 64.20 | 61.34 |
|  |  | Other Money Markets | 62.20 | 62.89 | 63.19 | 62.13 | 61.14 | 63.92 | 63.13 | 61.20 | 61.12 | 62.95 | 64.13 | 62.13 | 62.13 | 62.95 | 64.12 | 62.10 | 61.12 | 63.92 | 64.03 | 62.04 | 62.02 | 61.98 | 64.02 | 61.07 |

## TRADEWEB MARKETS - QUARTERLY BLENDED TRADE DAYS

| $\begin{aligned} & \text { Asset } \\ & \text { Class } \end{aligned}$ | Product |  | 012023 | Q22023 | Q3 2023 | Q42023 | Q1 2024 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total |  |  | 62.53 | 62.46 | 63.50 | 62.24 | 61.53 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rates | Total |  | 62.62 | 62.36 | 63.59 | 62.29 | 61.63 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 62.24 | 62.75 | 63.20 | 62.10 | 61.21 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. Government Bonds | 62.00 | 63.00 | 63.00 | 62.00 | ${ }^{61.00}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | European Goverrment Bonds | 64.00 | 61.00 | 65.00 | 63.00 | 63.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Mortages | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Other Government Bonds | 62.19 | 62.01 | 62.63 | 62.06 | 60.85 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 62.89 | 62.04 | 63.88 | 62.39 | ${ }^{61.86}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Swaps/Wwaptions IY $^{\text {r }}$ | 62.84 | 62.01 | 63.77 | 62.39 | 61.78 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Swaps/Wwaptions < 1Y | 62.96 | 62.09 | 64.12 | 62.41 | 62.02 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Futures | 62.02 | 62.97 | 63.20 | 62.01 | 61.46 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Credit | Total |  | 62.57 | 62.30 | 63.70 | 61.99 | 61.40 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 62.18 | 62.35 | 63.55 | 61.73 | 60.95 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | u.S. High Grade - Fully lectronic | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Grade - Electronically Processed | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High hield - Fully Electronic | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Yield - Electronically Processed | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | European Credit | 64.00 | 61.00 | 65.00 | 63.00 | 63.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Municipal Bonds | 62.00 | 63.00 | 63.00 | 62.00 | 61.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Chinese Bonds | 59.00 | 59.00 | 64.00 | 60.00 | 59.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Other Credit Bonds | 63.17 | 61.67 | 64.49 | 62.43 | 62.12 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 62.79 | 62.25 | 63.80 | 62.37 | ${ }^{61.84}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Swaps | 62.79 | 62.25 | 63.80 | 62.37 | 61.84 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Equities | Total |  | 62.38 | 61.83 | 63.28 | 63.00 | 61.25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 62.54 | 61.76 | 63.44 | ${ }^{63.00}$ | 61.45 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | U.S. ETFs | 62.00 | 62.00 | 63.00 | 63.00 | 61.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | European ETFs | 64.00 | 61.00 | 65.00 | 63.00 | 63.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 62.20 | 61.90 | 63.13 | 63.00 | 61.08 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Options / Convertibles / Swaps | 62.24 | 61.88 | 63.16 | 63.00 | 61.10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Equity futures | 62.11 | 61.94 | 63.06 | 63.00 | 61.06 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Money Markets | Total |  | 62.35 | 62.65 | 63.34 | 62.14 | 61.35 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 62.35 | 62.65 | 63.34 | 62.14 | 61.35 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Repurchase Agreements (Repo) | 62.36 | 62.63 | 63.34 | 62.14 | ${ }^{61.36}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Other Money Markets | 62.06 | 62.94 | 63.12 | 62.02 | 61.14 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## TRADEWEB MARKETS - 2017 MONTHLY ADV (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2017 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | juy | August | September | October | November | December |
| Total |  |  | 378,455 | 365,746 | 397,460 | 359,628 | 365,378 | 405,543 | 365,373 | 357,371 | 462,918 | 419,208 | 454,349 | 440,083 |
| Rates | Total |  | 245,832 | 232,53 | 257,975 | 222,683 | 224,444 | 260,036 | 230,594 | 222,372 | 305,486 | 261,759 | 293,275 | 282,916 |
|  | Cash | Total | 199,206 | 183,988 | 183,503 | 180,404 | 173,762 | 187,841 | 179,638 | 179,890 | 202,768 | 212,330 | 210,639 | 194,843 |
|  |  | u.s. Government Bonds | 51,52 | 50,860 | 48,784 | 52,684 | 52,085 | 49,290 | 47,388 | 47,803 | 55,36 | 54,325 | 58,86 | 57,174 |
|  |  | European Govermment Bonds | 13.607 | 15,064 | 13,612 | 14,267 | 12,751 | 15,705 | 13,820 | 11,069 | 16,841 | 16,135 | 16,943 | ${ }_{11,988}$ |
|  |  | Mortagas | 132,411 | 116,407 | 119,697 | 111,905 | 107,685 | 121,404 | 116,905 | 119,731 | 128,641 | 140,427 | 133,888 | 124,366 |
|  |  | Other Government Bonds | 1,625 | 1,367 | 1,409 | 1.547 | 1,241 | 1.442 | 1,525 | 1,287 | 1,749 | 1,443 | 1,722 | 1,315 |
|  | Derivatives | Total | 46,226 | 48,805 | 74,473 | 42,279 | 50,682 | 72,195 | 50,956 | 42,482 | 102,718 | 4,4,429 | 82,636 | 88,072 |
|  |  | Swaps/Swaptions 1 IY | 40,513 | 46,741 | 64,573 | 40,166 | 47,679 | 63,719 | 47,752 | 41,594 | 72,28 | 46,157 | 55,209 | 84,846 |
|  |  | Swaps/Wwaptions < 1 Y | 5,915 | 1,745 | 9,548 | 1,795 | 2,746 | 8,242 | 3,070 | 627 | 30,425 | 2.813 | 26,921 | 3,021 |
|  |  | Futures | 198 | 319 | 352 | 318 | 257 | 234 | 134 | 261 | 265 | 459 | 505 | 205 |
| Credit | Total |  | 4,944 | 5,431 | 11,823 | 6,479 | 5,196 | 6,139 | 5,420 | 5.885 | 16,711 | 8,687 | 7,685 | 4,456 |
|  | Cash | Total | 2,120 | 2.427 | 2,390 | 2,268 | 2.425 | 2.520 | 2.696 | 2.611 | 3.028 | 3,464 | 3,526 | 2.611 |
|  |  | U.S. High Grade - Fully flectronic | 305 | 318 | 322 | 294 | 347 | 397 | 340 | 336 | 355 | 441 | 416 | 356 |
|  |  | U.S. High Grade - Electronically Processed | 391 | 493 | 538 | 451 | 595 | 613 | 775 | 802 | 697 | 1,062 | 962 | 613 |
|  |  | U.S. High Y Yield - Fully Electronic | 48 | 56 | 49 | 43 | 54 | 55 | 44 | 54 | 75 | 75 | 129 | 62 |
|  |  | U.S. High Yield - Electronically Processed | 148 | 161 | 127 | 98 | 98 | 98 | 95 | 82 | 83 | 107 | 152 | ${ }_{68}$ |
|  |  | European Credit | 867 | 1,020 | 982 | 1,034 | 980 | 1,021 | 909 | 761 | 1,092 | 1,109 | 1,160 | 758 |
|  |  | Municipal Bonds | 300 | 307 | 290 | 288 | 292 | 278 | 277 | 269 | 246 | 265 | 276 | 319 |
|  |  | Chinese Bonds |  |  |  |  |  |  | 209 | 239 | 411 | 331 | 360 | 368 |
|  |  | Other Credit Bonds | 61 | 71 | 83 | 62 | 60 | 58 | 48 | 68 | 69 | 74 | 71 | 65 |
|  | Derivatives | Total | 2,824 | 3,005 | 9,434 | 4,211 | 2.771 | 3,619 | 2,723 | 3,274 | 13,143 | 5,223 | 4,160 | 1,845 |
|  |  | Swaps | 2.824 | 3,005 | 9,434 | 4,211 | 2,771 | 3,619 | 2,723 | 3,274 | 13,143 | 5,223 | 4,160 | 1.845 |
| Equities | Total |  | 4,743 | 3,663 | 4,947 | 4,702 | 4.446 | 4,444 | 3,822 | 3,760 | 5,039 | 4,700 | 6,136 | 8,033 |
|  | Cash | Total | 2,771 | 2,250 | 2.879 | 2,728 | 2,491 | 2,560 | 2,187 | 2,186 | 3.004 | 2.808 | 3,303 | 4,347 |
|  |  | U.S. ETFs | 2,002 | 1,609 | 2,057 | 1,910 | 1,629 | 1,955 | 1,476 | 1,596 | 2,262 | 2,064 | 2,545 | 3,708 |
|  |  | European ETTS | 769 | 640 | 821 | 817 | 862 | 605 | 711 | 590 | 742 | 744 | 758 | 639 |
|  | Derivatives | Total | 1,972 | 1,413 | 2,068 | 1,974 | 1,955 | 1,884 | 1,095 | 1,574 | 2,035 | 1,892 | 2,834 | 3,687 |
|  |  | Options / Convertibles / Swaps | 446 | 258 | 501 | 616 | 810 | 409 | 271 | 492 | 467 | 521 | 886 | 692 |
|  |  | Equity Futures | 1,526 | 1,156 | 1,567 | 1,358 | 1,146 | 1,476 | 824 | 1,082 | 1,568 | 1,371 | 1,948 | 2,995 |
| MoneyMarkets | Total |  | 122,936 | 124,149 | 122,714 | 125,76 | 131,292 | 134,22 | 126,078 | 125,354 | 136,221 | 144,062 | 147,252 | 144,679 |
|  | Cash | Total | 122,936 | 124,149 | 122,714 | 125,76 | 131,292 | 134,24 | 126,078 | 125,354 | 136,221 | 144,062 | 147,252 | 144,679 |
|  |  | Repurchase Agreements (Repo) | 102,56 | 103,260 | 101,323 | 104,849 | 110,404 | 114,584 | 106,572 | 106,416 | 114,954 | 123,095 | 128,011 | 124,151 |
|  |  | Other Money Markets | 20,381 | 20.889 | 21,391 | 20,915 | 20.888 | 20,340 | 19,506 | 18,938 | 21,267 | 20,966 | 19,241 | 20,527 |

## TRADEWEB MARKETS - 2018 MONTHLY ADV (USD mm)

| Asset <br> Class | Product |  | 2018 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 516,618 | 563,823 | 523,188 | 495,130 | 533,949 | 588,240 | 518,270 | 494,384 | 592,697 | 584,001 | 570,492 | 616,800 |
| Rates | Total |  | 337,510 | 368,75 | 327,750 | 308,994 | 346,634 | 397,060 | 340,56 | 313,841 | 379,57 | 369,809 | 359,982 | 409,245 |
|  | Cash | Total | 233,112 | 247,262 | 217,274 | 216,591 | 229,028 | 220,569 | 208,236 | 187,142 | 235,759 | 256,448 | 230,662 | 230,693 |
|  |  | u.s. Government Bonds | 70,561 | 79,835 | 65,708 | 64,142 | 66,843 | 62,451 | 64,839 | 61,652 | 71,082 | 78,042 | 78,225 | 80,870 |
|  |  | European Govermment Bonds | 19,221 | 19,705 | 20,643 | 19,723 | 22,637 | 20,643 | 17,847 | 15,45 | 20,26 | 22,650 | 20,609 | 16,719 |
|  |  | Mortagas | 141,344 | 145,69 | 128,801 | 130,575 | 137,62 | 135,28 | 123,468 | 108,350 | 142,206 | 153,631 | 129,883 | 131,431 |
|  |  | Other Government Bonds | 1,987 | 2.023 | 2,122 | 2,151 | 1.926 | 1,946 | 2.083 | 1,685 | 2,205 | 2,125 | 1,946 | 1,672 |
|  | Derivatives | Total | 104,398 | 121,495 | 110,475 | 92,403 | 117,606 | 176,491 | 131,820 | 126,699 | 143,768 | 113,361 | 129,320 | 178,553 |
|  |  | Swaps/Swaptions 1 IY | 95,56 | 104,760 | 104,579 | 86,144 | 107,912 | 135,169 | 95,672 | 95,437 | 123,470 | 105,312 | 106,276 | 168,203 |
|  |  | Swaps/Wwaptions < 1 Y | 8,115 | 16,082 | 5,300 | 5,723 | 9,159 | 40,618 | 35,652 | 30,808 | 19,780 | 7,485 | 22,72 | 9,913 |
|  |  | Futures | 627 | 653 | 596 | 537 | 535 | 705 | 496 | 455 | 518 | 563 | 772 | 436 |
| Credit | Total |  | 9,886 | 14,885 | 20,276 | 11,938 | 12,543 | 10,871 | 8.809 | 8,004 | 19,865 | 14,537 | 11,669 | 9,529 |
|  | Cash | Total | 4,562 | 4,386 | 4,016 | 4,294 | 4,153 | 4.509 | 3,903 | 3,599 | 4,434 | 4,713 | 4,550 | 3,622 |
|  |  | U.S. High Grade - Fully flectronic | 626 | 513 | 520 | 531 | 542 | 478 | 441 | 519 | 758 | 815 | 730 | 687 |
|  |  | U.S. High Grade - Electronically Processed | 1,077 | 1,142 | 1,146 | 1,105 | 1,280 | 1,175 | 1.047 | 1,105 | 1,305 | 1.506 | 1,382 | 1.026 |
|  |  | U.S. High Yield - Fully Electronic | 91 | 123 | 71 | 71 | 71 | 86 | 61 | 66 | 100 | 129 | 99 | 65 |
|  |  | U.S. High Yield - Electronically Processed | 185 | 161 | 135 | 174 | 158 | 140 | 145 | 163 | 165 | 176 | 191 | 145 |
|  |  | European Credit | 1,627 | 1,742 | 1,440 | 1,503 | 1,306 | 1,291 | 1,122 | 926 | 1,269 | 1,302 | 1,322 | 853 |
|  |  | Municipal Bonds | 290 | 281 | 264 | 284 | 254 | 260 | 239 | 256 | 275 | 285 | 301 | 292 |
|  |  | Chinese Bonds | 567 | 337 | 361 | 548 | 473 | 1,015 | 783 | 516 | 499 | 441 | 487 | 518 |
|  |  | Other Credit Bonds | 99 | 86 | 78 | 77 | 69 | 64 | 65 | 47 | 64 | 59 | 38 | 36 |
|  | Derivatives | Total | 5,324 | 10,599 | 16,260 | 7,644 | 8,391 | 6,362 | 4,907 | 4.406 | 15,431 | 9,824 | 7,119 | 5.907 |
|  |  | Swaps | 5,324 | 10,599 | 16,260 | 7.644 | 8,391 | 6,362 | 4,907 | 4,406 | 15,431 | 9,824 | 7,119 | 5,907 |
| Equities | Total |  | 8,096 | 12,877 | 9,193 | 7,098 | 6,306 | 7,532 | 5,110 | 5,212 | 7,251 | 9,283 | 6,799 | 9,524 |
|  | Cash | Total | 4,648 | 7,285 | 5,185 | 4,193 | 3,776 | 4,052 | 2,767 | 2.814 | 4.013 | 5.833 | 4,012 | 5,755 |
|  |  | U.S. EtFs | 3,579 | 5.825 | 4,100 | 3,156 | 2.525 | 2,751 | 1,798 | 1,916 | 2,929 | 4,523 | 2.830 | 4,390 |
|  |  | European ETFs | 1,070 | 1,460 | 1,085 | 1.037 | 1,251 | 1,301 | 970 | 898 | 1,083 | 1,310 | 1,182 | 1,365 |
|  | Derivatives | Total | 3,448 | 5,592 | 4,008 | 2,905 | 2,530 | 3,479 | 2,342 | 2,398 | 3,238 | 3,451 | 2,788 | 3,770 |
|  |  | Options / Convertibles / wwaps | 948 | 841 | 473 | 672 | 904 | 1,190 | 1,285 | 1,343 | 1,117 | 837 | 1,150 | 894 |
|  |  | Equity Futures | 2,500 | 4,751 | 3,535 | 2,233 | 1,626 | 2,289 | 1,057 | 1,055 | 2,121 | 2.614 | 1,638 | 2,876 |
| MoneyMarkets | Total |  | 161,126 | 167,206 | 165,969 | 167,100 | 168,465 | 122,78 | 164,295 | 167,326 | 186,054 | 190,32 | 192,041 | 188,561 |
|  | Cash | Total | 161,126 | 167,206 | 165,969 | 167,100 | 168,465 | 122,78 | 164,295 | 167,326 | 186,054 | 190,372 | 192,041 | 188,561 |
|  |  | Repurchase Agreements (Repo) | 138,855 | 142,285 | 142,027 | 146,622 | 147,153 | 148,621 | 144,277 | 148,365 | 165,366 | 168,780 | 173,075 | 168,517 |
|  |  | Other Money Markets | 22,271 | 24,921 | 23,942 | 20,477 | 21,312 | 24,157 | 20,019 | 18,961 | 20,688 | 21,592 | 18,966 | 20,045 |

## TRADEWEB MARKETS - 2019 MONTHLY ADV (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 623,373 | 602.595 | 708,063 | 666,051 | 738,212 | 857,92 | 751,26 | 829,376 | 874,898 | 706,987 | 698,716 | 65,024 |
| Rates | Total |  | 410,036 | 395,915 | 479,430 | 441,812 | 490,85 | 602,065 | 507,20 | 580,607 | 606,087 | 480,572 | 462,427 | 410,962 |
|  | Cash | Total | 268,614 | 263,055 | 292,256 | 271,455 | 262,327 | 303, 149 | 255,207 | 286,051 | 315,298 | 279,825 | 283,689 | 240,225 |
|  |  | u.s. Government Bonds | 79,56 | 82,807 | 83,886 | 76,248 | 79,991 | 86,010 | 73,129 | 85,47 | 88,38 | 77,945 | 81,30 | 72,133 |
|  |  | European Goverrment Bonds | 21,934 | 22,397 | 24,991 | 22,155 | 21,072 | 25,564 | 23,875 | 20,982 | 25,34 | 20,350 | 21,517 | 16,864 |
|  |  | Mortagas | 164,445 | 153,85 | 179,321 | 169,041 | 157,60 | 188,047 | 154,881 | 175,882 | 197,684 | 178,055 | 178,001 | 148,270 |
|  |  | Other Government Bonds | 2.578 | 3,966 | 4,158 | 4.010 | 3,604 | 3,528 | 3,323 | 3,709 | 3,962 | 3,475 | 2.861 | 2,958 |
|  | Derivatives | Total | 141,422 | 132,89 | 187,174 | 170,35 | 228,158 | 298,916 | 25,413 | 294,556 | 290,789 | 200,74 | 178,738 | 170,737 |
|  |  | Swaps/Swaptions 1 IY | 127,301 | 127,695 | 171,50 | 102,54 | 117,092 | 184,678 | 141,058 | 137,335 | 167,672 | 143,516 | 141,241 | 131.802 |
|  |  | Swaps/Wwaptions < 1 Y | 13,480 | 4,806 | 15,632 | 67,417 | 110,101 | 113,59 | 110,935 | 156,524 | 122,483 | 56,758 | 36,823 | 38,152 |
|  |  | Futures | 642 | 358 | 493 | 437 | 965 | 640 | 419 | 698 | 633 | 473 | 674 | 783 |
| Credit | Total |  | 12,78 | 11,804 | 24,365 | 10,897 | 11,432 | 14,544 | 10,168 | 14,642 | 27,76 | 16,377 | 13,21 | 9,986 |
|  | Cash | Total | 5,612 | 5.926 | 5,407 | 5,597 | 5.140 | 6,064 | 5,332 | 5,033 | 6,050 | 6.443 | 6,728 | 4,942 |
|  |  | U.S. High Grade - Fully flectronic | 860 | 867 | 844 | 1,055 | 866 | 1,252 | 938 | 877 | 1,174 | 1,380 | 1,514 | 1,410 |
|  |  | U.S. High Grade - Electronically Processed | 1,876 | 2.055 | 1,945 | 1.894 | 1.623 | 1.700 | 1,462 | 1,262 | 1,778 | 1,792 | 2.004 | 1.599 |
|  |  | U.S. High Yield - Fully Electronic | 139 | 120 | 96 | 129 | 113 | 218 | 165 | 129 | 193 | 228 | 229 | 195 |
|  |  | U.S. High Yield - Electronically Processed | 252 | 235 | 148 | 142 | 142 | 110 | 181 | 149 | 174 | 130 | 147 | 143 |
|  |  | European Credit | 1,277 | 1,340 | 1,348 | 1,295 | 1,173 | 1,404 | 1,316 | 949 | 1,346 | 1,366 | 1,517 | 991 |
|  |  | Municipal Bonds | 275 | 291 | 272 | 254 | 244 | 250 | 218 | 231 | 227 | 217 | 223 | 211 |
|  |  | Chinese Bonds | 885 | 957 | 689 | 766 | 919 | 1,074 | 1,000 | 1,381 | 1,092 | 1,265 | 1,039 | 344 |
|  |  | Other Credit Bonds | 47 | 61 | 64 | 62 | 61 | 56 | 53 | 54 | 66 | 64 | 55 | 48 |
|  | Derivatives | Total | 7,186 | 5.877 | 18,958 | 5,300 | 6,292 | 8,480 | 4,835 | 9,609 | 21,667 | 9,935 | 6,392 | 5,044 |
|  |  | Swaps | 7,186 | 5,877 | 18,958 | 5,300 | 6,292 | 8,480 | 4.835 | 9,609 | 21,667 | 9,935 | 6,392 | 5.044 |
| Equities | Total |  | 8,041 | 7.071 | 8,145 | 7,166 | 6,313 | 7,958 | 5,305 | 7,691 | 9,190 | 7,343 | 8,843 | 10,967 |
|  | Cash | Total | 4,902 | 4,223 | 4,280 | 3,969 | 3,881 | 4,526 | 3,246 | 5,044 | 5,882 | 3,695 | 4,183 | 5.832 |
|  |  | U.S. ETFs | 3,442 | 2,538 | 2,916 | 2,497 | 2,355 | 2,938 | 1,740 | 3,183 | 3,398 | 2,288 | 2.544 | 4,136 |
|  |  | European ETTS | 1,460 | 1,685 | 1,364 | 1,473 | 1,527 | 1,589 | 1,506 | 1.861 | 1.884 | 1,406 | 1,639 | 1.696 |
|  | Derivatives | Total | 3,139 | 2.848 | 3,865 | 3,197 | 2,431 | 3,432 | 2,059 | 2,647 | 3,908 | 3,648 | 4,660 | 5,135 |
|  |  | Options / Converitiles / Swaps | 1,195 | 1.615 | 1.528 | 1,780 | 1,171 | 1,280 | 1,356 | 1,003 | 1,471 | 2,364 | 3,187 | 2,401 |
|  |  | Equity Futures | 1,944 | 1,234 | 2,337 | 1,417 | 1,260 | 2,152 | 703 | 1.644 | 2,437 | 1,285 | 1,474 | 2,734 |
| MoneyMarkets | Total |  | 192,499 | 187,806 | 196,123 | 206,176 | 229,82 | 233,025 | 228,23 | 226,436 | 231,904 | 202,694 | 214,325 | 220,108 |
|  | Cash | Total | 192,499 | 187,06 | 196,123 | 206,176 | 229,82 | 233,25 | 228,203 | 226,436 | 231,94 | 202,694 | 214,325 | 220,108 |
|  |  | Repurchase Agreements (Repo) | 172,928 | 169,28 | 177,706 | 188,068 | 211,514 | 213,151 | 211,175 | 208,345 | 213,482 | 184,153 | 196,118 | 202,450 |
|  |  | Other Money Markets | 19,571 | 18,178 | 18,417 | 18,108 | 18,468 | 19,873 | 17,028 | 18,091 | 18,423 | 18,541 | 18,207 | 17,659 |

## TRADEWEB MARKETS - 2020 MONTHLY ADV (USD mm)

| Asset <br> Class | Product |  | 2020 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | Juy | August | September | October | November | December |
| Total |  |  | 801,420 | 885,011 | 1,001,529 | 762,963 | 791,493 | 780,924 | 724,614 | 746,829 | 870,466 | 904,525 | 958,689 | 834,473 |
| Rates | Total |  | 521,837 | 578,563 | 668,515 | 494,657 | 524,83 | 501,700 | 444,827 | 469,838 | 556,548 | 538,807 | 582,163 | 494,929 |
|  | Cash | Total | 325,969 | 349,980 | 349,341 | 294,970 | 301,03 | 297,039 | 301,746 | 314,076 | 317,627 | 330,43 | 357,616 | 299,164 |
|  |  | U.S. Government Bonds | 87,737 | 96,610 | 96,366 | 88,955 | 91,881 | 95,852 | 83,673 | 87,375 | 89,977 | 83,886 | 100,139 | 91,965 |
|  |  | European Government Bonds | 26,75 | 25,835 | 31,599 | 27,344 | 25,745 | 28,123 | 23,634 | 22,182 | 27,068 | 27,327 | 26,972 | 20,414 |
|  |  | Mortages | 207,390 | 223,086 | 215,130 | 173,879 | 178,900 | 168,375 | 190,812 | 200,606 | 196,784 | 214,979 | 226,47 | 183,407 |
|  |  | Other Goverrment Bonds | 4,085 | 4,448 | 6,286 | 4,792 | 4,577 | 4,689 | 3,627 | 3,912 | 3,798 | 4,262 | 4,058 | 3,378 |
|  | Derivatives | Total | 195,868 | 228,583 | 319,174 | 199,686 | 223,80 | 204,661 | 143,081 | 155,762 | 238,921 | 208,34 | 224,547 | 195,765 |
|  |  | Swaps/Wwaptions 1 Y | 140,767 | 140,486 | 193,880 | 144,608 | 129,433 | 148,044 | 87,779 | 122,290 | 158,231 | 120,588 | 161,049 | 147,919 |
|  |  | Swaps/Wwaptions < 1 Y | 54,466 | 87,35 | 124,857 | 54,683 | 93,832 | 56,233 | 55,018 | 33,040 | 80,213 | 87,194 | 62.786 | 47,502 |
|  |  | Futures | 656 | 762 | 437 | 395 | 405 | 385 | 284 | 431 | 478 | 572 | 712 | 343 |
| Credit | Total |  | 15,74 | 27,863 | 54,352 | 20,173 | 14,703 | 18.851 | 13,191 | 11,598 | 33,928 | 20,292 | 21,276 | 12,451 |
|  | Cash | Total | 7,166 | 7,329 | 7,255 | 7.504 | 7.887 | 8.071 | 7.090 | 6,519 | 7.484 | 8.471 | 9,281 | 7,281 |
|  |  | U.S. High Grade - Fully Electronic | 1,660 | 1,744 | 1,037 | 1,410 | 1,780 | 1.837 | 1.520 | 1.524 | 1,800 | 2,262 | 2.477 | 1,996 |
|  |  | U.S. High Grade - Electronically Processed | 2,300 | 2,241 | 2,748 | 3,041 | 3,055 | 2.844 | 2,328 | 2,155 | 2,137 | 2,405 | 2.418 | 1,701 |
|  |  | U.S. High Yield - Fully Electronic | 229 | 306 | 163 | 134 | 162 | 216 | 194 | 180 | 233 | 327 | 376 | 384 |
|  |  | U.S. High Yield - Electronically Processed | 205 | 237 | 323 | 401 | 320 | 230 | 193 | 162 | 256 | 230 | 296 | 207 |
|  |  | European Credit | 1,706 | 1,763 | 1,515 | 1,463 | 1,186 | 1,437 | 1,188 | 969 | 1,643 | 1,591 | 1,814 | 1,216 |
|  |  | Municipal Bonds | 227 | 236 | 394 | 290 | 239 | 213 | 202 | 192 | 208 | 210 | 187 | 200 |
|  |  | Chinese Bonds | 770 | 741 | 1,026 | 711 | 1,096 | 1,248 | 1,409 | 1,287 | 1,129 | 1,348 | 1,639 | 1,881 |
|  |  | Other Credit Bonds | 69 | 61 | 49 | 55 | 51 | 46 | 56 | 51 | 76 | 98 | 75 | 97 |
|  | Derivatives | Total | 8,583 | 20,533 | 47,096 | 12,669 | ${ }_{6}^{6.816}$ | 10,780 | 6,100 | 5,079 | 26,444 | ${ }^{11,821}$ | 11,995 | 5,170 |
|  |  | Swaps | 8.583 | 20,533 | 47,096 | 12,669 | 6.816 | 10,780 | 6,100 | 5,079 | 26,444 | 11,821 | 11,995 | 5,170 |
| Equities | Total |  | 10,704 | 19,300 | 23,326 | 10,143 | 8,566 | 11,142 | 8.001 | 6,955 | 12,280 | 11,620 | 13,806 | 11,870 |
|  | Cash | Total | 5,249 | 8,208 | 13,958 | 6,609 | 5,393 | 6,911 | 5,018 | 4,279 | 7.039 | 6.441 | 7.494 | 6.573 |
|  |  | u.S. EtFs | 3,582 | 5,790 | 9,974 | 4,749 | 3,782 | 4,857 | 3,268 | 2,920 | 5,388 | 4,679 | 4,771 | 4,528 |
|  |  | European ETTs | 1,667 | 2.418 | 3,984 | 1,860 | 1,612 | 2.054 | 1,750 | 1.359 | 1,650 | 1,762 | 2,723 | 2.045 |
|  | Derivatives | Total | 5,455 | 11,092 | ${ }^{9,368}$ | 3,533 | 3,173 | 4,231 | 2,983 | 2.676 | 5,241 | 5,180 | 6,312 | 5,297 |
|  |  | Options / Convertibles / Swaps | 3,478 | 7,111 | 1,713 | 473 | 942 | 1,113 | 1,058 | 929 | 1,583 | 2,299 | 3,367 | 2,329 |
|  |  | Equity futures | 1,976 | 3,981 | 7,655 | 3,060 | 2,230 | 3,118 | 1,926 | 1,746 | 3,658 | 2.881 | 2,945 | 2,968 |
| MoneyMarkets | Total |  | 253,131 | 259,287 | 255,336 | 237,991 | 243,541 | 249,231 | 258,595 | 258,438 | 267,990 | 333,805 | 341,44 | 315,225 |
|  | Cash | Total | 253,131 | 259,287 | 255,336 | 237,991 | 243,541 | 299,31 | 258,595 | 258,438 | 267,690 | 333,805 | 341,44 | 315,225 |
|  |  | Repurchase Agreements (Repo) | 233,593 | 242,35 | 235,119 | 222,683 | 231,326 | 238,56 | 248,457 | 245,763 | 255,79 | 322,80 | 330,411 | 304,536 |
|  |  | Other Money Markets | 19,538 | 16,932 | 20,217 | 15,307 | 12,214 | 10,675 | 10,138 | 12,675 | 11,911 | 11,525 | 11,034 | 10,689 |

## TRADEWEB MARKETS - 2021 MONTHLY ADV (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2021 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 1,037,525 | 1,060,741 | 1,075,517 | 897,012 | ${ }_{980,396}$ | 1,051,686 | 971,830 | 901,006 | 1,021,322 | 1,260,266 | 1,174,776 | 915,893 |
| Rates | Total |  | 661,547 | 669,013 | 667,75 | 521,861 | 563,568 | 638,632 | 579,548 | 544,170 | 628,887 | 882,138 | 758,225 | 554,678 |
|  | Cash | Total | 399,236 | 390, 144 | 352,374 | 300,730 | 326,244 | 330,489 | 339,08 | 319,824 | 352,157 | 390,790 | 361,55 | 288,720 |
|  |  | u.s. Government Bonds | 114,191 | 117,221 | 114,249 | 96,060 | 105,044 | 119,439 | 116,212 | 123,347 | 134,418 | 149,019 | 144,462 | 113,705 |
|  |  | European Govermment Bonds | 30,27 | 33,651 | 30,986 | 28.383 | 30,902 | 32,102 | 29,542 | 22,423 | 34,435 | 36,251 | 34,647 | 21,926 |
|  |  | Mortagas | 249,084 | 233,27 | 201,937 | 171,764 | 186,456 | 174,927 | 189,510 | 170,681 | 179,145 | 200,630 | 178,298 | 150,123 |
|  |  | Other Government Bonds | 5,665 | 5,345 | 5,201 | 4.524 | 3,841 | 4,021 | 3,745 | 3,373 | 4,159 | 4.890 | 4,147 | 2.966 |
|  | Derivatives | Total | 262,311 | 278,69 | 315,32 | 221,131 | 237,32 | 308,143 | 240,539 | 224,346 | 276,730 | 491,388 | 396,669 | 265,958 |
|  |  | Swaps/Swaptions 1 IY | 145,403 | 171,248 | 222,073 | 138,487 | 151,029 | 200,574 | 151,311 | 126,440 | 187,768 | 202,936 | 233,344 | 165,377 |
|  |  | Swaps/Wwaptions < 1 Y | 116,272 | 106,615 | 92,418 | 81,964 | 85,499 | 101,508 | 88,377 | 97,265 | 88,178 | 287,39 | 162,47 | 99,865 |
|  |  | Futures | 636 | 1,006 | 890 | 680 | 797 | 1.061 | 891 | 641 | 785 | 1,023 | 878 | 716 |
| Credit | Total |  | 20,30 | 19,301 | 39,343 | 19,137 | 17,568 | 17,514 | 16,206 | 13,113 | 37,596 | 21,818 | 19,616 | 15,087 |
|  | Cash | Total | 10.820 | 9,977 | 10,313 | 9,383 | 9,103 | 10,036 | 8.737 | 7.277 | 9,321 | 10,431 | 9,779 | 6,607 |
|  |  | U.S. High Grade - Fully flectronic | 2,848 | 2.663 | 3,042 | 2,759 | 2.637 | 3,156 | 2.509 | 2.506 | 2,796 | 3,108 | 3,238 | 2,214 |
|  |  | U.S. High Grade - Electronically Processed | 3,015 | 2.661 | 2.518 | 2,404 | 2,239 | 2.050 | 1,736 | 1.423 | 2,183 | 2,357 | 2,240 | 1.506 |
|  |  | U.S. High Yield - Fully Electronic | 367 | 488 | 509 | 468 | 436 | 522 | 550 | 502 | 568 | 754 | 720 | 531 |
|  |  | U.S. High Yield - Electronically Processed | 356 | 389 | 344 | 412 | 337 | 326 | 309 | 263 | 317 | 357 | 374 | 218 |
|  |  | European Credit | 2,021 | 2,059 | 2,111 | 1,912 | 1,740 | 2,064 | 1,943 | 1,154 | 2,024 | 1.833 | 1,842 | 1,103 |
|  |  | Municipal Bonds | 204 | 208 | 201 | 188 | 191 | 200 | 172 | 172 | 174 | 187 | 182 | 181 |
|  |  | Chinese Bonds | 1.875 | 1,400 | 1,477 | 1,131 | 1,426 | 1,570 | 1,409 | 1,160 | 1,120 | 1,728 | 1,073 | 796 |
|  |  | Other Credit Bonds | 134 | 110 | 111 | 110 | 96 | 147 | 110 | 99 | 139 | 107 | 110 | 58 |
|  | Derivatives | Total | 9,511 | 9,324 | 29,030 | 9,754 | ${ }^{8,465}$ | 7.479 | 7.468 | 5.835 | 28,275 | 11,387 | 9,838 | 8,480 |
|  |  | Swaps | 9,511 | 9,324 | 29,030 | 9,754 | 8,465 | 7.479 | 7,468 | 5,835 | 28,275 | 11,387 | 9,838 | 8.480 |
| Equities | Total |  | 14,817 | 14,352 | 18,817 | 16,142 | 16,828 | 15,261 | 16,052 | 12,151 | 15,519 | 13,045 | 15,830 | 18,923 |
|  | Cash | Total | ${ }^{8,718}$ | 8,039 | 10,087 | 8,739 | ${ }^{8,014}$ | 7,967 | 8,707 | 5,991 | 8,002 | 7,141 | 8,031 | 10,480 |
|  |  | U.S. ETFs | 5,636 | 5,222 | 7,066 | 6,398 | 5,731 | 5,534 | 6,188 | 4,406 | 5,718 | 4,931 | 5,528 | 7.865 |
|  |  | European ETTS | 3,081 | 2.817 | 3,021 | 2,340 | 2,284 | 2,432 | 2.520 | 1.585 | 2,284 | 2.210 | 2.502 | 2.615 |
|  | Derivatives | Total | 6,099 | 6,313 | 8,730 | 7,403 | 8,813 | 7,294 | 7,345 | 6,160 | 7,518 | 5,904 | 7,799 | 8,443 |
|  |  | Options / Convertibles / wwaps | 2.829 | 2,847 | 3,414 | 2.886 | 4,931 | 3,780 | 3,746 | 3,409 | 3,538 | 2,971 | 4,321 | 3,055 |
|  |  | Equity Futures | 3,270 | 3,466 | 5,316 | 4,517 | 3,882 | 3,514 | 3,599 | 2,751 | 3,980 | 2,933 | 3,478 | 5,388 |
| MoneyMarkets | Total |  | 340,830 | 358,075 | 349,62 | 339,871 | 382,432 | 380,279 | 360,24 | 331,572 | 339,319 | 343,265 | 381,106 | 327,204 |
|  | Cash | Total | 340,830 | 358,075 | 399,62 | 339,871 | 382,432 | 380,79 | 360,24 | 331,52 | 339,319 | 343,265 | 381,106 | 327,204 |
|  |  | Repurchase Agreements (Repo) | 328,445 | 343,06 | 334,498 | 326,091 | 369,316 | 366,371 | 345,052 | 316,596 | 326,823 | 328,532 | 367,026 | 313,984 |
|  |  | Other Money Markets | 12,366 | 14,269 | 15,103 | 13,780 | 13,116 | 13,908 | 14,972 | 14,976 | 12,496 | 14,733 | 14,080 | 13,220 |

## TRADEWEB MARKETS - 2022 MONTHLY ADV (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2022 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | juy | August | September | October | November | December |
| Total |  |  | 1,116,141 | 1,174,298 | 1,225,729 | 1,094,923 | 1,186,835 | 1,241,528 | 1,088,687 | 1,018,455 | 1,196,950 | 1,052,638 | 1,131,354 | 1,022,235 |
| Rates | Total |  | 707,263 | 753,876 | 779,641 | 659,899 | 700,148 | 758,680 | 636,153 | 596,282 | 731,457 | 615,671 | 679,162 | 593,350 |
|  | Cash | Total | 400,130 | 385,374 | 378, 145 | 356,017 | 326.881 | 341,724 | 322,305 | 312820 | 338,475 | 342,069 | 337,363 | 276,621 |
|  |  | U.S. Government Bonds | 146,615 | 153,006 | 148,26 | 135,886 | 135,968 | 124,139 | 117,382 | 124,201 | 129,277 | 128,129 | 136,953 | 114,071 |
|  |  | European Government Bonds | 37,045 | 42,022 | 37,923 | 33,51 | 35,708 | 36,880 | 31,466 | 27,522 | 41,506 | 37,767 | 34,307 | 27,518 |
|  |  | Mortages | 211.832 | 184,509 | 185,914 | 181,433 | 150,321 | 174,65 | 169,199 | 157,131 | 162,127 | 170,873 | 161,264 | 130,567 |
|  |  | Other Goverrment Bonds | 4,638 | 5,036 | 5,682 | 5,148 | 4.884 | 6,039 | 4,258 | 3,965 | 5,464 | 5,301 | 4,838 | 4,465 |
|  | Derivatives | Total | 307,133 | 368,50 | 401,46 | 303,882 | 377,68 | 416,957 | 313,848 | 283,462 | 392,983 | 273,602 | 341,799 | 316,729 |
|  |  | Swaps/Swaptions 1 Y | 163,918 | 212,371 | 249,633 | 195,425 | 214,878 | 250,960 | 184,895 | 169,404 | 257,934 | 209,585 | 208,602 | 186,804 |
|  |  | Swaps/Swaptions < 1 Y | 139,458 | 154,865 | 150,623 | 107,147 | 161,012 | 164,460 | 127,198 | 112,374 | 133,138 | 62,499 | 131,356 | 128,342 |
|  |  | Futures | 3,757 | 1,267 | 1,240 | 1,310 | 1,378 | 1,536 | 1,755 | 1,683 | 1,911 | 1.547 | 1.841 | 1.584 |
| Credit | Total |  | 23,42 | 27,563 | 46,467 | 26,805 | 27,325 | 25,926 | 21,444 | 19,843 | 47,346 | 26,944 | 21.875 | 16,094 |
|  | Cash | Total | 10,411 | 10,737 | 11,203 | 10,752 | 10,448 | 9,448 | 9,164 | 8.467 | 10,342 | 11,084 | 11,210 | 8,179 |
|  |  | U.S. High Grade - Fully Electronic | 2,974 | 3,270 | 3,022 | 3,248 | 3,465 | 3.066 | 3,101 | 3,030 | 3,764 | 3,834 | 3,999 | 3,094 |
|  |  | U.S. High Grade - Electronically Processed | 2,483 | 2.697 | 3,265 | 2.937 | 2.535 | 2.496 | 2,497 | 2.310 | 2.636 | 2.801 | 2.895 | 2,113 |
|  |  | U.S. High hield - Fully Electronic | 879 | 724 | 723 | 729 | 623 | 608 | 466 | 437 | 488 | 643 | 637 | 470 |
|  |  | U.S. High Yield - Electronically Processed | 463 | 382 | 386 | 356 | 364 | 339 | 404 | 305 | 352 | 359 | 321 | 188 |
|  |  | European Credit | 2,103 | 2,097 | 2,125 | 1,933 | 1,743 | 1,627 | 1,394 | 1,056 | 1,753 | 1,676 | 1,776 | 1,297 |
|  |  | Municipal Bonds | 226 | 251 | 268 | 384 | 415 | 383 | 333 | 345 | 385 | 463 | 476 | 437 |
|  |  | Chinese Bonds | 1,164 | 1,229 | 1,342 | 1,064 | 1,179 | 791 | 858 | 873 | 856 | 1,135 | 1,007 | 521 |
|  |  | Other Credit Bonds | 120 | 88 | 73 | 101 | 124 | 137 | 111 | 110 | 110 | 173 | 99 | 59 |
|  | Derivatives | Total | 13,61 | 16,826 | 35,263 | 16,053 | 16,876 | 16,478 | 12,281 | 11,376 | 37,04 | 15,860 | 10,665 | 7.915 |
|  |  | Swaps | 13,061 | 16,826 | 35,263 | 16,053 | 16,876 | 16,478 | 12,281 | 11,376 | 37,004 | 15,860 | 10,65 | 7,915 |
| Equities | Total |  | 22,019 | 22,059 | 20,460 | 14,882 | 17,319 | 17.822 | 15,619 | 14,322 | 17,618 | 16,878 | 17,184 | 17,668 |
|  | Cash | Total | 13,350 | 13,052 | 12,024 | 9,068 | 10,402 | 10,320 | 9,018 | 7.460 | 10,049 | 9,724 | 9,056 | 10,011 |
|  |  | U.S. ETFs | 9,613 | 9,401 | 8,270 | 6,381 | 7,649 | 7.535 | 6,051 | 5,298 | 7,633 | 7,662 | 6,712 | 7,569 |
|  |  | European ETFs | 3,737 | 3,651 | 3,754 | 2.687 | 2.753 | 2,784 | 2,967 | 2,162 | 2.416 | 2,062 | 2,344 | 2,442 |
|  | Derivatives | Total | 8,669 | 9,007 | 8,436 | 5,814 | 6,916 | 7,503 | 6,601 | 6,862 | 7,569 | 7,154 | 8,128 | 7,657 |
|  |  | Options/ Converitiles / Swaps | 3,320 | 3,328 | 3,447 | 2,758 | 3,295 | 3,743 | 4,405 | 4,632 | 4,096 | 3,911 | 5,065 | 4,161 |
|  |  | Equity Futures | 5,349 | 5,679 | 4,989 | 3,056 | 3,621 | 3,760 | 2,197 | 2,230 | 3,473 | 3,242 | 3.063 | 3,496 |
| MoneyMarkets | Total |  | 363,387 | 370,800 | 379,162 | 393,337 | 438,044 | 439,099 | 415,470 | 388,008 | 400.529 | 393,146 | 413,132 | 395,123 |
|  | Cash | Total | 366,387 | 370,800 | 379,162 | 393,337 | 438,044 | 439,099 | 415,470 | 388,008 | 400.529 | 393,146 | 413,132 | 395,123 |
|  |  | Repurchase Agreements (Repo) | 346,347 | 352,349 | 361,347 | 375,317 | 420,287 | 419,900 | 397,280 | 369,519 | 381,153 | 373,273 | 399,570 | 379,028 |
|  |  | Other Money Markets | 17,040 | 18,451 | 17.814 | 18,019 | 17,757 | 19,198 | 18,190 | 18,489 | 19,376 | 19,872 | 17,563 | 16,095 |

## TRADEWEB MARKETS - 2023 MONTHLY ADV (USD mm)

| AssetClass | Product |  | 2023 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | Juy | August | September | October | November | December |
| Total |  |  | 1,146,885 | 1,426,210 | 1,510,618 | 1,145,868 | 1,353,505 | 1,376,153 | 1,266,580 | 1,437,644 | 1,565,313 | 1,750,475 | 1,799,599 | 1,464,678 |
| Rates | Total |  | 674,690 | 959,018 | 974,32 | 664,074 | 825,369 | 821,217 | 712,156 | 891,702 | 949,217 | 1,159,082 | 1,201,307 | 888,967 |
|  | Cash | Total | 361,074 | 361,290 | 365,284 | 314,679 | 358,32 | 358,783 | 350,66 | 355,818 | 378,312 | 409,50 | 406,897 | 375,734 |
|  |  | U.S. Goverrment Bonds | 136,123 | 144,32 | 150,869 | 120,27 | 144,274 | 139,737 | 139,84 | 142,737 | 145,318 | 163,61 | 163,699 | 159,512 |
|  |  | European Government Bonds | 42,325 | 43,238 | 42,396 | 36,800 | 41.585 | 43,029 | 36,865 | 32,914 | 42,387 | 42,305 | 44,760 | 33,447 |
|  |  | Mortages | 177,12 | 167,694 | 166,430 | 152,961 | 166,56 | 169,912 | 167,35 | 174,387 | 181,575 | 193,837 | 188,27 | 175,080 |
|  |  | Other Goverrment Bonds | 5,514 | 6,027 | 5.589 | 4,690 | 5,617 | 6,105 | 6.593 | 5,780 | 9,033 | 9,746 | 10,221 | 7.694 |
|  | Derivatives | Total | 313,616 | 597,728 | 609,058 | 349,395 | 467,37 | 462,434 | 361,491 | 535,884 | 570,904 | 749,53 | 794,410 | 51,233 |
|  |  | Swaps/Wwaptions 1 Y | 192,341 | 304,173 | 355,017 | 217,323 | 315,850 | 280,438 | 253,111 | 381,825 | 322,853 | 459,598 | 577,137 | 334,848 |
|  |  | Swaps/Wwaptions < 1 Y | 119,562 | 292,155 | 252,436 | 130,877 | 199,900 | 180,588 | 106,936 | 151,651 | 235,013 | 286,044 | 213,720 | 175,380 |
|  |  | Futures | 1,713 | 1,401 | 1,605 | 1,195 | 1,587 | 1,458 | 1,443 | 2,408 | 3,039 | 3,891 | 3,553 | 3,004 |
| Credit | Total |  | 21,616 | 22,383 | 50,171 | 19,274 | 19,048 | 18,703 | 19,491 | 20,961 | 50,531 | 26,422 | 25,784 | 20,224 |
|  | Cash | Total | 12,035 | 11,861 | 10,723 | 10,015 | 10,790 | 11,036 | 11,981 | 13,052 | 13,936 | 14,365 | 15,954 | 12.500 |
|  |  | U.S. High Grade - Fully Electronic | 4,348 | 4,326 | 3,788 | 3,571 | 3,939 | 4,361 | 4,268 | 4,180 | 4,244 | 4,921 | 5,414 | 5,064 |
|  |  | U.S. High Grade - Electronically Processed | 3,342 | 2.978 | 3,089 | 2,634 | 2,792 | 2.648 | 2.522 | 2.113 | 2.415 | 2,328 | 2,923 | 2,236 |
|  |  | U.S. High Yield - Fully Electronic | 574 | 808 | 649 | 529 | 552 | 621 | 557 | 642 | 629 | 687 | 720 | 515 |
|  |  | U.S. High Yield - Electronically Processed | 385 | 365 | 368 | 333 | 344 | 275 | 225 | 205 | 223 | 335 | 332 | 231 |
|  |  | European Credit | 2,169 | 2,191 | 1,808 | 1,945 | 1,926 | 2.001 | 1,918 | 1,569 | 2,148 | 2,136 | 2,303 | 1,637 |
|  |  | Municipal Bonds | 318 | 337 | 285 | 287 | 321 | 314 | 298 | 345 | 357 | 472 | 475 | 414 |
|  |  | Chinese Bonds | 762 | 725 | 672 | 644 | 825 | 688 | 2.099 | 3,890 | 3,663 | 3,268 | 3,523 | 2,189 |
|  |  | Other Credit Bonds | 138 | 132 | 63 | 72 | 91 | 128 | 94 | 108 | 257 | 219 | 263 | 216 |
|  | Derivatives | Total | 9,581 | 10,522 | 39,448 | 9,259 | 8,258 | 7,667 | 7.510 | 7,909 | 36,595 | 12,057 | 9,830 | 7.524 |
|  |  | Swaps | 9,581 | 10,522 | 39,448 | 9,259 | 8,258 | 7.667 | 7,510 | 7,909 | 36,595 | 12,057 | 9,830 | 7.524 |
| Equities | Total |  | 18,80 | 18,599 | 21,481 | 16,788 | 18,750 | 22,302 | 20,365 | 17,494 | 19,121 | 19,804 | 20,504 | 30,852 |
|  | Cash | Total | 10,050 | 10,010 | 11,270 | 8,593 | 9,590 | 11,444 | 10,244 | 8.686 | 9,604 | 9.726 | 9,599 | 14.071 |
|  |  | u.S. EtFs | 7,110 | 7,248 | 8.486 | 6,234 | 7.229 | 9,069 | 8,105 | 6,782 | 7.412 | 7,166 | 7.017 | 10,918 |
|  |  | European ETTs | 2,939 | 2,762 | 2,783 | 2,359 | 2,361 | 2,375 | 2,139 | 1.904 | 2,192 | 2.559 | 2.582 | 3,153 |
|  | Derivatives | Total | 8,130 | 8.589 | 10,212 | 8,195 | 9,160 | 10,858 | 10,121 | 8.808 | 9,517 | 10,079 | 10,905 | 16,781 |
|  |  | Options / Convertibles / Swaps | ${ }_{5,594}$ | 5,915 | 6.568 | 5,764 | 6,197 | 7.014 | ${ }_{6,990}$ | 5,854 | 6,378 | 7,246 | 7.587 | 10,830 |
|  |  | Equity futures | 2.536 | 2.674 | 3,644 | 2,432 | 2,962 | 3,844 | 3,432 | 2,954 | 3,139 | 2.833 | 3,318 | 5,951 |
| MoneyMarkets | Total |  | 432,399 | 426,209 | 464,623 | 445,732 | 400,38 | 513,931 | 514,569 | 507,487 | 546,445 | 545,167 | 552,04 | 524,835 |
|  | Cash | Total | 432,399 | 426,209 | 464,623 | 445,732 | 490,388 | 513,931 | 514,569 | 507,487 | 546,45 | 545,167 | 552,04 | 524,835 |
|  |  | Repurchase Agreements (Repo) | 416,789 | 411,310 | 446,685 | 428,992 | 470,018 | 496,121 | 496,251 | 491,868 | 529,591 | 527,23 | 534,722 | 508,733 |
|  |  | Other Money Markets | 15,610 | 14,899 | 17,938 | 16,740 | 20,320 | 17,811 | 18,317 | 15,620 | 16,853 | 17,944 | 17,282 | 16,102 |

## TRADEWEB MARKETS - 2024 MONTHLY ADV (USD mm)

| AssetClass | Product |  | 2024 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | july | August | Seprember | October | November | December |
| Total |  |  | 2,011,899 | 1,869,89 | 1,811,177 |  |  |  |  |  |  |  |  |  |
| Rates | Total |  | 1,393,891 | 1,247,879 | 1,132,158 |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 469,642 | 458,144 | 457, 198 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. Goverrment Bonds | 190,065 | 207,816 | 191, 845 |  |  |  |  |  |  |  |  |  |
|  |  | European Goverrment Bonds | 50,136 | 50,980 | 49,663 |  |  |  |  |  |  |  |  |  |
|  |  | Mortgages | 219,481 | 188,131 | 203,69 |  |  |  |  |  |  |  |  |  |
|  |  | Other Government Bonds | 9,960 | 11,218 | 11,821 |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 924,249 | 789,735 | 67,961 |  |  |  |  |  |  |  |  |  |
|  |  | Swaps/Swaptions 1 1Y | 590,678 | 502,302 | 408,966 |  |  |  |  |  |  |  |  |  |
|  |  | Swaps/Swaptions < 1 Y | 328,362 | 276,005 | 258,388 |  |  |  |  |  |  |  |  |  |
|  |  | Futures | 5,208 | 11,427 | 7,607 |  |  |  |  |  |  |  |  |  |
| Creait |  |  | 27,62 | 25,024 | 53,119 |  |  |  |  |  |  |  |  |  |
|  |  | Total | 17,599 | 16,932 | 17,597 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Grade - Fully Electronic | 6,387 | 6,970 | 6,786 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Grade - Electronically Processed | 3,492 | 3,468 | 3,275 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Y ield - Fully flectronic | 774 | 753 | 717 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Yield - Electronically Processed | 348 | 308 | 315 |  |  |  |  |  |  |  |  |  |
|  |  | European Credit | 2.515 | 2,294 | 2,761 |  |  |  |  |  |  |  |  |  |
|  |  | Municipal Bonds | 322 | 322 | 325 |  |  |  |  |  |  |  |  |  |
|  |  | Chinese Bonds | 3,478 | 2,542 | 3,112 |  |  |  |  |  |  |  |  |  |
|  |  | Other Credit Bonds | 281 | 276 | 305 |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 9,664 | 8,092 | 35,522 |  |  |  |  |  |  |  |  |  |
|  |  | Swaps | 9,664 | 8,092 | 35,522 |  |  |  |  |  |  |  |  |  |
| Equities | Total |  | 26,058 | 26,994 | 29,398 |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 12,661 | 11,699 | 13,484 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. etfs | 10,083 | 8,744 | 10,471 |  |  |  |  |  |  |  |  |  |
|  |  | European ETFs | 2.577 | 2.955 | 3.013 |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 13,997 | 15,295 | 15,914 |  |  |  |  |  |  |  |  |  |
|  |  | Options / Convertibles / Swaps | 8,935 | 11,453 | 10,784 |  |  |  |  |  |  |  |  |  |
|  |  | Equity Futures | 4,462 | 3.842 | 5,130 |  |  |  |  |  |  |  |  |  |
| Money <br> Markets | Total |  | 564,688 | 569,192 | 596,502 |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 564,688 | 569,192 | 596,502 |  |  |  |  |  |  |  |  |  |
|  |  | Repurchase Agreements (Repo) | 546,20 | 550,309 | 576,268 |  |  |  |  |  |  |  |  |  |
|  |  | Other Money Markets | 18,448 | 18.882 | 20,234 |  |  |  |  |  |  |  |  |  |

## TRADEWEB MARKETS - 2017 MONTHLY VOLUMES (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Class } \end{aligned}$ | Product |  | 2017 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 7.595,189 | 6,984,104 | 9,139,391 | 6,801,442 | 8,034,772 | 8,921,942 | 7,346,624 | 8,216,954 | 9,334,315 | 8.849,953 | 9,59,440 | 8,78,953 |
| Rates | Total |  | 4,936,606 | 4,445,137 | 5,931,247 | 4,207,807 | 4,934,221 | 5,720,783 | 4,641,837 | 5,111,970 | 6,170,231 | 5,526,675 | 6,194,228 | 5,65,234 |
|  | Cash | Total | 3,997,798 | 3,506,524 | 4,220,085 | 3,413,077 | 3,821,915 | 4,132,503 | 3,607,445 | 4,137,106 | 4,073,167 | 4,475,929 | 4,440,737 | 3,897,393 |
|  |  | u.s. Government Bonds | 1,031,247 | 966,33 | 1,122,033 | 1,001,000 | 1,145,881 | 1,084,389 | 947,54 | 1,099,461 | 1,110,729 | 1,140,830 | 1,219,810 | 1,143,481 |
|  |  | European Government Bonds | 285,75 | 301,288 | 313,87 | 256,811 | 280,59 | 345,50 | 290,22 | 254,587 | 353,69 | 354,970 | 372,740 | 239,765 |
|  |  | Mortgages | 2,648,225 | 2,211,724 | 2,753,040 | 2,126,203 | 2,369,073 | 2,670,881 | 2,338,110 | 2,753,823 | 2,572,828 | 2,948,974 | 2,811,638 | 2,48,326 |
|  |  | Other Goverrment Bonds | 32,569 | 27,179 | 31,925 | 29,064 | 26,443 | 31,724 | 31,357 | 29,235 | 35,941 | 31,155 | 36,549 | 26,821 |
|  | Derivatives | Total | 938,807 | 938,613 | 1,711,161 | 794,730 | 1,112,307 | 1,588,281 | 1,034,392 | 974,864 | 2,097,064 | 1,050,746 | 1,753,491 | 1,757,841 |
|  |  | Swaps/Swaptions 1 Y | 816,130 | 898,481 | 1,883,457 | 755,224 | 1,046,249 | 1,401,808 | 968,27 | 954,433 | 1,458,455 | 980,356 | 1,175,015 | 1,693,363 |
|  |  | Swaps/Swaptions < 1 Y | 118,720 | 34,068 | 219,611 | 3,459 | 60,403 | 181,327 | 63,995 | 14,431 | 633,29 | 60,79 | 567,861 | 60,376 |
|  |  | Futures | 3,957 | 6,064 | 8,093 | 6,047 | 5,654 | 5,146 | 2,670 | 6,000 | 5,310 | 9,641 | 10,615 | 4,102 |
| Credit | ${ }_{\text {T }}$ Total |  | 100,719 | 105,616 | 271,936 | 120,360 | 114,314 | 135,060 | 110,518 | 135,32 | 330, 184 | 188,599 | 164,947 | 89,483 |
|  |  | Total | 43,298 | 47,162 | 54,959 | 42,038 | 53,360 | 55,40 | 55,065 | 60,044 | 62,106 | 74,216 | 75,584 | 52,59 |
|  |  | U.S. High Grade - Fully Electronic | 6,106 | 6,046 | 7,407 | 5,578 | 7,643 | 8,740 | ${ }_{6,802}$ | 7,718 | 7,100 | 9,256 | 8,746 | 7,116 |
|  |  | U.S. High Grade - Electronically Processed | 7.829 | 9,374 | 12,367 | 8.565 | 13,091 | 13,483 | 15,495 | 18,443 | 13,499 | 22,292 | 20,196 | 12,266 |
|  |  | U.S. High hield - Fully Electronic | 963 | 1,055 | 1,127 | 810 | 1,183 | 1,202 | 876 | 1,244 | 1,506 | 1,579 | 2,708 | 1,248 |
|  |  | U.S. High Yield - Electronically Processed | 2.954 | 3,067 | 2.914 | 1.858 | 2,156 | 2,162 | 1,897 | 1.876 | 1,652 | 2,255 | 3,188 | 1,368 |
|  |  | European Credit | 18,198 | 20,391 | 22,575 | 18,617 | 21,555 | 22,461 | 19,094 | 17,505 | 22,931 | 24,388 | 25,524 | 15,164 |
|  |  | Municipal Bonds | 6,007 | 5.840 | 6,667 | 5,463 | 6.417 | 6,119 | 5,535 | 6,189 | 4,922 | 5,571 | 5,793 | 6,379 |
|  |  | Chinese Bonds |  |  |  |  |  |  | 4,382 | 5,500 | 8,641 | 7,285 | 7,917 | 7,737 |
|  |  | Other Credit Bonds | 1,240 | 1,389 | 1,901 | 1,146 | 1,316 | 1,274 | 985 | 1,569 | 1,405 | 1,592 | 1,512 | 1,301 |
|  | Derivatives | Total | 57,421 | 58,453 | 216,977 | 78,323 | 60,953 | 79,620 | 55,453 | 75,07 | 268,079 | 111,384 | 89,363 | 36,904 |
|  |  | Swaps | 57,421 | 58,453 | 216,977 | 78,323 | 60,953 | 79,620 | 55,453 | 75,307 | 268,79 | 111,384 | 89,363 | 36,904 |
| Equities | $\frac{\text { Total }}{\text { Cash }}$ |  | 96,072 | 70,455 | 113,76 | 87.883 | 97,819 | 97,776 | 66,620 | 86,484 | 102,06 | 103,399 | 130,451 | 160,663 |
|  |  | Total | 56,189 | 43,386 | 66,214 | 51,009 | 54,799 | 56,320 | 44,459 | 50,881 | 60,818 | 61,780 | 70,111 | 86,931 |
|  |  | U.S. ETFs | 40,042 | 30,577 | 47,322 | 36,299 | 35,834 | 43,003 | 29,526 | 36,719 | 45,234 | 45,410 | 53,441 | 74,153 |
|  |  | European ETFs | 16,147 | 12,809 | 18,992 | 14,710 | 18,965 | 13,317 | 14,932 | 13,562 | 15,584 | 16,370 | 16,669 | 12,778 |
|  | Derivatives | Total | 39,883 | 27,069 | 47,562 | 36,874 | 43,021 | 41,456 | 22,161 | 36,203 | 41,245 | 41,619 | 60,340 | 73,732 |
|  |  | Options / Convertibles / Swaps | 9,339 | 5,101 | 11,513 | 11,116 | 17,811 | 8.989 | 5,666 | 11,327 | 9,783 | 11,466 | 19,419 | 13,842 |
|  |  | Equity futures | 30,544 | 21,967 | 36,049 | 25,758 | 25,209 | 32,467 | 16,495 | 24,876 | 31,462 | 30,153 | 40,921 | 59,890 |
| Money Markets | Total |  | 2,461,792 | 2,362,896 | 2,822,432 | 2,385,392 | 2.888,417 | 2,968,322 | 2,527,649 | 2,883,199 | 2,731,837 | 3,34,280 | 3,10,814 | 2,893,573 |
|  | Cash | Total | 2,461,792 | 2,362,896 | 2,822,432 | 2,385,392 | 2,888,417 | 2,968,322 | 2,527,649 | 2,88, 149 | 2,731,837 | 3,034,280 | 3,10,814 | 2,893,573 |
|  |  | Repurchase Agreements (Repo) | 2,052,268 | 1,963,913 | 2,330,431 | 1,990,362 | 2,428,890 | 2,520,847 | 2,135,661 | 2,447,578 | 2,304,671 | 2,592,714 | 2,696,422 | 2,483,027 |
|  |  | Other Money Markets | 409,524 | 398,93 | 492,01 | 395,030 | 459,527 | 447,45 | 391,988 | 435,511 | 427,166 | 441,566 | 405,32 | 410,547 |

## TRADEWEB MARKETS - 2018 MONTHLY VOLUMES (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2018 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 10,97,630 | 10,790,305 | 10,987,312 | 10,314,915 | 11,74,494 | 12,35,030 | 10,973,480 | 11,368,936 | 11,37,281 | 12,954,617 | 11,63,901 | 11,83, 687 |
| Rates | Total |  | 7,138,660 | 7,063,997 | 6,882,748 | 6,428,638 | 7,623,573 | 8,338,256 | 7,204,178 | 7,216,461 | 7,290,193 | 8,210,661 | 7,355,521 | 7.866,110 |
|  | Cash | Total | 4,914,218 | 4,718,939 | 4,562,763 | 4,526,668 | 5,037,937 | 4,631,946 | 4,391,851 | 4,304,277 | 4,499,919 | 5,665,577 | 4,657,143 | 4,400,596 |
|  |  | U.S. Government Bonds | 1,481,778 | 1,51,860 | 1,379,877 | 1,346,985 | 1,470,549 | 1,311,481 | 1,361,610 | 1,418,004 | 1,350,556 | 1,716,932 | 1,564,492 | 1,536,532 |
|  |  | European Goverrment Bonds | 422,852 | 394,04 | 433,54 | 394,452 | 498,006 | 433,510 | 392,625 | 355,46 | 405,330 | 520,941 | 453,407 | 334,382 |
|  |  | Mortages | 2,968,223 | 2,76,289 | 2,704,816 | 2,742,074 | 3,027,687 | 2,846,083 | 2,592,836 | 2,992,054 | 2,701,910 | 3,379,880 | 2,59, ,50 | 2,497,190 |
|  |  | Other Government Bonds | 41,365 | 39,695 | 44,565 | 43,156 | 41,695 | 40,872 | 44,79 | 38,757 | 42,123 | 47,825 | 41,594 | 32,492 |
|  | Derivatives | Total | 2,224,442 | 2,345,059 | 2,319,985 | 1,901,971 | 2,585,636 | 3,706,310 | 2,812,327 | 2,912, 81 | 2,790,274 | 2,545,083 | 2,698,377 | 3,465,515 |
|  |  | Swaps/Wwaptions 1 IY | 2,038,997 | 2,026,183 | 2,196,158 | 1,775,410 | 2,372,362 | 2,888,541 | 2,047,483 | 2,193,177 | 2,395,195 | 2,36, 293 | 2,224,092 | 3,261,682 |
|  |  | Swaps/Swaptions < 1 Y | 172,289 | 306,42 | 111,301 | 115,291 | 201,508 | 852,975 | 754,412 | 708,548 | 385,226 | 169,390 | 458,840 | 199,543 |
|  |  | Futures | 13,157 | 12,413 | 12,526 | 11,270 | 11,766 | 14,795 | 10,432 | 10,460 | 9,852 | 12,401 | 15,445 | 8,290 |
| Credit | Total |  | 212,086 | 288,789 | 426,159 | 244,191 | 275,950 | 227,273 | 189,588 | 184,095 | 387,034 | 324,098 | 243,64 | 184,743 |
|  | Cash | Total | 98,56 | 83,67 | 84,696 | 86,982 | 91,358 | 93,677 | 83,899 | 82,766 | 85,540 | 103,253 | 94,667 | 70,202 |
|  |  | U.S. High Grade - Fully lectronic | 13,153 | 9,756 | 10,924 | 11,148 | 11,922 | 10,037 | 9,261 | 11,933 | 14,404 | 17,934 | 14,603 | 13,046 |
|  |  | U.S. High Grade - Electronically Processed | 22,610 | 21,702 | 24,057 | 23,212 | 28,157 | 24,676 | 21,978 | 25,410 | 24,90 | 33,130 | 27,641 | 19,491 |
|  |  | U.S. High Yield - Fully Electronic | 1,910 | 2,334 | 1,499 | 1,493 | 1,562 | 1,810 | 1,289 | 1,518 | 1,891 | 2,832 | 1,987 | 1,243 |
|  |  | U.S. High Yield - Electronically Processed | 3,886 | 3,058 | 2.844 | 3,646 | 3,884 | 2,949 | 3,052 | 3,760 | 3,127 | 3,878 | 3,815 | 2,751 |
|  |  | European Credit | 35,804 | 34,831 | 30,250 | 30,065 | 28,727 | 27,14 | 24,673 | 21,295 | 25,39 | 29,942 | 29,91 | 17,067 |
|  |  | Municipal Bonds | 6,082 | 5,343 | 5,549 | 5,969 | 5,580 | 5,452 | 5,023 | 5.887 | 5,224 | 6,263 | 6,020 | 5.548 |
|  |  | Chinese Bonds | 12,483 | 5,062 | 7,936 | 9,872 | 10,410 | 20,23 | 17,225 | 11,872 | 9,474 | 7,938 | 10,714 | 10,361 |
|  |  | Other Credit Bonds | 2,128 | 1,681 | 1,637 | 1,578 | 1,516 | 1,347 | 1,398 | 1,091 | 1,243 | 1,336 | 797 | 694 |
|  | Derivatives | Total | 114,030 | 205,022 | 341,43 | 157,209 | 184,592 | 133,595 | 105,690 | 101,329 | 301,493 | 220,845 | 148,997 | 114,541 |
|  |  | Swaps | 114,030 | 205,022 | 341,43 | 157,209 | 184,592 | 133,595 | 105,690 | 101,329 | 301,493 | 220,845 | 148,997 | 114,541 |
| Equities | Total |  | 171,958 | 246,915 | 193,055 | 147,262 | 138,739 | 158,163 | 109,360 | 119,880 | 140,486 | 213,518 | 145,025 | 183,686 |
|  | Cash | Total | 98,679 | 139,871 | 108,80 | 87,018 | 83,74 | 85,102 | 59,085 | 64,732 | 77,321 | 134,151 | 85,426 | 110,702 |
|  |  | U.S. EtFs | 75,150 | 100,673 | 86,097 | 66,274 | 55,561 | 57,79 | 37,79 | 44,075 | 55,60 | 104,027 | 59,423 | 83,408 |
|  |  | European ETFs | 23,529 | 29,198 | 22,883 | 20,744 | 27,513 | 27,323 | 21,336 | 20,657 | 21,660 | 30,124 | 26,02 | 27,294 |
|  | Derivatives | Total | 73,279 | 107,044 | 84,174 | 60,243 | 55,65 | 73,661 | 50,27 | 55,148 | 63,165 | 79,367 | 59,599 | 72.985 |
|  |  | Options / Converitiles / Swaps | 20,71 | 16,729 | 9,935 | 13,502 | 19,883 | 24,988 | 28,71 | 30,885 | 22,241 | 19,252 | 25,164 | 17,760 |
|  |  | Equity futures | 52,508 | 90,315 | 74,240 | 46,742 | 35,78 | 48,073 | 22,204 | 24,263 | 40,923 | 60,114 | 34,435 | 55,22 |
| MoneyMarkets | Total |  | 3,394,926 | 3,190,604 | 3,48,531 | 3,944,824 | 3,706,231 | 3,628,338 | 3,470,354 | 3,488,500 | 3,553,569 | 4,206,340 | 3,886,691 | 3,596,147 |
|  | Cash | Total | 3,394,926 | 3,190,604 | 3,485,351 | 3,994,824 | 3,706,231 | 3,628,338 | 3,470,354 | 3,848,500 | 3,553,569 | 4,206,340 | 3,886,691 | 3,596,147 |
|  |  | Repurchase Agreements (Repo) | 2,925,489 | 2,715,584 | 2,982,574 | 3,066,306 | 3,237,368 | 3,121,043 | 3,488,515 | 3,412,392 | 3,159,195 | 3,730,032 | 3,505,438 | 3,214,530 |
|  |  | Other Money Markets | 469,437 | 475,20 | 502,77 | 428,518 | 468,863 | 507,295 | 421,840 | 436,107 | 394,373 | 476,308 | 381,252 | 381,618 |

## TRADEWEB MARKETS - 2019 MONTHLY VOLUMES (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 13,196,407 | 11,556,165 | 14,866,382 | 13,875,664 | 16,23,349 | 17,150,768 | 16,695,305 | 18,238,454 | 17,66,338 | 15,70,669 | 13,532,677 | 13,562,243 |
| Rates | Total |  | 8,688,181 | 7,604,073 | 10,065,090 | 9,196,757 | 10,78,366 | 12,04, 308 | 11,298,292 | 12,765,575 | 12,24,326 | 10,69,390 | 8,967,79 | 8,526,094 |
|  | Cash | Total | 5,661,513 | 5,021,471 | 6,136,283 | 5,675,975 | 5,767,580 | 6,062,979 | 5,639,320 | 6,290,555 | 6,330,665 | 6,176,020 | 5,436,824 | 5,026,452 |
|  |  | U.S. Government Bonds | 1,672,79 | 1,573,331 | 1,76,996 | 1,601,214 | 1,759,805 | 1,720,202 | 1,608,831 | 1,880,522 | 1,766,569 | 1,714,784 | 1,544,892 | 1,514,783 |
|  |  | European Goverrment Bonds | 482,549 | 477,945 | 520,611 | 443,109 | 463,585 | 511,289 | 549,131 | 461,594 | 531,812 | 468,056 | 451,850 | 337,289 |
|  |  | Mortages | 3,45,3,45 | 2,923,821 | 3,765,74 | 3,499,867 | 3,468,520 | 3,760,932 | 3,407,373 | 3,869,394 | 3,953,672 | 3,917,202 | 3,382,027 | 3,113,677 |
|  |  | Other Government Bonds | 52,839 | 76,374 | 86,229 | 81,785 | 75,69 | 70,57 | 73,984 | 79,046 | 78,612 | 75,977 | 58,055 | 60,703 |
|  | Derivatives | Total | 3,026,668 | 2,582,602 | 3,928,807 | 3,520,782 | 5,012,786 | 5,978,329 | 5,658,972 | 6,475,020 | 5,912,661 | 4,521,370 | 3,530,924 | 3,499,642 |
|  |  | Swaps/Wwaptions 1 IY | 2,724,665 | 2,480,109 | 3,590,224 | 2,107,724 | 2,569,520 | 3,693,563 | 3,167,679 | 3,016,155 | 3,428,649 | 3,241,152 | 2,996,892 | 2,701,544 |
|  |  | Swaps/Swaptions < 1 Y | 288,526 | 95,683 | 328,233 | 1,403,887 | 2,422,037 | 2,271,973 | 2,482,065 | 3,443,518 | 2,471,346 | 1,269,807 | 721,26 | 781,665 |
|  |  | Futures | 13,478 | 6.810 | 10,350 | 9,172 | 21,29 | 12,792 | 9,228 | 15,346 | 12,666 | 10,411 | 12,807 | 16,432 |
| Credit | Total |  | 274,026 | 224,35 | 511,658 | 225,489 | 251,500 | 289,809 | 228,221 | 322,123 | 566,786 | 360,901 | 260,76 | 200,330 |
|  | Cash | Total | 120,032 | 110, 148 | 113,546 | 116,198 | 113,080 | 120,200 | 119,657 | 110,734 | 122,382 | 138,044 | 133,018 | 102,765 |
|  |  | U.S. High Grade - Fully Electronic | 18,069 | 16,478 | 17,731 | 22,153 | 19,053 | 25,34 | 20,635 | 19,295 | 23,86 | 30,367 | 28,762 | 29,614 |
|  |  | U.S. High Grade - Electronically Processed | 39,392 | 39,039 | 40,845 | 39,770 | 35,704 | 34,006 | 32,175 | 27,772 | 35,59 | 39,431 | 38,74 | 33,54 |
|  |  | U.S. High Yield - Fully Electronic | 2,920 | 2,278 | 2,017 | 2,705 | 2,884 | 4,355 | 3,626 | 2.838 | 3,866 | 5,021 | 4,353 | 4,099 |
|  |  | U.S. High Yield - Electronically Processed | 5,289 | 4.472 | 3,115 | 2,990 | 3,119 | 2,92 | 3,973 | 3,287 | 3,483 | 2,867 | 2,802 | 3,010 |
|  |  | European Credit | 28,93 | 26,992 | 28,318 | 25,996 | 25,802 | 28,072 | 30,23 | 20,885 | 28,261 | 31,415 | 31,866 | 19,825 |
|  |  | Municipal Bonds | 5,780 | 5,538 | 5,709 | 5,335 | 5,370 | 5,009 | 4,801 | 5,092 | 4,541 | 4,769 | 4,228 | 4,429 |
|  |  | Chinese Bonds | 19,481 | 14,351 | 14,461 | 16,080 | 20,216 | 20,099 | 22,994 | 30,372 | 21,835 | 22,70 | 21,814 | 7,229 |
|  |  | Other Credit Bonds | 1,009 | 1,200 | 1,351 | 1,268 | 1,332 | 1,123 | 1,190 | 1,193 | 1,353 | 1,444 | 1,119 | 975 |
|  | Derivatives | Total | 153,994 | 114,206 | 398,12 | 109,290 | 138,420 | 169,609 | 108,564 | 211,389 | 444,405 | 222,817 | 127,747 | 103,565 |
|  |  | Swaps | 153,994 | 114,206 | 398,12 | 109,290 | 138,420 | 169,609 | 108,564 | 211,389 | 444,405 | 222,817 | 127,747 | 103,565 |
| Equities | Total |  | 171,412 | 137,480 | 171,044 | 147,488 | 138,878 | 159,159 | 119,393 | 169,199 | 187,538 | 168.888 | 179,690 | 2226,645 |
|  | Cash | Total | 104,402 | 81,922 | 89,883 | ${ }^{81,887}$ | 85,391 | 90,524 | 72,916 | 110,969 | 107,525 | 84,978 | 85,89 | 120,769 |
|  |  | U.S. EtFs | 72,276 | 48,226 | 61,243 | 52,431 | 51,799 | 58,750 | 38,87 | 70,037 | 67,968 | 52,330 | 50,872 | 86,849 |
|  |  | European ETFs | 32,126 | 33,696 | 28,440 | 29,456 | 33,592 | 31,74 | 34,629 | 40,932 | 3,557 | 32,348 | 34,417 | 33,919 |
|  | Derivatives | Total | 67,09 | 55,558 | 81,162 | 65,62 | 53,486 | 68,635 | 46,477 | 58,230 | 80,014 | 83,910 | 94,401 | 105,877 |
|  |  | Options / Converitiles / Swaps | 26,078 | 32,025 | 32,092 | 35,886 | 25,72 | 25,54 | 30,946 | 22,056 | 30,722 | 54,367 | ${ }^{64,876}$ | 48,950 |
|  |  | Equity futures | 40,932 | 23,534 | 49,070 | 29,676 | 27,724 | 43,041 | 15,531 | 36,174 | 49,291 | 29,544 | 29,525 | 56,927 |
| MoneyMarkets | Total |  | 4,062,789 | 3,590,259 | 4,118,589 | 4,305,970 | 5,059,006 | 4,660,492 | 5,049,400 | 4,981,557 | 4,670,688 | 4,483,490 | 4,124,473 | 4,603,174 |
|  | Cash | Total | 4,062,789 | 3,590,259 | 4,118,599 | 4,305,970 | 5,059,606 | 4,660,422 | 5,049,400 | 4,981,577 | 4,670,688 | 4,483,490 | 4,124,473 | 4,603,174 |
|  |  | Repurchase Agreements (Repo) | 3,650,533 | 3,243,735 | 3,731,831 | 3,926,709 | 4,653,313 | 4,263,024 | 4,673,730 | 4,583,591 | 4,301,035 | 4,074,334 | 3,776,090 | 4,233,580 |
|  |  | Other Money Markets | 412,256 | 346,524 | 386,78 | 379,262 | 406,293 | 397,467 | 375,670 | 397,96 | 369,653 | 409, 156 | 348,383 | 369,593 |

## TRADEWEB MARKETS - 2020 MONTHLY VOLUMES (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2020 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 16,999,706 | 16,963,583 | 22,027,25 | 15,860,208 | 15,85,401 | 17,17,833 | 16,093,881 | 15,674,763 | 18,49,162 | 19,23,648 | 18,72,388 | 18,177,460 |
| Rates | Total |  | 11,073,095 | 11,094,019 | 14,70,947 | 10,27,221 | 10,48,397 | 11,037,402 | 9,880,659 | 9,857,987 | 11,84,947 | 11,46,605 | 11,378,194 | 10,762,714 |
|  | Cash | Total | 6,871,490 | 6,674,918 | 7,683,251 | 6,165,884 | 6,017,091 | 6,534,849 | 6,661,520 | 6,592,993 | 6,697,089 | 6,969,236 | 6,85, 688 | 6,559,106 |
|  |  | U.S. Government Bonds | 1,842,482 | 1,835,593 | 2,120,053 | 1,868,052 | 1,835,612 | 2,108,735 | 1,800,805 | 1,834,885 | 1,889,512 | 1,761,608 | 1,902,637 | 2,023,225 |
|  |  | European Goverrment Bonds | 588,626 | 516,78 | 694,292 | 546,886 | 514,906 | 618,708 | 543,592 | 465,87 | 599,500 | 601,191 | 566,412 | 428,696 |
|  |  | Mortages | 4,355,198 | 4,238,642 | 4,732,870 | 3,651,451 | 3,578,003 | 3,704,258 | 4,197,869 | 4,212,736 | 4,132,470 | 4,514,551 | 4,302,498 | 4,034,962 |
|  |  | Other Government Bonds | 85,184 | 83,975 | 136,036 | 99,494 | 88,50 | 103,147 | 79,254 | 79,245 | 79,608 | 91,885 | 82,140 | 72,23 |
|  | Derivatives | Total | 4,201,605 | 4,419,101 | 7,017,696 | 4,111,338 | 4,464,306 | 4,502,553 | 3,219,139 | 3,265,294 | 5,127,859 | 4,992,369 | 4,524,506 | 4,203,608 |
|  |  | Swaps/Wwaptions 1 IY | 3,025,565 | 2,726,532 | 4,261,282 | 2,975,429 | 2,579,583 | 3,256,963 | 1,972,373 | 2,562,392 | 3,384,520 | 2,587,435 | 3,228,524 | 3,185,674 |
|  |  | Swaps/Swaptions < 1 Y | 1,162,263 | 1,678,091 | 2,746,805 | 1,127,604 | 1,876,628 | 1,237,120 | 1,240,524 | 693,847 | 1,733,307 | 1,892,927 | 1,882,462 | 1,010,380 |
|  |  | Futures | 13,776 | 14,479 | 9,610 | 8,305 | 8,096 | 8,469 | 6,241 | 9,054 | 10,032 | 12,007 | 13,519 | 7.553 |
| Credit | Total |  | 332,885 | 542,165 | 1,195,737 | 416,213 | 291,872 | 412,232 | 295,798 | 243,55 | 729,705 | 426,599 | 421,131 | 271,809 |
|  | Cash | Total | 148,385 | 141,797 | 159,614 | 156,095 | 155,549 | 175,072 | 158,623 | 136,901 | 159,972 | 172,78 | 183,34 | 160,401 |
|  |  | U.S. High Grade - Fully lectronic | 34,850 | 33,130 | 22,819 | 29,617 | 35,591 | 40,424 | 33,430 | 31,995 | 37,805 | 47,510 | 47,960 | 43,008 |
|  |  | U.S. High Grade - Electronically Processed | 48,37 | 42,580 | 60,456 | 63,855 | 61,094 | ${ }^{62,576}$ | 51,209 | 45,245 | 44,885 | 50,501 | 45,943 | 37,414 |
|  |  | U.S. High Yield - Fully Electronic | 4,804 | 5.816 | 3,580 | 2.804 | 3,232 | 4,755 | 4,270 | 3,772 | 4,898 | 6,865 | 7,145 | 8,441 |
|  |  | U.S. High Yield - Electronically Processed | 4,315 | 4,505 | 7,114 | 8,414 | 6,392 | 5,050 | 4,253 | 3,408 | 5,377 | 4,832 | 5,627 | 4.544 |
|  |  | European Credit | 37,51 | 35,258 | 33,325 | 29,60 | 23,723 | 31,615 | 27,331 | 20,554 | 36,145 | 35,02 | 38,87 | 25,54 |
|  |  | Municipal Bonds | 4,764 | 4,480 | 8,658 | 6,098 | 4,775 | 4,693 | 4,446 | 4,032 | 4,373 | 4,406 | 3,553 | 4,390 |
|  |  | Chinese Bonds | 12,313 | 14,822 | 22,581 | 14,923 | 19,731 | 24,954 | 32,416 | 27,032 | 24,844 | 21,566 | 34,418 | 34,073 |
|  |  | Other Creait Bonds | 1,501 | 1,206 | 1,081 | 1,123 | 1,011 | 1,005 | 1,269 | 1,062 | 1,644 | 2.097 | 1,502 | 2.096 |
|  | Derivatives | Total | 184,500 | 400,36 | 1,036,123 | 260,118 | 136,324 | 237,160 | 137,174 | 106,654 | 569,733 | 253,811 | 237,797 | 111,408 |
|  |  | Swaps | 184,500 | 400,368 | 1,036,123 | 260,118 | 136,324 | 237,160 | 137,174 | 106,64 | 569,733 | 253,811 | 237,797 | 111,408 |
| Equities | Total |  | 227,634 | 370,223 | 513,175 | 210,762 | 171,317 | 245,118 | 178,540 | 146,060 | 266,350 | 255,648 | 280,198 | 257,343 |
|  | Cash | Total | 111,889 | 158,364 | 307,087 | 136,939 | 107,867 | 152,044 | 112,140 | 89,869 | 149,459 | 141,694 | 152,95 | 142,559 |
|  |  | U.S. EtFs | 75,24 | 110,04 | 219,430 | 99,736 | 75,36 | 106,863 | 71,990 | 61,320 | 113,157 | 102,934 | 95,414 | 99,618 |
|  |  | European ETFs | 36,665 | 48,361 | 87,67 | 37,203 | 32,330 | 45,180 | 40,50 | 28,549 | 36,301 | 38,760 | 57,181 | 42,941 |
|  | Derivatives | Total | 115,745 | 212,59 | 200,088 | 73,824 | 63,450 | 93,74 | ${ }^{66,400}$ | 56,191 | 110,892 | 113,955 | 127,603 | 114,784 |
|  |  | Options / Converitiles / Swaps | 74,209 | 136,75 | 37,62 | 9,615 | 18,841 | 24,485 | 24,016 | 19,515 | 33,938 | 50,572 | 68,578 | 49,729 |
|  |  | Equity futures | 4, 1,35 | 75,804 | 168,407 | 64,209 | 44,609 | 68,599 | 42,384 | 36,676 | 76,953 | 6,382 | 59,025 | 65,055 |
| $\begin{aligned} & \text { Money } \\ & \text { Markets } \end{aligned}$ | Total |  | 5,346,092 | 4,956,475 | 5,617,393 | 4,956,012 | 4,870,815 | 5,483,082 | 5,738,885 | 5,427,161 | 5,681,159 | 7,088,806 | 6,400,866 | 6,885,595 |
|  | Cash | Total | 5,346,092 | 4,956,475 | 5,617,393 | 4,956,012 | 4,870,815 | 5,483,082 | 5,738,885 | 5,427,161 | 5,681,159 | 7,088,806 | 6,640,866 | 6,885,595 |
|  |  | Repurchase Agreements (Repo) | 4,934,360 | 4,633,571 | 5,172,609 | 4,635,507 | 4,626,528 | 5,488,242 | 5,15,288 | 5,161,028 | 5,430,235 | 6,466,049 | 6,430,177 | 6,650,965 |
|  |  | Other Money Markets | 411,731 | 32,904 | 444,784 | 320,505 | 244,286 | 234,839 | 223,596 | 266,133 | 250,924 | 242,756 | 210,689 | 234,629 |

## TRADEWEB MARKETS - 2021 MONTHLY VOLUMES (USD mm)

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2021 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 19,94, 151 | 20,395,506 | 24,736,896 | 19,301,344 | 19,59,996 | 23,135,521 | 20,60,953 | 19,809,571 | 21,70,807 | 25,50,616 | 24,161,441 | 19,98,419 |
| Rates | $\xrightarrow{\text { Total }}$ |  | 12,74,807 | 12,867,453 | 15,358,375 | 11,245,902 | 11,26,344 | 14,04,904 | 12,27,893 | 11,959,245 | 13,36,910 | 17,98,037 | 15,63,213 | 12,08,9,90 |
|  |  | Total | 7,619,003 | 7,445,912 | 8,104,599 | 6,55,612 | 6,522,023 | 7,270,758 | 7,148,196 | 7,033,668 | 7,428,861 | 7,855,794 | 7,303,768 | 6,329,757 |
|  |  | U.S. Government Bonds | 2,169,620 | 2,240,502 | 2,627,735 | 2,113,310 | 2,100,879 | 2,627,652 | 2,440,451 | 2,713,630 | 2,822,77 | 2,980,375 | 2,889,249 | 2,501,516 |
|  |  | European Goverrment Bonds | 605,936 | 673,016 | 712,679 | 567,650 | 618,047 | 706,241 | 649,917 | 493,310 | 757,568 | 761,279 | 762,236 | 460,452 |
|  |  | Mortages | 4,732,592 | 4,431,312 | 4,64, 562 | 3,778,806 | 3,729,120 | 3,488,396 | 3,979,709 | 3,754,981 | 3,762,044 | 4,012,598 | 3,665,965 | 3,302,695 |
|  |  | Other Government Bonds | 110,856 | 101,082 | 119,623 | 93,446 | 73,978 | 88,499 | 78,119 | 71,747 | 86,471 | 101,543 | 86,317 | 65,093 |
|  | Derivatives | Total | 5,095,804 | 5,421,541 | 7,25,777 | 4,992,290 | 4,738,321 | 6,779,146 | 5,129,696 | 4,925,577 | 5,937,049 | 10,052,242 | 8,331,445 | 5,75,213 |
|  |  | Swaps/Wwaptions 1 IY | 2,829,663 | 3,325,053 | 5,107,690 | 2,90,, 38 | 3,012,413 | 4,522,622 | 3,235,123 | 2,774,067 | 4,030,121 | 4,166,203 | 4,901,812 | 3,571,74 |
|  |  | Swaps/Swaptions < 1 Y | 2,254,065 | 2,077,378 | 2,125,611 | 1,770,493 | 1,709,966 | 2,233,177 | 1,875,850 | 2,137,002 | 1,890,443 | 5,865,583 | 3,412,070 | 2,167,719 |
|  |  | Futures | 12,077 | 19,110 | 20,476 | 14,559 | 15,942 | 23,377 | 18,724 | 14,108 | 16,485 | 20,457 | 17,563 | 15,749 |
| Credit | Total |  | 394,100 | 367,147 | 904,86 | 408,145 | 348,460 | 383,745 | 346,899 | 288,46 | 800,280 | 437,694 | 407,870 | 327,638 |
|  | Cash | Total | 209,529 | 186,02 | 237,190 | 201,35 | 179,201 | 219,212 | 186,907 | 160,102 | 196,726 | 203,616 | 201,566 | 145,016 |
|  |  | U.S. High Grade - Fully Electronic | 54,121 | 50,601 | 69,970 | 60,691 | 52,74 | 69,434 | 52,990 | 55,123 | 58,723 | 62,155 | 64,754 | 48,715 |
|  |  | U.S. High Grade - Electronically Processed | 57,288 | 50,560 | 57,921 | 52,879 | 44,90 | 45,101 | 36,462 | 31,301 | 45,852 | 47,136 | 44,791 | 33,126 |
|  |  | U.S. High Yield - Fully Electronic | 6,965 | 9,264 | 11,700 | 10,303 | 8,716 | 11,488 | 11,557 | 11,043 | 11,999 | 15,080 | 14,399 | 11,690 |
|  |  | U.S. High Yield - Electronically Processed | 6,758 | 7,388 | 7,911 | 9,074 | 6,735 | 7,165 | 6,479 | 5,786 | 6,664 | 7,147 | 7,470 | 4,795 |
|  |  | European Credit | 40,415 | 41,711 | 48,548 | 38,233 | 34,806 | 45,416 | 42,740 | 25,381 | 44,533 | 38,45 | 40,532 | 23,153 |
|  |  | Municipal Bonds | 3,877 | 3,954 | 4,634 | 4,134 | 3,824 | 4,409 | 3,622 | 3,785 | 3,649 | 3,747 | 3,645 | 3,982 |
|  |  | Chinese Bonds | 37,501 | 20,996 | 33,660 | 23,766 | 25,659 | 32,972 | 30,988 | 25,515 | 22,390 | 27,54 | 23,614 | 18,319 |
|  |  | Other Credit Bonds | 2,603 | 2,157 | 2,547 | 2,294 | 1,923 | 3,227 | 2,370 | 2,168 | 2,996 | 2,201 | 2,352 | 1,237 |
|  | Derivatives | Total | 184,571 | 181,055 | 667,96 | 206,792 | 169,259 | 164,533 | 159,992 | 128,34 | 607,54 | 234,078 | 206,314 | 182,622 |
|  |  | Swaps | 184,571 | 181,055 | 667,96 | 206,792 | 169,259 | 164,533 | 159,992 | 128,34 | 607,54 | 234,078 | 206,314 | 182,622 |
| Equities | Total |  | 285,949 | 276,25 | 432,78 | 335,237 | 336,54 | 335,739 | 340,532 | 267,37 | 328,892 | 27,945 | 336,192 | 412,944 |
|  | Cash | Total | 168,718 | 155,561 | 232,02 | 181,178 | 160,287 | 175,266 | 185,376 | 131811 | 170,321 | 149,959 | 171,144 | 227,950 |
|  |  | U.S. EtFs | 107,092 | 99,214 | 162,516 | 134,368 | 114,615 | 121,759 | 129,943 | 96,936 | 120,071 | 103,544 | 116,097 | 173,039 |
|  |  | European ETFs | 61,626 | 56,347 | 69,486 | 46,810 | 45,671 | 53,507 | 55,433 | 34,875 | 50,250 | 46,414 | 55,048 | 54,911 |
|  | Derivatives | Total | 117,231 | 121,364 | 200,795 | 154,060 | 176,267 | 160,473 | 155,155 | 135,516 | 158,571 | 123,987 | 165,048 | 184,994 |
|  |  | Options / Converitiles / Swaps | 55,67 | 55,448 | 78,518 | 59,274 | 98,619 | 83,154 | 79,556 | 74,988 | 74,812 | 62,399 | 91,907 | 66,808 |
|  |  | Equity futures | 62,165 | 65,916 | 122,278 | 94,785 | 77,648 | 77,319 | 75,599 | 60,528 | 83,759 | 61,588 | 73,141 | 118,186 |
| $\begin{aligned} & \text { Money } \\ & \text { Markets } \end{aligned}$ | Total |  | 6,499,295 | 6,883,980 | 8,040,837 | 7,312,059 | 7,688,638 | 8,366,134 | 7,641,629 | 7,294,552 | 7,201,725 | 6,950,940 | 7,782,165 | 7,155,868 |
|  | Cash | Total | 6,549,295 | 6,883,980 | 8,040,837 | 7,312,059 | 7,648,638 | 8,366,134 | 7,641,629 | 7,294,52 | 7,201,725 | 6,950,940 | 7,782,165 | 7,15,868 |
|  |  | Repurchase Agreements (Repo) | 6,313,133 | 6,612,096 | 7,693,463 | 7,009,916 | 7,386,323 | 8,060,151 | 7,366,927 | 6,965,113 | 6,39, 108 | 6,655,973 | 7,500,058 | 6,865,383 |
|  |  | Other Money Markets | 236,162 | 271,884 | 347,34 | 302,144 | 262,315 | 305,982 | 314,702 | 329,40 | 262,617 | 294,968 | 282,108 | 290,485 |

## TRADEWEB MARKETS - 2022 MONTHLY VOLUMES (USD mm)

| AssetClass | Product |  | 2022 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 22,314,207 | 22,597,428 | 28,191,769 | 21,68,943 | 24,900,881 | 26,09,795 | 22,08,349 | 23,410,838 | 25,17,377 | 21,33,377 | 23,173,116 | 21,24,065 |
| Rates | $\begin{aligned} & \text { Total } \\ & \hline \text { Cash } \end{aligned}$ |  | 14,137,849 | 14,522,662 | 17,931,751 | 13,24,330 | 14,768,074 | 15,95,916 | 12,89,326 | 13,70,917 | 15,342,208 | 12,501,480 | 13,952,474 | 12,298,275 |
|  |  | Total | 8,000,574 | 7,362,600 | 8,697,334 | 7,085,529 | 6,860,018 | 7,180,841 | 6,478,530 | 7,191,825 | 7,103,707 | 6,880,350 | 6,819,047 | 5,781,715 |
|  |  | u.5. Government Bonds | 2,932,293 | 2,922,313 | 3,418,391 | 2,717,715 | 2,855,331 | 2,006,923 | 2,347,631 | 2,85,628 | 2,714,823 | 2,562,575 | 2,739,061 | 2,395,493 |
|  |  | European Government Bonds | 740,905 | 840,437 | 872,23 | 637,465 | 749,864 | 774,480 | 660,794 | 633,014 | 873,727 | 793,098 | 754,747 | 550,350 |
|  |  | Mortagas | 4,236,640 | 3,505,678 | 4,276,024 | 3,628,655 | 3,156,741 | 3,667,974 | 3,383,986 | 3,614,016 | 3,404,676 | 3,417,456 | 3,25,289 | 2,741,914 |
|  |  | Other Government Bonds | 90,736 | 94,172 | 130,697 | 101,694 | 98,082 | 131,464 | 86,118 | 88,167 | 110,42 | 107,220 | 99,950 | 93,957 |
|  | Derivatives | Total | 6,137,275 | 7,160,062 | 9,234,417 | 5,938,801 | 7,908,056 | 8,770,075 | 6,410,796 | 6,509,092 | 8,238,500 | 5,621,130 | 7,133,427 | 6,516,560 |
|  |  | Swaps/Wwaptionsz 1 Y | 3,273,066 | 4,129,344 | 5,741,557 | 3,820,685 | 4,497,970 | 5,883,837 | 3,777,577 | 3,885,977 | 5,402,75 | 4,303,407 | 4,35,776 | 3,445,798 |
|  |  | Swaps/Swaptions < 1 Y | 2,889,069 | 3,006,642 | 3,46, 330 | 2,091,913 | 3,381,152 | 3,45,,981 | 2,598,140 | 2,584,399 | 2,99,604 | 1,286,74 | 2,740,824 | 2,637,506 |
|  |  | Futures | 75,141 | 24,077 | 28,531 | 26,203 | 28,934 | 32,25 | 35,09 | 38,716 | 40,121 | 30,977 | 36,828 | 33,26 |
| Credit | Total |  | 466,232 | 532,158 | 1,068,731 | 524,629 | 570,201 | 544,479 | 436,973 | 456,373 | 994,134 | 542,417 | 450,532 | 333,815 |
|  | Cash | Total | 207,050 | 202,469 | 257,674 | 211,979 | 21,882 | 198,415 | 185,607 | 194,738 | 217,175 | 218,957 | 229,898 | 170,951 |
|  |  | U.S. High Grade - Fully lectronic | 59,489 | 62,136 | 69,511 | 64,954 | 72,79 | 64,394 | 62,025 | 69,691 | 79,040 | 76,680 | 79,988 | 64,979 |
|  |  | U.S. High Grade - Electronically Processed | 49,651 | 51,239 | 75,086 | 58,742 | 53,238 | 52,417 | 49,938 | 53,122 | 55,352 | 56,017 | 57,905 | 44,372 |
|  |  | U.S. High Yield - Fully Electronic | 17,570 | 13,554 | 16,624 | 14,582 | 13,089 | 12,762 | 9,318 | 10,062 | 10,442 | 12,852 | 12,743 | 9,868 |
|  |  | U.S. High Y Yeld - Electronically Processed | 9,251 | 7,252 | 8.889 | 7,128 | 7.652 | 7,129 | 8.072 | 7.024 | 7,385 | 7,185 | 6,421 | 3,938 |
|  |  | European Credit | 42,59 | 41,934 | 48.864 | 36,718 | 36,602 | 34,176 | 29,72 | 24,293 | 36,806 | 35,197 | 39,061 | 25,94 |
|  |  | Municipal Bonds | 4,515 | 4,762 | 6,172 | 7.684 | 8.716 | 8,045 | 6,669 | 7,926 | 8.078 | 9,258 | 9,525 | 9,179 |
|  |  | Chinese Bonds | 22,17 | 19,665 | 30,860 | 20,218 | 21,214 | 16,609 | 18,013 | 20,088 | 17,967 | 18,163 | 22,152 | 11,466 |
|  |  | Other Credit Bonds | 2,397 | 1,728 | 1,669 | 1,954 | 2.612 | 2.884 | 2,299 | 2.532 | 2.304 | 3,605 | 2,103 | 1,206 |
|  | Derivatives | Total | 261,183 | 329,69 | 811,057 | 312,650 | 354,319 | 346,064 | 251,366 | 261,635 | 776,959 | 323,459 | 220,634 | 162,864 |
|  |  | Swaps | 261,183 | 329,689 | 811,057 | 312,650 | 354,319 | 346,064 | 251,366 | 261,635 | 776,959 | 323,459 | 220,634 | 162,864 |
| Equities | Total |  | 440,389 | 423,413 | 470,51 | 294,430 | 363,990 | 374,270 | 315,773 | 329,401 | 369,968 | 354,431 | 363,673 | 367,542 |
|  | Cash | Total | 267,001 | 251,633 | 276,50 | 178,679 | 218,450 | 216,713 | 183,326 | 171,584 | 211,025 | 204,207 | 192,526 | 207,783 |
|  |  | u.S. ETFs | 192,254 | 178,618 | 190,218 | 127,630 | 160,628 | 158,241 | 121,018 | 121,854 | 160,290 | 160,901 | 140,956 | 158,942 |
|  |  | European ETFs | 74,747 | 73,015 | 86,332 | 51,050 | 57,822 | 58,42 | 62,308 | 49,729 | 50,735 | 43,305 | 51,571 | 48,842 |
|  | Derivatives | Total | 173,388 | 171,80 | 194,220 | 115,751 | 145,20 | 157,577 | 132,447 | 157,817 | 158,944 | 150,225 | 171,146 | 159,759 |
|  |  | Options / Converitiles / Swaps | 66,401 | 63,709 | 79,881 | 54,70 | 69,198 | 78,601 | 88,41 | 106,536 | 86,010 | 82,137 | 106,765 | 86.825 |
|  |  | Equity Futures | 106,987 | 108,071 | 114,740 | 60,971 | 76,042 | 78,956 | 43,987 | 51,282 | 72,934 | 68,088 | 64,382 | 72,934 |
| MoneyMarkets | Total |  | 7,267,737 | 7,19,194 | 8,720,716 | 7,785,544 | 9,198,916 | 9,221,130 | 8,386,278 | 8,924,146 | 8,411,068 | 7,935,049 | 8,406,437 | 8,244,433 |
|  | Cash | Total | 7,267,737 | 7,19, 194 | 8,720,716 | 7,785,554 | 9,198,916 | 9,221,130 | 8,366,278 | 8,924,146 | 8,411,068 | 7,935,049 | 8,406,437 | 8,244,433 |
|  |  | Repurchase Agreements (Repo) | 6,926,943 | 6,768,326 | 8,310,991 | 7,425,481 | 8,826,023 | 8,817,910 | 8,021,987 | 8,498,936 | 8,004,212 | 7,536,857 | 8,054,061 | 7,907,106 |
|  |  | Other Money Markets | 340,794 | 350,868 | 409,724 | 360,073 | 372,83 | 403,219 | 364,291 | 425,211 | 406,855 | 398,192 | 352,36 | 337,327 |

## TRADEWEB MARKETS - 2023 MONTHLY VOLUMES (USD mm)

| Asset <br> Class | Product |  | 2023 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 23,219,274 | 27,445,985 | 34,722,415 | 22,30, 560 | 29,39,688 | 29,284,300 | 25,615,641 | 33,36,113 | 31,783,160 | 37,193,537 | 38,25,945 | 28,98,6,50 |
| Rates |  |  | 13,696,67 | 18,478,926 | 22,388,235 | 12,855,283 | 17,87,390 | 17,53,787 | 14,42, 306 | 20,479,513 | 19,357,705 | 24,68,560 | 25,56,509 | 17,50, 111 |
|  |  | Total | 7,266,191 | 6,909,006 | 8,398,574 | 6,16,748 | 7,827,381 | 7,583,494 | 7,051,104 | 8,178,989 | 7,612,010 | 8,644,875 | 8,588,911 | 7,479,941 |
|  |  | U.S. Government Bonds | 2,722,463 | 2,742,306 | 3,469,985 | 2,004,549 | 3,174,039 | 2,934,481 | 2,997,071 | 3,882,940 | 2,906,360 | 3,436,884 | 3,477,671 | 3,190,246 |
|  |  | European Government Bonds | 888,831 | 864,751 | 975,115 | 662,392 | 873,282 | 946,630 | 774,160 | 757,025 | 890,121 | 930,712 | 984,728 | 635,487 |
|  |  | Mortagas | 3,442,236 | 3,186,177 | 3,827,885 | 3,059,226 | 3,664,236 | 3,568,157 | 3,477,069 | 4,010,911 | 3,631,493 | 4,070,582 | 3,952,559 | 3,501,610 |
|  |  | Other Government Bonds | 112,660 | 116,172 | 125,990 | 90,581 | 115,824 | 134,226 | 132,804 | 128,14 | 184,036 | 206,697 | 213,954 | 152,598 |
|  | Derivatives | Total | 6,430,576 | 11,569,521 | 13,989,661 | 6,638,534 | 10,04,010 | 9,949,293 | 7,376,202 | 12,300,524 | 11,745,695 | 16,038,885 | 16,972,598 | 10,22,170 |
|  |  | Swaps/Wwaptions $\geq$ IY | 3,399,997 | 5,877,780 | 8,147,470 | 4,108,305 | 6,797,426 | 6,055,839 | 5,160,470 | 8,55,644 | 6,827,871 | 9,832,598 | 12,317,255 | 6,545,527 |
|  |  | Swaps/Wwaptions < 1Y | 2,456,297 | 5,66,119 | 5,805,280 | 2,506,347 | 3,213,673 | 3,862,804 | 2,186,859 | 3,486,494 | 4,85,695 | 6,124,341 | 4,579,101 | 3,417,955 |
|  |  | Futures | 34,83 | 26,622 | 36,911 | 23,883 | 34,911 | 30,50 | 28,873 | 55,386 | 62,129 | 81,746 | 76,242 | 58,688 |
| Credit |  |  | 435,381 | 432,214 | 1,153,780 | 373,650 | 412,363 | 397,059 | 399,858 | 482,046 | 1,027,893 | 548,695 | 550,735 | 398,031 |
|  |  | Total | 239,902 | 228,360 | 246,24 | 195,674 | 233,732 | 233,151 | 243,708 | 300,189 | 281,086 | 290,816 | 341,030 | 250,407 |
|  |  | U.S. High Grade - Fully lectronic | 86,959 | 82,187 | 87,135 | 71,427 | 86,657 | 91,582 | 85,36 | 96,131 | 84,871 | 103,345 | 113,704 | 101,271 |
|  |  | U.S. High Grade - Electronically Processed | ${ }_{66,446}$ | 56,589 | 71,038 | 52,673 | 61,413 | 55,610 | 50,42 | 48,608 | 48,309 | 48.889 | 61,389 | 44,716 |
|  |  | U.S. High Yield - Fully Electronic | 11,490 | 15,352 | 14,935 | 10,579 | 12,137 | 13,049 | 11,135 | 14,57 | 12,573 | 14,418 | 15,116 | 10,20 |
|  |  | U.S. High Yield - Electronically Processed | 7,697 | 6,935 | 8,470 | 6,663 | 7,567 | 5,767 | 4,501 | 4,713 | 4,454 | 7,025 | 6,982 | 4,612 |
|  |  | European Credit | 45,577 | 43,812 | 41,580 | 35,06 | 40,43 | 44,012 | 40,73 | 36,086 | 45,116 | 46,990 | 50,658 | 31,097 |
|  |  | Municipal Bonds | 6,350 | 6,397 | 6,559 | 5,743 | 7,071 | 6,598 | 5,967 | 7,943 | 7,144 | 9,922 | 9,971 | 8,283 |
|  |  | Chinese Bonds | 12,184 | 14,997 | 15,452 | 12,241 | 16,508 | 13,75 | 44,079 | 89,463 | 73,252 | 55,551 | 77,505 | 45,976 |
|  |  | Other Credit Bonds | 2.829 | 2.592 | 1,454 | 1,342 | 1,935 | 2,777 | 1,944 | 2.490 | 5,367 | 4,676 | 5,705 | 4,163 |
|  | Derivatives | Total | 195,49 | 203,85 | 907,157 | 177,96 | 178,630 | 163,908 | 153,150 | 181,856 | 746,807 | 257,89 | 209,705 | 147,623 |
|  |  | Swaps | 195,49 | 203,85 | 907,157 | 177,976 | 178,630 | 163,908 | 153,150 | 181,856 | 746,807 | 257,879 | 209,705 | 147,623 |
| Equities | Total |  | 367,507 | 356,94 | 494,070 | 315,858 | 409,101 | 471,796 | 410,000 | 402,363 | 385,333 | 435,695 | 433,922 | 612,613 |
|  | Cash | Total | 203,937 | 192,951 | 259,205 | 160,904 | 208,630 | 242,694 | 207,021 | 199,788 | 194,82 | 213,966 | 204,159 | 278,261 |
|  |  | U.S. ETFs | 142,208 | 137,705 | 195,186 | 118,446 | 159,044 | 190,440 | 162,093 | 155,981 | 148,250 | 157,60 | 147,358 | 218,361 |
|  |  | European ETFs | 61,729 | 55,246 | 64,019 | 42,458 | 49,585 | 52,25 | 44,928 | 43,798 | 46,032 | 56,306 | 56,801 | 59,900 |
|  | Derivatives | Total | 163,50 | 164,033 | 234,865 | 154,954 | 200,472 | 229,102 | 202,979 | 202,58 | 191,051 | 221,730 | 229,763 | 334,352 |
|  |  | Options / Convertibles / Swaps | 112,707 | 113,181 | 151,062 | 108,859 | 135,396 | 148,052 | 134,328 | 134,638 | 128,03 | 159,404 | 159,999 | 215,796 |
|  |  | Equity futures | 50,863 | 50,862 | 83,803 | 46,095 | 65,76 | 81,051 | 68,651 | 67,947 | 63,048 | 62,326 | 69,764 | 118,556 |
| Money Markets | Total |  | 8,79,618 | 8,177,850 | 10,686,330 | 8,756,770 | 10,69,834 | 10,882,659 | 10,38,477 | 11,672,191 | 11,012,228 | 11,525,586 | 11,67,778 | 10,43,895 |
|  | Cash | Total | 8,719,618 | 8,177,850 | 10,686,330 | 8,756,770 | 10,69,834 | 10,82,659 | 10,31,477 | 11,672,191 | 11,012,228 | 11,525,586 | 11,679,778 | 10,43,895 |
|  |  | Repurchase Agreements (Repo) | 8,406,861 | 7,894,324 | 10,273,758 | 8,423,009 | 10,25,352 | 10,50,037 | 10,14,388 | 11,312,956 | 10,672,851 | 11,148,355 | 11,313,440 | 10,116,303 |
|  |  | Other Money Markets | 312,758 | 283,26 | 412,572 | 333,761 | 446,482 | 374,623 | 367,089 | 359,235 | 339,377 | 377,231 | 365,938 | 319,592 |

## TRADEWEB MARKETS - 2024 MONTHLY VOLUMES (USD mm)

| AssetClass | Product |  | 2024 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | Seprember | October | November | December |
| Total |  |  | 42,76,647 | 37,85,626 | 36,226,653 |  |  |  |  |  |  |  |  |  |
| Rates | Total |  | 29,70,517 | 25,37,221 | 22,643,163 |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 9,907,999 | 9,218,289 | 9,143,953 |  |  |  |  |  |  |  |  |  |
|  |  | u.s. Goverrment Bonds | 3,991,371 | 4,156,312 | 3,836,900 |  |  |  |  |  |  |  |  |  |
|  |  | European Goverrment Bonds | 1,102,997 | 1,070,579 | 993,20 |  |  |  |  |  |  |  |  |  |
|  |  | Mortages | 4,609,091 | 3,762,612 | 4,077,375 |  |  |  |  |  |  |  |  |  |
|  |  | Other Government Bonds | 204,540 | 228,785 | 236,419 |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 19,73,518 | 16,12,932 | 13,499,210 |  |  |  |  |  |  |  |  |  |
|  |  | Swaps/waptions 1 1 | 12,616,785 | 10,24,598 | 8,179,310 |  |  |  |  |  |  |  |  |  |
|  |  | Swaps/waptions < 1Y | 7,067,335 | 5,656,991 | 5,167,761 |  |  |  |  |  |  |  |  |  |
|  |  | Futures | 109,397 | 230,343 | 152,139 |  |  |  |  |  |  |  |  |  |
| Creait |  |  | 582,325 | 496,146 | 1,065,499 |  |  |  |  |  |  |  |  |  |
|  |  | Total | 375.68 | 330,951 | 355,56 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Grade - Fully lectronic | 134,127 | 139,401 | 135,72 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Grade - Electronically Processed | 73,331 | 69,363 | 65.508 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Yield - Fully Electronic | 16,260 | 15,062 | 14,348 |  |  |  |  |  |  |  |  |  |
|  |  | U.S. High Yield - Electronically Processed | 7,309 | 6,156 | ${ }_{6,306}$ |  |  |  |  |  |  |  |  |  |
|  |  | European Credit | 55,333 | 48,169 | 55,223 |  |  |  |  |  |  |  |  |  |
|  |  | Municipal Bonds | 6,770 | ${ }_{6,435}$ | 6,497 |  |  |  |  |  |  |  |  |  |
|  |  | Chinese Bonds | 76,523 | 40,669 | 65,353 |  |  |  |  |  |  |  |  |  |
|  |  | Other Creait Bonds | 6,029 | 5,695 | 6,101 |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 206,644 | 165,195 | 710,43 |  |  |  |  |  |  |  |  |  |
|  |  | Swaps | 206,644 | 165,195 | 710,433 |  |  |  |  |  |  |  |  |  |
| Equities | Total |  | 550,186 | 543,303 | 587,954 |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 268,449 | 236,930 | 269,682 |  |  |  |  |  |  |  |  |  |
|  |  | u. Efits | 211,750 | 174,871 | 209,423 |  |  |  |  |  |  |  |  |  |
|  |  | European ETFs | 56,988 | 62,60 | 60,259 |  |  |  |  |  |  |  |  |  |
|  | Derivatives | Total | 281,737 | 306,32 | 318,72 |  |  |  |  |  |  |  |  |  |
|  |  | Options / Converitiles / wwaps | 187,94 | 229,500 | 215,673 |  |  |  |  |  |  |  |  |  |
|  |  | Equity futures | 93,743 | 76,872 | 102,599 |  |  |  |  |  |  |  |  |  |
| Money <br> Markets | Total |  | 11,952,619 | 11,48,956 | 11,930,038 |  |  |  |  |  |  |  |  |  |
|  | Cash | Total | 11,952,619 | 11,488,956 | 11,930,038 |  |  |  |  |  |  |  |  |  |
|  |  | Repurchase Agreements (Repo) | 11,564,841 | 11,108,693 | 11,525,364 |  |  |  |  |  |  |  |  |  |
|  |  | Other Money Markets | 387,788 | 300,264 | 404,674 |  |  |  |  |  |  |  |  |  |

## TRADEWEB MARKETS - 2017 MONTHLY BLENDED TRADE DAYS

| $\begin{aligned} & \text { Asset } \\ & \text { Class } \end{aligned}$ | Product |  | 2017 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 20.07 | 19.10 | 22.99 | 18.91 | 21.99 | 22.00 | 20.11 | 22.99 | 20.16 | 21.11 | 21.11 | 19.99 |
| Rates | Total |  | 20.08 | 19.12 | 22.99 | 18.90 | 21.98 | 22.00 | 20.13 | 22.99 | 20.20 | 21.11 | 21.12 | 19.99 |
|  | Cash | Total | 20.07 | 19.99 | 23.00 | 18.92 | 22.00 | 22.00 | 20.08 | 23.00 | 20.09 | 21.08 | 21.08 | 20.00 |
|  |  | U.S. Government Bonds | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | European Government Bonds | 21.00 | 20.00 | 23.00 | 18.00 | 22.00 | 22.00 | 21.00 | 23.00 | 21.00 | 22.00 | 22.00 | 20.00 |
|  |  | Mortages | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | Other Government Bonds | 20.05 | 19.88 | 22.66 | 18.79 | 21.31 | 22.00 | 20.57 | 22.72 | 20.55 | 21.60 | 21.22 | 20.40 |
|  | Derivatives | Total | 20.13 | 19.23 | 22.98 | 18.80 | 21.95 | 22.00 | 20.30 | 22.95 | 20.42 | 21.26 | 21.22 | 19.96 |
|  |  | Swaps/Wwaptions 1 IY | 20.14 | 19.22 | 22.97 | 18.80 | 21.94 | 22.00 | 20.27 | 22.95 | 20.25 | 21.24 | 21.28 | 19.96 |
|  |  | Swaps/Wwaptions < 1 Y | 20.07 | 19.52 | 23.00 | 18.64 | 22.00 | 22.00 | 20.75 | 23.00 | 20.82 | 21.59 | 21.09 | 19.99 |
|  |  | Futures | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.01 | 21.00 | 21.00 | 20.00 |
| Credit | Total |  | 20.37 | 19.45 | 23.00 | 18.58 | 22.00 | 22.00 | 20.39 | 23.00 | 20.42 | 21.37 | 21.46 | 20.08 |
|  | Cash | Total | 20.42 | 19.44 | 23.00 | 18.53 | 22.00 | 22.00 | 20.42 | 23.00 | 20.51 | 21.42 | 21.44 | 20.14 |
|  |  | U.S. High Grade - Fully Electronic | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | U.S. High Grade - Electronically Processed | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | u.s. High Yield - Fully flectronic | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | U.S. High Yield - Electronically Processed | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | European Credit | 21.00 | 20.00 | 23.00 | 18.00 | 22.00 | 22.00 | 21.00 | 23.00 | 21.00 | 22.00 | 22.00 | 20.00 |
|  |  | Municipal Bonds | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | Chinese Bonds |  |  |  |  |  |  | 21.00 | 23.00 | 21.00 | 22.00 | 22.00 | 21.00 |
|  |  | Other Credit Bonds | 20.41 | 19.55 | 23.00 | 18.64 | 22.00 | 22.00 | 20.47 | 23.00 | 20.49 | 21.40 | 21.40 | 20.00 |
|  | Derivatives | Total | 20.33 | 19.45 | 23.00 | 18.60 | 22.00 | 22.00 | 20.36 | 23.00 | 20.40 | 21.33 | 21.48 | 20.00 |
|  |  | Swaps | 20.33 | 19.45 | 23.00 | 18.60 | 22.00 | 22.00 | 20.36 | 23.00 | 20.40 | 21.33 | 21.48 | 20.00 |
| Equities | Total |  | 20.26 | 19.23 | 23.00 | 18.69 | 22.00 | 22.00 | 20.30 | 23.00 | 20.25 | 22.00 | 21.26 | 20.00 |
|  | Cash | Total | 20.28 | 19.28 | 23.00 | 18.70 | 22.00 | 22.00 | 20.33 | 23.00 | 20.25 | 22.00 | 21.23 | 20.00 |
|  |  | U.S. EtFs | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 |
|  |  | European ETFs | 21.00 | 20.00 | 23.00 | 18.00 | 22.00 | 22.00 | 21.00 | 23.00 | 21.00 | 22.00 | 22.00 | 20.00 |
|  | Derivatives | Total | 20.23 | 19.16 | 23.00 | 18.68 | 22.00 | 22.00 | 20.24 | 23.00 | 20.26 | 22.00 | 21.29 | 20.00 |
|  |  | Options / Converitiles / Swaps | 20.96 | 19.81 | 23.00 | 18.04 | 22.00 | 22.00 | 20.93 | 23.00 | 20.94 | 22.00 | 21.92 | 20.00 |
|  |  | Equity Futures | 20.01 | 19.01 | 23.00 | 18.97 | 22.00 | 22.00 | 20.02 | 23.00 | 20.06 | 22.00 | 21.01 | 20.00 |
| Money Markets | Total |  | 20.02 | 19.03 | 23.00 | 18.97 | 22.00 | 22.00 | 20.05 | 23.00 | 20.05 | 21.06 | 21.06 | 20.00 |
|  | Cash | Total | 20.02 | 19.03 | 23.00 | 18.97 | 22.00 | 22.00 | 20.05 | 23.00 | 20.05 | 21.06 | 21.06 | 20.00 |
|  |  | Repurchase Agreements (Repo) | 20.01 | 19.02 | 23.00 | 18.98 | 22.00 | 22.00 | 20.04 | 23.00 | 20.05 | 21.06 | 21.06 | 20.00 |
|  |  | Other Money Markets | 20.09 | 19.10 | 23.00 | 18.89 | 22.00 | 22.00 | 20.10 | 23.00 | 20.09 | 21.06 | 21.07 | 20.00 |

## TRADEWEB MARKETS - 2018 MONTHLY BLENDED TRADE DAYS

| $\begin{aligned} & \text { Asset } \\ & \text { Class } \end{aligned}$ | Product |  | 2018 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | Seprember | October | November | December |
| Total |  |  | 21.13 | 19.14 | 21.00 | 20.83 | 22.00 | 21.00 | 21.17 | 23.00 | 19.19 | 22.18 | 20.39 | 19.18 |
| Rates | Total |  | 21.15 | 19.16 | 21.00 | 20.81 | 21.99 | 21.00 | 21.19 | 22.99 | 19.21 | 22.20 | 20.43 | 19.22 |
|  | Cash | Total | 21.08 | 19.08 | 21.00 | 20.90 | 22.00 | 21.00 | 21.09 | 23.00 | 19.09 | 22.09 | 20.19 | 19.08 |
|  |  | U.S. Govermment Bonds | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.00 | 23.00 | 19.00 | 22.00 | 20.00 | 19.00 |
|  |  | European Government Bonds | 22.00 | 20.00 | 21.00 | 20.00 | 22.00 | 21.00 | 22.00 | 23.00 | 20.00 | 23.00 | 22.00 | 20.00 |
|  |  | Mortages | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.00 | 23.00 | 19.00 | 22.00 | 20.00 | 19.00 |
|  |  | Other Goverrment Bonds | 20.82 | 19.63 | 21.00 | 20.06 | 21.65 | 21.00 | 21.50 | 23.00 | 19.11 | 22.50 | 21.38 | 19.43 |
|  | Derivatives | Total | 21.31 | 19.30 | 21.00 | 20.58 | 21.99 | 21.00 | 21.33 | 22.99 | 19.41 | 22.45 | 20.87 | 19.41 |
|  |  | Swaps/Wwaptions 1 IY | 21.32 | 19.34 | 21.00 | 20.61 | 21.98 | 21.00 | 21.40 | 22.98 | 19.40 | 22.44 | 20.93 | 19.39 |
|  |  | Swaps/Wwaptions < 1 Y | 21.23 | 19.06 | 21.00 | 20.15 | 22.00 | 21.00 | 21.16 | 23.00 | 19.48 | 22.63 | 20.60 | 19.73 |
|  |  | Futures | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.02 | 23.00 | 19.01 | 22.01 | 20.00 | 19.00 |
| Credit | Total |  | 21.45 | 19.27 | 21.02 | 20.46 | 22.00 | 20.91 | 21.52 | 23.00 | 19.48 | 22.29 | 20.88 | 19.39 |
|  | Cash | Total | 21.49 | 19.10 | 21.09 | 20.26 | 22.00 | 20.77 | 21.50 | 23.00 | 19.29 | 21.91 | 20.81 | 19.38 |
|  |  | U.S. High Grade - Fully Electronic | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.00 | 23.00 | 19.00 | 22.00 | 20.00 | 19.00 |
|  |  | U.S. High Grade - Electronically Processed | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.00 | 23.00 | 19.00 | 22.00 | 20.00 | 19.00 |
|  |  | U.S. High Yield - Fully Electronic | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.00 | 23.00 | 19.00 | 22.00 | 20.00 | 19.00 |
|  |  | U.S. High Yield - Electronically Processed | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.00 | 23.00 | 19.00 | 22.00 | 20.00 | 19.00 |
|  |  | European Credit | 22.00 | 20.00 | 21.00 | 20.00 | 22.00 | 21.00 | 22.00 | 23.00 | 20.00 | 23.00 | 22.00 | 20.00 |
|  |  | Municipal Bonds | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.00 | 23.00 | 19.00 | 22.00 | 20.00 | 19.00 |
|  |  | Chinese Bonds | 22.00 | 15.00 | 22.00 | 18.00 | 22.00 | 20.00 | 22.00 | 23.00 | 19.00 | 18.00 | 22.00 | 20.00 |
|  |  | Other Credit Bonds | 21.51 | 19.52 | 21.00 | 20.52 | 22.00 | 21.00 | 21.57 | 23.00 | 19.44 | 22.55 | 21.21 | 19.44 |
|  | Derivatives | Total | 21.42 | 19.34 | 21.00 | 20.57 | 22.00 | 21.00 | 21.54 | 23.00 | 19.54 | 22.48 | 20.93 | 19.39 |
|  |  | Swaps | 21.42 | 19.34 | 21.00 | 20.57 | 22.00 | 21.00 | 21.54 | 23.00 | 19.54 | 22.48 | 20.93 | 19.39 |
| Equities | Total |  | 21.24 | 19.18 | 21.00 | 20.75 | 22.00 | 21.00 | 21.40 | 23.00 | 19.38 | 23.00 | 21.33 | 19.29 |
|  | Cash | Total | 21.23 | 19.20 | 21.00 | 20.75 | 22.00 | 21.00 | 21.35 | 23.00 | 19.27 | 23.00 | 21.29 | 19.24 |
|  |  | U.S. ETFs | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 21.00 | 21.00 | 23.00 | 19.00 | 23.00 | 21.00 | 19.00 |
|  |  | European ETFs | 22.00 | 20.00 | 21.00 | 20.00 | 22.00 | 21.00 | 22.00 | 23.00 | 20.00 | 23.00 | 22.00 | 20.00 |
|  | Derivatives | Total | 21.25 | 19.14 | 21.00 | 20.74 | 22.00 | 21.00 | 21.47 | 23.00 | 19.51 | 23.00 | 21.38 | 19.36 |
|  |  | Options / Convertibles / Swaps | 21.92 | 19.90 | 21.00 | 20.08 | 22.00 | 21.00 | 21.84 | 23.00 | 19.92 | 23.00 | 21.88 | 19.87 |
|  |  | Equity futues | 21.00 | 19.01 | 21.00 | 20.93 | 22.00 | 21.00 | 21.01 | 23.00 | 19.29 | 23.00 | 21.02 | 19.20 |
| MoneyMarkets | Total |  | 21.07 | 19.08 | 21.00 | 20.91 | 22.00 | 21.00 | 21.12 | 23.00 | 19.10 | 22.10 | 20.24 | 19.07 |
|  | Cash | Total | 21.07 | 19.08 | 21.00 | 20.91 | 22.00 | 21.00 | 21.12 | 23.00 | 19.10 | 22.10 | 20.24 | 19.07 |
|  |  | Repurchase Agreements (Repo) | 21.07 | 19.09 | 21.00 | 20.91 | 22.00 | 21.00 | 21.13 | 23.00 | 19.10 | 22.10 | 20.25 | 19.08 |
|  |  | Other Money Markets | 21.08 | 19.06 | 21.00 | 20.93 | 22.00 | 21.00 | 21.07 | 23.00 | 19.06 | 22.06 | 20.10 | 19.04 |

## TRADEWEB MARKETS - 2019 MONTHLY BLENDED TRADE DAYS

| Asset <br> Class | Product |  | 2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | Juy | August | September | October | November | December |
| Total |  |  | 21.17 | 19.18 | 21.00 | 20.83 | 21.99 | 20.00 | 22.22 | 21.99 | 20.19 | 22.22 | 19.37 | 20.80 |
| Rates | Total |  | 21.19 | 19.21 | 20.99 | 20.82 | 21.98 | 20.00 | 22.26 | 21.99 | 20.20 | 22.26 | 19.39 | 20.75 |
|  | Cash | Total | 21.08 | 19.09 | 21.00 | 20.91 | 21.99 | 20.00 | 22.10 | 21.99 | 20.08 | 22.07 | 19.16 | 20.92 |
|  |  | u.s. Government Bonds | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 22.00 | 19.00 | 21.00 |
|  |  | European Govermment Bonds | 22.00 | 20.00 | 21.00 | 20.00 | 22.00 | 20.00 | 23.00 | 22.00 | 21.00 | 23.00 | 21.00 | 20.00 |
|  |  | Mortages | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 22.00 | 19.00 | 21.00 |
|  |  | Other Government Bonds | 20.49 | 19.26 | 20.74 | 20.40 | 21.00 | 20.00 | 22.27 | 21.31 | 19.84 | 21.86 | 20.29 | 20.52 |
|  | Derivatives | Total | 21.40 | 19.44 | 20.99 | 20.67 | 21.97 | 20.00 | 22.42 | 21.98 | 20.33 | 22.52 | 19.75 | 20.50 |
|  |  | Swaps/Swaptions 1 IY | 21.40 | 19.42 | 20.99 | 20.56 | 21.94 | 20.00 | 22.46 | 21.96 | 20.45 | 22.58 | 19.80 | 20.50 |
|  |  | Swaps/Wwaptions < 1 Y | 21.40 | 19.91 | 21.00 | 20.82 | 22.00 | 20.00 | 22.37 | 22.00 | 20.18 | 22.37 | 19.59 | 20.49 |
|  |  | Futures | 21.01 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 22.00 | 19.00 | 20.98 |
| Credit | Total |  | 21.41 | 19.01 | 21.00 | 20.69 | 22.00 | 19.93 | 22.45 | 22.00 | 20.45 | 22.04 | 19.87 | 20.66 |
|  | Cash | Total | 21.39 | 18.59 | 21.00 | 20.76 | 22.00 | 19.82 | 22.44 | 22.00 | 20.23 | 21.43 | 19.77 | 20.79 |
|  |  | U.S. High Grade - Fully flectronic | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 22.00 | 19.00 | 21.00 |
|  |  | U.S. High Grade - Electronically Processed | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 22.00 | 19.00 | 21.00 |
|  |  | U.S. High Yield - Fully Electronic | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 22.00 | 19.00 | 21.00 |
|  |  | U.S. High Yield - Electronically Processed | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 22.00 | 19.00 | 21.00 |
|  |  | European Credit | 22.00 | 20.00 | 21.00 | 20.00 | 22.00 | 20.00 | 23.00 | 22.00 | 21.00 | 23.00 | 21.00 | 20.00 |
|  |  | Municipal Bonds | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 22.00 | 19.00 | 21.00 |
|  |  | Chinese Bonds | 22.00 | 15.00 | 21.00 | 21.00 | 22.00 | 19.00 | 23.00 | 22.00 | 20.00 | 18.00 | 21.00 | 21.00 |
|  |  | Other Credit Bonds | 21.59 | 19.56 | 21.00 | 20.41 | 22.00 | 20.00 | 22.53 | 22.00 | 20.64 | 22.67 | 20.18 | 20.43 |
|  | Derivatives | Total | 21.43 | 19.43 | 21.00 | 20.62 | 22.00 | 20.00 | 22.45 | 22.00 | 20.51 | 22.43 | 19.98 | 20.53 |
|  |  | Swaps | 21.43 | 19.43 | 21.00 | 20.62 | 22.00 | 20.00 | 22.45 | 22.00 | 20.51 | 22.43 | 19.98 | 20.53 |
| Equities | Total |  | 21.32 | 19.44 | 21.00 | 20.58 | 22.00 | 20.00 | 22.51 | 22.00 | 20.41 | 23.00 | 20.32 | 20.67 |
|  | Cash | Total | 21.30 | 19.40 | 21.00 | 20.63 | 22.00 | 20.00 | 22.46 | 22.00 | 20.36 | 23.00 | 20.39 | 20.71 |
|  |  | U.S. ETFs | 21.00 | 19.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 | 22.00 | 20.00 | 23.00 | 20.00 | 21.00 |
|  |  | European ETTS | 22.00 | 20.00 | 21.00 | 20.00 | 22.00 | 20.00 | 23.00 | 22.00 | 21.00 | 23.00 | 21.00 | 20.00 |
|  | Derivatives | Total | 21.35 | 19.51 | 21.00 | 20.51 | 22.00 | 20.00 | 22.57 | 22.00 | 20.48 | 23.00 | 20.26 | 20.62 |
|  |  | Options / Convertibles / wwaps | 21.83 | 19.83 | 21.00 | 20.16 | 22.00 | 20.00 | 2282 | 22.00 | 20.89 | 23.00 | 20.36 | 20.38 |
|  |  | Equity Futures | 21.05 | 19.08 | 21.00 | 20.94 | 22.00 | 20.00 | 22.09 | 22.00 | 20.23 | 23.00 | 20.04 | 20.82 |
| MoneyMarkets | Total |  | 21.11 | 19.12 | 21.00 | 20.88 | 22.00 | 20.00 | 22.13 | 22.00 | 20.14 | 22.12 | 19.24 | 20.91 |
|  | Cash | Total | 21.11 | 19.12 | 21.00 | 20.88 | 22.00 | 20.00 | 22.13 | 22.00 | 20.14 | 22.12 | 19.24 | 20.91 |
|  |  | Repurchase Agreements (Repo) | 21.11 | 19.12 | 21.00 | 20.88 | 22.00 | 20.00 | 22.13 | 22.00 | 20.15 | 22.12 | 19.25 | 20.91 |
|  |  | Other Money Markets | 21.06 | 19.06 | 21.00 | 20.94 | 22.00 | 20.00 | 22.06 | 22.00 | 20.06 | 22.07 | 19.13 | 20.93 |

## TRADEWEB MARKETS - 2020 MONTHLY BLENDED TRADE DAYS

| AssetClass | Product |  | 2020 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 21.19 | 19.17 | 21.99 | 20.79 | 19.98 | 22.00 | 22.21 | 20.99 | 21.25 | 21.26 | 19.53 | 21.78 |
| Rates | Total |  | 21.22 | 19.18 | 21.99 | 20.78 | 19.98 | 22.00 | 22.21 | 20.98 | 21.25 | 21.27 | 19.54 | 21.75 |
|  | Cash | Total | 21.08 | 19.07 | 21.99 | 20.90 | 19.99 | 22.00 | 22.08 | 20.99 | 21.08 | 21.09 | 19.16 | 21.92 |
|  |  | U.S. Goverrment Bonds | 21.00 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 21.00 | 19.00 | 22.00 |
|  |  | European Goverrment Bonds | 22.00 | 20.00 | 22.00 | 20.00 | 20.00 | 22.00 | 23.00 | 21.00 | 22.00 | 22.00 | 21.00 | 21.00 |
|  |  | Mortgages | 21.00 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 21.00 | 19.00 | 22.00 |
|  |  | Other Government Bonds | 20.85 | 18.88 | 21.64 | 20.76 | 19.35 | 22.00 | 21.85 | 20.26 | 20.96 | 21.56 | 20.24 | 21.38 |
|  | Derivatives | Total | 21.45 | 19.33 | 21.99 | 20.59 | 19.96 | 22.00 | 22.50 | 20.96 | 21.46 | 21.56 | 20.15 | 21.47 |
|  |  | Swaps/Wwaptions IV $^{\text {r }}$ | 21.49 | 19.41 | 21.98 | 20.58 | 19.93 | 22.00 | 22.47 | 20.95 | 21.39 | 21.46 | 20.05 | 21.54 |
|  |  | Swaps/waptions < 1Y | 21.35 | 19.21 | 22.00 | 20.62 | 20.00 | 22.00 | 22.55 | 21.00 | 21.61 | 21.71 | 20.43 | 21.27 |
|  |  | Futures | 21.01 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 21.00 | 19.00 | 22.00 |
| Credit | Total |  | 21.14 | 19.46 | 22.00 | 20.63 | 19.85 | 21.87 | 22.42 | 21.00 | 21.51 | 21.02 | 19.79 | 21.83 |
|  | Cash | Total | 20.71 | 19.35 | 22.00 | 20.80 | 19.72 | 21.69 | 22.37 | 21.00 | 21.38 | 20.40 | 19.75 | 22.03 |
|  |  | u.s. High Grade - Fully Electronic | 21.00 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 21.00 | 19.00 | 22.00 |
|  |  | U.S. High Grade - Electronically Processed | 21.00 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 21.00 | 19.00 | 22.00 |
|  |  | U.S. High Yield - Fully Electronic | 21.00 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 21.00 | 19.00 | 22.00 |
|  |  | u.S. High Yield - Electronically Processed | 21.00 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 21.00 | 19.00 | 22.00 |
|  |  | European Credit | 22.00 | 20.00 | 22.00 | 20.00 | 20.00 | 22.00 | 23.00 | 21.00 | 22.00 | 22.00 | 21.00 | 21.00 |
|  |  | Municipal Bonds | 21.00 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 21.00 | 19.00 | 22.00 |
|  |  | Chinese Bonds | 16.00 | 20.00 | 22.00 | 21.00 | 18.00 | 20.00 | 23.00 | 21.00 | 22.00 | 16.00 | 21.00 | 23.00 |
|  |  | Other Credit Bonds | 21.72 | 19.67 | 22.00 | 20.40 | 20.00 | 22.00 | 22.66 | 21.00 | 21.54 | 21.41 | 20.11 | 21.62 |
|  | Derivatives | Total | 21.50 | 19.50 | 22.00 | 20.53 | 20.00 | 22.00 | 22.49 | 21.00 | 21.54 | 21.47 | 19.82 | 21.55 |
|  |  | Swaps | 21.50 | 19.50 | 22.00 | 20.53 | 20.00 | 22.00 | 22.49 | 21.00 | 21.54 | 21.47 | 19.82 | 21.55 |
| Equities | Total |  | 21.27 | 19.22 | 22.00 | 20.78 | 20.00 | 22.00 | 22.31 | 21.00 | 21.20 | 22.00 | 20.30 | 21.68 |
|  | Cash | Total | 21.32 | 19.29 | 22.00 | 20.72 | 20.00 | 22.00 | 22.35 | 21.00 | 21.23 | 22.00 | 20.36 | 21.69 |
|  |  | u. E. ETFs | 21.00 | 19.00 | 22.00 | 21.00 | 20.00 | 22.00 | 22.00 | 21.00 | 21.00 | 22.00 | 20.00 | 22.00 |
|  |  | European ETFs | 22.00 | 20.00 | 22.00 | 20.00 | 20.00 | 22.00 | 23.00 | 21.00 | 22.00 | 22.00 | 21.00 | 21.00 |
|  | Derivative | Total | 21.22 | 19.16 | 22.00 | 20.89 | 20.00 | 22.00 | 22.26 | 21.00 | 21.16 | 22.00 | 20.22 | 21.67 |
|  |  | Options / Converitiles / Swaps | 21.33 | 19.23 | 22.00 | 20.33 | 20.00 | 22.00 | 22.70 | 21.00 | 21.43 | 22.00 | 20.37 | 21.36 |
|  |  | Equity futures | 21.01 | 19.04 | 22.00 | 20.98 | 20.00 | 22.00 | 22.01 | 21.00 | 21.04 | 22.00 | 20.04 | 21.92 |
| Money <br> Markets | Total |  | 21.12 | 19.12 | 22.00 | 20.82 | 20.00 | 22.00 | 22.19 | 21.00 | 21.22 | 21.24 | 19.45 | 21.84 |
|  | Cash | Total | 21.12 | 19.12 | 22.00 | 20.82 | 20.00 | 22.00 | 22.19 | 21.00 | 21.22 | 21.24 | 19.45 | 21.84 |
|  |  | Repurchase Agreements (Repo) | 21.12 | 19.12 | 22.00 | 20.82 | 20.00 | 22.00 | 22.20 | 21.00 | 21.23 | 21.24 | 19.46 | 21.84 |
|  |  | Other Money Markets | 21.07 | 19.07 | 22.00 | 20.94 | 20.00 | 22.00 | 22.06 | 21.00 | 21.07 | 21.06 | 19.10 | 21.95 |

## TRADEWEB MARKETS - 2021 MONTHLY BLENDED TRADE DAYS

| $\begin{aligned} & \text { Asset } \\ & \text { Cass } \end{aligned}$ | Product |  | 2021 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | Juy | August | September | October | November | December |
| Total |  |  | 19.22 | 19.23 | 23.00 | 21.52 | 19.99 | 22.00 | 21.20 | 21.99 | 21.25 | 20.29 | 20.57 | 21.82 |
| Rates | Total |  | 19.22 | 19.23 | 23.00 | 21.55 | 19.98 | 22.00 | 21.19 | 21.98 | 21.25 | 20.30 | 20.62 | 21.79 |
|  | Cash | Total | 19.08 | 19.09 | 23.00 | 21.79 | 19.99 | 22.00 | 21.09 | 21.99 | 21.10 | 20.10 | 20.20 | 21.92 |
|  |  | u.s. Government Bonds | 19.00 | 19.00 | 23.00 | 22.00 | 20.00 | 22.00 | 21.00 | 22.00 | 21.00 | 20.00 | 20.00 | 22.00 |
|  |  | European Govermment Bonds | 20.00 | 20.00 | 23.00 | 20.00 | 20.00 | 22.00 | 22.00 | 22.00 | 22.00 | 21.00 | 22.00 | 21.00 |
|  |  | Mortages | 19.00 | 19.00 | 23.00 | 22.00 | 20.00 | 22.00 | 21.00 | 22.00 | 21.00 | 20.00 | 20.00 | 22.00 |
|  |  | Other Government Bonds | 19.57 | 18.91 | 23.00 | 20.74 | 19.26 | 22.00 | 20.86 | 21.27 | 20.79 | 20.77 | 20.81 | 21.95 |
|  | Derivatives | Total | 19.43 | 19.44 | 23.00 | 21.22 | 19.97 | 22.00 | 21.33 | 21.96 | 21.45 | 20.46 | 21.00 | 21.64 |
|  |  | Swaps/Swaptions 1 IY | 19.46 | 19.42 | 23.00 | 20.99 | 19.95 | 22.00 | 21.38 | 21.94 | 21.46 | 20.53 | 21.01 | 21.60 |
|  |  | Swaps/Wwaptions < 1 Y | 19.39 | 19.48 | 23.00 | 21.60 | 20.00 | 22.00 | 21.24 | 21.98 | 21.44 | 20.41 | 21.00 | 21.71 |
|  |  | Futures | 19.00 | 19.00 | 23.00 | 21.98 | 20.00 | 22.00 | 21.01 | 22.00 | 21.00 | 20.00 | 20.00 | 22.00 |
| Credit | Total |  | 19.38 | 19.02 | 23.00 | 21.33 | 19.83 | 21.91 | 21.41 | 22.00 | 21.39 | 20.06 | 20.79 | 21.72 |
|  | Cash | Total | 19.37 | 18.65 | 23.00 | 21.46 | 19.69 | 21.84 | 21.39 | 22.00 | 21.10 | 19.52 | 20.61 | 21.95 |
|  |  | U.S. High Grade - Fully flectronic | 19.00 | 19.00 | 23.00 | 22.00 | 20.00 | 22.00 | 21.00 | 22.00 | 21.00 | 20.00 | 20.00 | 22.00 |
|  |  | U.S. High Grade - Electronically Processed | 19.00 | 19.00 | 23.00 | 22.00 | 20.00 | 22.00 | 21.00 | 22.00 | 21.00 | 20.00 | 20.00 | 22.00 |
|  |  | U.S. High Yield - Fully Electronic | 19.00 | 19.00 | 23.00 | 22.00 | 20.00 | 22.00 | 21.00 | 22.00 | 21.00 | 20.00 | 20.00 | 22.00 |
|  |  | U.S. High Yield - Electronically Processed | 19.00 | 19.00 | 23.00 | 22.00 | 20.00 | 22.00 | 21.00 | 22.00 | 21.00 | 20.00 | 20.00 | 22.00 |
|  |  | European Credit | 20.00 | 20.00 | 23.00 | 20.00 | 20.00 | 22.00 | 22.00 | 22.00 | 22.00 | 21.00 | 22.00 | 21.00 |
|  |  | Municipal Bonds | 19.00 | 19.00 | 23.00 | 22.00 | 20.00 | 22.00 | 21.00 | 22.00 | 21.00 | 20.00 | 20.00 | 22.00 |
|  |  | Chinese Bonds | 20.00 | 15.00 | 23.00 | 21.00 | 18.00 | 21.00 | 22.00 | 22.00 | 20.00 | 16.00 | 22.00 | 23.00 |
|  |  | Other Credit Bonds | 19.46 | 19.59 | 23.00 | 20.91 | 20.00 | 22.00 | 21.63 | 22.00 | 21.52 | 20.65 | 21.40 | 21.40 |
|  | Derivatives | Total | 19.41 | 19.42 | 23.00 | 21.20 | 19.99 | 22.00 | 21.42 | 21.99 | 21.49 | 20.56 | 20.97 | 21.54 |
|  |  | Swaps | 19.41 | 19.42 | 23.00 | 21.20 | 19.99 | 22.00 | 21.42 | 21.99 | 21.49 | 20.56 | 20.97 | 21.54 |
| Equities | Total |  | 19.30 | 19.29 | 23.00 | 20.77 | 20.00 | 22.00 | 21.21 | 22.00 | 21.19 | 21.00 | 21.24 | 21.82 |
|  | Cash | Total | 19.35 | 19.35 | 23.00 | 20.73 | 20.00 | 22.00 | 21.29 | 22.00 | 21.29 | 21.00 | 21.31 | 21.75 |
|  |  | U.S. ETFs | 19.00 | 19.00 | 23.00 | 21.00 | 20.00 | 22.00 | 21.00 | 22.00 | 21.00 | 21.00 | 21.00 | 22.00 |
|  |  | European ETTS | 20.00 | 20.00 | 23.00 | 20.00 | 20.00 | 22.00 | 22.00 | 22.00 | 22.00 | 21.00 | 22.00 | 21.00 |
|  | Derivatives | Total | 19.22 | 19.22 | 23.00 | 20.81 | 20.00 | 22.00 | 21.12 | 22.00 | 21.09 | 21.00 | 21.16 | 21.91 |
|  |  | Options / Convertibles / wwaps | 19.46 | 19.47 | 23.00 | 20.54 | 20.00 | 22.00 | 21.24 | 22.00 | 21.15 | 21.00 | 21.27 | 21.87 |
|  |  | Equity Futures | 19.01 | 19.02 | 23.00 | 20.98 | 20.00 | 22.00 | 21.01 | 22.00 | 21.05 | 21.00 | 21.03 | 21.94 |
| MoneyMarkets | Total |  | 19.22 | 19.22 | 23.00 | 21.51 | 20.00 | 22.00 | 21.23 | 22.00 | 21.22 | 20.25 | 20.42 | 21.87 |
|  | Cash | Total | 19.22 | 19.22 | 23.00 | 21.51 | 20.00 | 22.00 | 21.23 | 22.00 | 21.22 | 20.25 | 20.42 | 21.87 |
|  |  | Repurchase Agreements (Repo) | 19.22 | 19.23 | 23.00 | 21.50 | 20.00 | 22.00 | 21.23 | 22.00 | 21.23 | 20.26 | 20.43 | 21.87 |
|  |  | Other Money Markets | 19.07 | 19.05 | 23.00 | 21.93 | 20.00 | 22.00 | 21.02 | 22.00 | 21.02 | 20.02 | 20.04 | 21.97 |

## TRADEWEB MARKETS - 2022 MONTHLY BLENDED TRADE DAYS

| $\begin{aligned} & \text { Asset } \\ & \text { Class } \end{aligned}$ | Product |  | 2022 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | July | August | September | October | November | December |
| Total |  |  | 19.99 | 19.24 | 23.00 | 19.75 | 20.98 | 21.02 | 20.23 | 22.99 | 20.98 | 20.27 | 20.48 | 20.78 |
| Rates | Total |  | 19.99 | 19.26 | 23.00 | 19.74 | 20.97 | 21.02 | 20.26 | 22.98 | 20.97 | 20.31 | 20.54 | 20.73 |
|  | Cash | Total | 19.99 | 19.11 | 23.00 | 19.90 | 20.99 | 21.01 | 20.10 | 22.99 | 20.99 | 20.11 | 20.21 | 20.90 |
|  |  | U.S. Government Bonds | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 20.00 | 20.00 | 21.00 |
|  |  | European Goverrment Bonds | 20.00 | 20.00 | 23.00 | 19.00 | 21.00 | 21.00 | 21.00 | 23.00 | 21.00 | 21.00 | 22.00 | 20.00 |
|  |  | Mortages | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 20.00 | 20.00 | 21.00 |
|  |  | Other Goverrment Bonds | 19.56 | 18.70 | 23.00 | 19.76 | 20.08 | 21.77 | 20.23 | 22.23 | 20.22 | 20.23 | 20.66 | 21.04 |
|  | Derivatives | Total | 19.98 | 19.43 | 23.00 | 19.54 | 20.96 | 21.03 | 20.43 | 22.96 | 20.96 | 20.54 | 20.87 | 20.57 |
|  |  | Swaps/Wwaptions 1 IY | 19.97 | 19.44 | 23.00 | 19.55 | 20.93 | 21.05 | 20.43 | 22.94 | 20.95 | 20.53 | 20.88 | 20.59 |
|  |  | Swaps/Wwaptions < 1 Y | 20.00 | 19.41 | 23.00 | 19.52 | 21.00 | 21.00 | 20.43 | 23.00 | 21.00 | 20.60 | 20.87 | 20.55 |
|  |  | Futures | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 20.02 | 20.00 | 21.00 |
| Credit | Total |  | 19.95 | 19.31 | 23.00 | 19.57 | 20.87 | 21.00 | 20.38 | 23.00 | 21.00 | 20.13 | 20.60 | 20.74 |
|  |  | Total | 19.89 | 18.86 | 23.00 | 19.72 | 20.66 | 21.00 | 20.25 | 23.00 | 21.00 | 19.75 | 20.51 | 20.90 |
|  |  | U.S. High Grade - Fully Electronic | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 20.00 | 20.00 | 21.00 |
|  |  | U.S. High Grade - Electronically Processed | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 20.00 | 20.00 | 21.00 |
|  |  | U.S. High Yield - Fully Electronic | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 20.00 | 20.00 | 21.00 |
|  |  | U.S. High Yield - Electronically Processed | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 20.00 | 20.00 | 21.00 |
|  |  | European Credit | 20.00 | 20.00 | 23.00 | 19.00 | 21.00 | 21.00 | 21.00 | 23.00 | 21.00 | 21.00 | 22.00 | 20.00 |
|  |  | Municipal Bonds | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 20.00 | 20.00 | 21.00 |
|  |  | Chinese Bonds | 19.00 | 16.00 | 23.00 | 19.00 | 18.00 | 21.00 | 21.00 | 23.00 | 21.00 | 16.00 | 22.00 | 22.00 |
|  |  | Other Credit Bonds | 20.00 | 19.63 | 23.00 | 19.34 | 21.00 | 21.00 | 20.76 | 23.00 | 21.00 | 20.79 | 21.35 | 20.52 |
|  | Derivatives | Total | 20.00 | 19.59 | 23.00 | 19.48 | 21.00 | 21.00 | 20.47 | 23.00 | 21.00 | 20.40 | 20.69 | 20.58 |
|  |  | Swaps | 20.00 | 19.59 | 23.00 | 19.48 | 21.00 | 21.00 | 20.47 | 23.00 | 21.00 | 20.40 | 20.69 | 20.58 |
| Equities | Total |  | 20.00 | 19.19 | 23.00 | 19.78 | 21.00 | 21.00 | 20.22 | 23.00 | 21.00 | 21.00 | 21.16 | 20.80 |
|  | Cash | Total | 20.00 | 19.28 | 23.00 | 19.70 | 21.00 | 21.00 | 20.33 | 23.00 | 21.00 | 21.00 | 21.26 | 20.76 |
|  |  | U.S. ETFs | 20.00 | 19.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 | 23.00 | 21.00 | 21.00 | 21.00 | 21.00 |
|  |  | European ETFs | 20.00 | 20.00 | 23.00 | 19.00 | 21.00 | 21.00 | 21.00 | 23.00 | 21.00 | 21.00 | 22.00 | 20.00 |
|  | Derivatives | Total | 20.00 | 19.07 | 23.00 | 19.91 | 21.00 | 21.00 | 20.06 | 23.00 | 21.00 | 21.00 | 21.06 | 20.86 |
|  |  | Options / Convertibles / Swaps | 20.00 | 19.14 | 23.00 | 19.86 | 21.00 | 21.00 | 20.08 | 23.00 | 21.00 | 21.00 | 21.08 | 20.87 |
|  |  | Equity futues | 20.00 | 19.03 | 23.00 | 19.95 | 21.00 | 21.00 | 20.02 | 23.00 | 21.00 | 21.00 | 21.02 | 20.86 |
| MoneyMarkets | Total |  | 20.00 | 19.20 | 23.00 | 19.79 | 21.00 | 21.00 | 20.19 | 23.00 | 21.00 | 20.18 | 20.35 | 20.87 |
|  | Cash | Total | 20.00 | 19.20 | 23.00 | 19.79 | 21.00 | 21.00 | 20.19 | 23.00 | 21.00 | 20.18 | 20.35 | 20.87 |
|  |  | Repurchase Agreements (Repo) | 20.00 | 19.21 | 23.00 | 19.78 | 21.00 | 21.00 | 20.19 | 23.00 | 21.00 | 20.19 | 20.36 | 20.86 |
|  |  | Other Money Markets | 20.00 | 19.02 | 23.00 | 19.98 | 21.00 | 21.00 | 20.03 | 23.00 | 21.00 | 20.04 | 20.06 | 20.96 |

## TRADEWEB MARKETS - 2023 MONTHLY BLENDED TRADE DAYS

| AssetClass | Product |  | ${ }^{2023}$ |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | January | February | March | April | May | June | Juy | August | September | October | November | December |
| Total |  |  | 20.25 | 19.24 | 22.99 | 19.46 | 21.72 | 21.28 | 20.22 | 22.98 | 20.30 | 21.25 | 21.24 | 19.76 |
| Rates | Total |  | 20.30 | 19.27 | 22.98 | 19.36 | 21.66 | 21.35 | 20.26 | 22.97 | 20.39 | 21.30 | 21.28 | 19.69 |
|  | Cash | Total | 20.12 | 19.12 | 22.99 | 19.76 | 21.86 | 21.14 | 20.11 | 22.99 | 20.12 | 21.11 | 21.11 | 19.91 |
|  |  | U.S. Government Bonds | 20.00 | 19.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | European Government Bonds | 21.00 | 20.00 | 23.00 | 18.00 | 21.00 | 22.00 | 21.00 | 23.00 | 21.00 | 22.00 | 22.00 | 19.00 |
|  |  | Mortages | 20.00 | 19.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | Other Goverrment Bonds | 20.43 | 19.28 | 22.47 | 19.31 | 20.62 | 21.99 | 20.14 | 22.17 | 20.37 | 21.21 | 20.93 | 19.83 |
|  | Derivatives | Total | 20.50 | 19.36 | 22.97 | 19.00 | 21.50 | 21.52 | 20.40 | 22.95 | 20.57 | 21.40 | 21.37 | 19.53 |
|  |  | Swaps/Wwaptions 1 Y | 20.48 | 19.32 | 22.95 | 18.90 | 21.52 | 21.59 | 20.39 | 22.94 | 20.51 | 21.39 | 21.34 | 19.55 |
|  |  | Swaps/Wwaptions < 1 Y | 20.54 | 19.39 | 23.00 | 19.15 | 21.44 | 21.40 | 20.45 | 22.99 | 20.66 | 21.41 | 21.43 | 19.49 |
|  |  | Futures | 20.02 | 19.00 | 23.00 | 19.99 | 21.99 | 21.03 | 20.00 | 23.00 | 20.44 | 21.01 | 21.46 | 19.54 |
| Credit | Total |  | 20.14 | 19.31 | 23.00 | 19.39 | 21.65 | 21.23 | 20.36 | 23.00 | 20.34 | 20.77 | 21.36 | 19.88 |
|  | Cash | Total | 19.93 | 19.25 | 23.00 | 19.54 | 21.66 | 21.13 | 20.34 | 23.00 | 20.17 | 20.24 | 21.38 | 20.03 |
|  |  | U.S. High Grade - Fully Electronic | 20.00 | 19.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | U.S. High Grade - Electronically Processed | 20.00 | 19.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 | 23.00 | 20.00 | 21.00 | 21.00 | 20.00 |
|  |  | U.S. High Yield - Fully Electronic | 20.00 | 19.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 | 23.00 | 19.99 | 20.99 | 20.99 | 19.98 |
|  |  | U.S. High Y Yield - Electronically Processed | 20.00 | 19.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 | 23.00 | 19.97 | 20.97 | 21.03 | 19.97 |
|  |  | European Credit | 21.00 | 20.00 | 23.00 | 18.00 | 21.00 | 22.00 | 21.00 | 23.00 | 21.00 | 22.00 | 22.00 | 19.00 |
|  |  | Municipal Bonds | 20.00 | 19.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 | 23.00 | 20.01 | 21.02 | 20.99 | 20.01 |
|  |  | Chinese Bonds | 16.00 | 20.00 | 23.00 | 19.00 | 20.00 | 20.00 | 21.00 | 23.00 | 20.00 | 17.00 | 22.00 | 21.00 |
|  |  | Other Credit Bonds | 20.55 | 19.61 | 23.00 | 18.68 | 21.33 | 21.66 | 20.71 | 22.99 | 20.88 | 21.35 | 21.69 | 19.27 |
|  | Derivatives | Total | 20.40 | 19.37 | 23.00 | 19.22 | 21.63 | 21.38 | 20.39 | 22.99 | 20.41 | 21.39 | 21.33 | 19.62 |
|  |  | Swaps | 20.40 | 19.37 | 23.00 | 19.22 | 21.63 | 21.38 | 20.39 | 22.99 | 20.41 | 21.39 | 21.33 | 19.62 |
| Equities | Total |  | 20.21 | 19.19 | 23.00 | 18.81 | 21.82 | 21.16 | 20.13 | 23.00 | 20.15 | 22.00 | 21.16 | 19.86 |
|  | Cash | Total | 20.29 | 19.28 | 23.00 | 18.73 | 21.75 | 21.21 | 20.21 | 23.00 | 20.23 | 22.00 | 21.27 | 19.78 |
|  |  | u.S. EtFs | 20.00 | 19.00 | 23.00 | 19.00 | 22.00 | 21.00 | 20.00 | 23.00 | 20.00 | 22.00 | 21.00 | 20.00 |
|  |  | European ETTs | 21.00 | 20.00 | 23.00 | 18.00 | 21.00 | 22.00 | 21.00 | 23.00 | 21.00 | 22.00 | 22.00 | 19.00 |
|  | Derivatives | Total | 20.12 | 19.10 | 23.00 | 18.91 | 21.89 | 21.10 | 20.06 | 23.00 | 20.07 | 22.00 | 21.07 | 19.92 |
|  |  | Options / Convertibles / Swaps | 20.15 | 19.14 | 23.00 | 18.89 | 21.85 | 21.11 | 20.08 | 23.00 | 20.07 | 22.00 | 21.09 | 19.93 |
|  |  | Equity futures | 20.06 | 19.02 | 23.00 | 18.96 | 21.97 | 21.09 | 20.01 | 23.00 | 20.09 | 22.00 | 21.03 | 19.92 |
| Money Markets | Total |  | 20.17 | 19.19 | 23.00 | 19.65 | 21.82 | 21.18 | 20.18 | 23.00 | 20.15 | 21.14 | 21.16 | 19.88 |
|  | Cash | Total | 20.17 | 19.19 | 23.00 | 19.65 | 21.82 | 21.18 | 20.18 | 23.00 | 20.15 | 21.14 | 21.16 | 19.88 |
|  |  | Repurchase Agreements (Repo) | 20.17 | 19.19 | 23.00 | 19.63 | 21.81 | 21.18 | 20.18 | 23.00 | 20.15 | 21.15 | 21.16 | 19.89 |
|  |  | Other Money Markets | 20.04 | 19.03 | 23.00 | 19.94 | 21.97 | 21.03 | 20.04 | 23.00 | 20.14 | 21.02 | 21.17 | 19.85 |

## TRADEWEB MARKETS - 2024 MONTHLY BLENDED TRADE DAYS

|  |  |  | ${ }^{2024}$ |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }_{\text {cose }}^{\text {cases }}$ | $p_{\text {Proutut }}$ |  | many | remay | merch | mail | mw | yme | mw | Amper | Sepember | Oatasar | Noenemer | Doemer |
| Tobl |  |  | 2127 | 2026 | 2000 |  |  |  |  |  |  |  |  |  |
| Rates | Toal |  | 2131 | 2031 | 2000 |  |  |  |  |  |  |  |  |  |
|  | Csan | Toal | 21.10 | ${ }^{20,12}$ | ${ }^{2000}$ |  |  |  |  |  |  |  |  |  |
|  |  | U.S Soemementomis | ${ }_{2200}^{2100}$ | ${ }_{2000}^{2000}$ | ${ }_{2000}^{2000}$ |  |  |  |  |  |  |  |  |  |
|  |  | Mortages | 21.00 | 2000 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  | Othere coemment tomis | 2054 | 2039 | 2000 |  |  |  |  |  |  |  |  |  |
|  | Deriaties | Toal | ${ }^{21,12}$ | 20.62 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  |  | 21.36 | 2039 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  | Smenssmanioss <1 | 2152 | 2250 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  | futues | 21.01 | 20.6 | 2000 |  |  |  |  |  |  |  |  |  |
| ceatt | $\frac{\text { Toad }}{\text { cast }}$ | Tobl | ${ }_{2}^{21365}$ | ${ }_{1985}^{1985}$ | ${ }^{20066}$ |  |  |  |  |  |  |  |  |  |
|  |  | US High Gande fillyeleatroic | 21.00 | 2000 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  |  | 2100 | 2000 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  |  | 21.00 | 2000 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  |  | 2100 | 2000 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  | Etureancereit | 2200 | 2100 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  | Munciealemens | 2100 | 2000 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  | Clines onis | ${ }^{2200}$ | ${ }^{1600}$ | ${ }_{2100}^{2100}$ |  |  |  |  |  |  |  |  |  |
|  | $\bigcirc$ Derimites | cone | 21.28 21.38 |  | ${ }_{2}^{2000}$ |  |  |  |  |  |  |  |  |  |
|  |  | Smas | ${ }_{2138}$ | 20,2 | 200 |  |  |  |  |  |  |  |  |  |
| Euxites | Toal |  | 21.11 | 20.3 | 2000 |  |  |  |  |  |  |  |  |  |
|  | Cash | Toos | 220 | 2025 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  | Us.fis | ${ }^{21200}$ | ${ }^{2000}$ | ${ }^{2000}$ |  |  |  |  |  |  |  |  |  |
|  | $\bigcirc$ | Cumpen lis | ${ }_{2}^{2200}$ | ${ }_{2}^{21,00}$ | ${ }^{2000}$ |  |  |  |  |  |  |  |  |  |
|  |  |  | ${ }_{2,104}^{210.3}$ | ${ }_{2094}$ | ${ }_{2000}^{2000}$ |  |  |  |  |  |  |  |  |  |
|  |  | Esuiffitues | 2101 | 2001 | 2000 |  |  |  |  |  |  |  |  |  |
|  | Toal |  | 21.17 | 20.18 | 2000 |  |  |  |  |  |  |  |  |  |
|  |  | Toul | ${ }_{21.17}^{21.10}$ | ${ }_{20,18}^{20,19}$ | ${ }_{2000}^{2000}$ |  |  |  |  |  |  |  |  |  |
|  |  | Onememen | 2102 | 20.41 | 2000 |  |  |  |  |  |  |  |  |  |

## TRADEWEB MARKETS / TRACE - ANNUAL



FOOTNOTES
Corporate bond volume and trade count numbers reflect all trades reported to TRACE, excluding emerging market and converible bonds
Monthly average capped volumes for $H G$ and $H Y$ applied to capped trades based on TRACE reporting standards.
Electronically Processed include voice trades processed electronically on Tradeweb.

## TRADEWEB MARKETS / TRACE - QUARTERLY



## TRADEWEB MARKETS / TRACE - QUARTERLY

|  |  |  | ADV(USD mm) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Product | Type | 012023 | Q22023 | Q3 2023 | 042023 | 012024 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tradeweb | U.S. High Grade | Total | 7,461 | 6,821 | 6,756 | 7.876 | 10,364 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Fully Electronic | 4,324 | 4,128 | 4,417 | 5,376 | 6,951 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Electronically Processed | 3,137 | 2.694 | 2,339 | 2.500 | 3,413 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | U.S. High Yield | Total | 1,065 | 901 | 845 | 962 | 1,092 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Fully Electronic | 692 | 583 | 628 | 662 | 768 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Electronically Processed | 373 | 317 | 217 | 300 | 324 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TRACE | U.S. High Grade | Total | 32,383 | 27,658 | 26,635 | 31,185 | 39,59 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | U.S. High Yield | Total | 11,291 | 9,403 | 8.065 | 9,874 | 11,844 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



|  |  |  | Volume (\% of TRACE) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Product | Type | Q12023 | Q22023 | Q3 2023 | 042023 | Q12024 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tradeweb | U.S. High Grade | Total | 23.0\% | 24.7\% | 25.4\% | 25.2\% | 26.2\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Fully Electronic | 13.4\% | 14.9\% | 16.6\% | 17.2\% | 17.6\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Electronically Processed | 9.7\% | 9.7\% | 8.8\% | 8.0\% | 8.5\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | U.S. High Yield | Total | 9.4\% | 9.6\% | 10.5\% | 9.8\% | 9.5\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Fully Electronic | 6.1\% | 6.2\% | 7.8\% | 6.7\% | 6.7\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Electronically Processed | 3.3\% | 3.4\% | 2.7\% | 3.0\% | 2.8\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TRACE | U.S. High Grade | Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | U.S. High Y Yield | Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.\% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## TRADEWEB MARKETS / TRACE - MONTHLY ADV (USD mm)



## TRADEWEB MARKETS / TRACE - MONTHLY ADV (USD mm)

|  |  |  | 2020 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Product | Type | January | February | March | April | May | June | July | August | September | October | November | December |
| Tradeweb | U.S. High Grade | Total | 4,095 | 4,115 | 3,927 | 4,583 | 4,951 | 4,793 | 3,932 | 3,764 | 4,020 | 4,737 | 4,978 | 3,769 |
|  |  | Fully Electronic | 1,994 | 1.874 | 1,179 | 1,542 | 1.896 | 1,949 | 1,604 | 1,610 | 1,883 | 2,332 | 2.560 | 2,068 |
|  |  | Electronically Processed | 2,300 | 2,241 | 2,748 | 3,041 | 3,055 | 2,844 | 2,328 | 2,155 | 2,137 | 2,405 | 2.418 | 1,701 |
|  | U.S. High Yield | Total | 450 | 563 | 505 | 555 | 498 | 462 | 401 | 357 | 507 | 571 | 688 | 609 |
|  |  | Fully Electronic | 245 | 326 | 181 | 154 | 179 | 233 | 208 | 195 | 251 | 341 | 392 | 402 |
|  |  | Electronically Processed | 205 | 237 | 323 | 401 | 320 | 230 | 193 | 162 | 256 | 230 | 296 | 207 |
| TRACE | U.S. High Grade | Total | 24,816 | 25,37 | 30,509 | 32,90 | 32,67 | 28,715 | 22,598 | 20,727 | 22,729 | 24,591 | 24,696 | 19,550 |
|  | U.S. High Yield | Total | 10,746 | 12,614 | 13,996 | 13,499 | 12,201 | 11,931 | 8.744 | 8,264 | 9,589 | 9,645 | 10,165 | 8.881 |



## TRADEWEB MARKETS / TRACE - MONTHLY ADV (USD mm)



## FOOTNOTES

Corporate bond volume and trade count numbers reflect all trades reported to TRACE, excluding emerging market and converible bonds.
Morthly average capped volumes for $H G$ and $H Y$ applied to capped trades based on TRACE reporting standards
Electronically Processed include voice trades processed decectronically on Tradeeweb.

## TRADEWEB MARKETS / TRACE - MONTHLY VOLUMES (USD mm)



## TRADEWEB MARKETS / TRACE - MONTHLY VOLUMES (USD mm)



## TRADEWEB MARKETS / TRACE - MONTHLY VOLUMES (USD mm)



## FOOTNOTES

Corporate bond volume and trade count numbers reflect all trades reported to TRACE, excluding emerging market and converible bonds
Monthly average capped volumes for $H G$ and $H Y$ applied to capped trades based on TRACE reporting standards.
Electronically Processed include voice trades processed electronically on Tradeweb.

## TRADEWEB MARKETS /TRACE - MONTHLY VOLUMES (\% OF TRACE)



## TRADEWEB MARKETS /TRACE - MONTHLY VOLUMES (\% OF TRACE)



## TRADEWEB MARKETS / TRACE - MONTHLY VOLUMES (\% OF TRACE)



## FOOTNOTES

Corporate bond volume and trade count numbers reflect all trades reported to TRACE, excluding emerging market and converible bonds
Monthly average capped volumes for $H G$ and $H Y$ applied to capped trades based on TRACE reporting standards.
Electronically Processed include voice trades processed decectronically on Tradeeweb.

## DISCLOSURES

## PRODUCT CATEGORIES INCLUDE

U.S. Government Bonds: U.S. Treasury bils, notes and bonds, and Treasury Inflation-protected Securties, including when-ssued securities. Beginning on June 28, 2021, U. government bonds volumes include wholesale U.S. Treasury volumes from the Nasdaq Fixed Income business Tradeweb acquired on June 25, 202
ryages: To-be-announced mortgage-backed securities, specified pools, collateralized mortgage obligations, commercial mortgage-backed securities, other mortgage derivatives and other asset-backed securities.
位 Government Bonds: Japanese, Canadian, Australian and New Zealand government bonds, covered bonds (including Pfandbriefe), other government-guaranteed securities, supranational, sub-sovererign and agency bonds/debentures.
Rates Futures: Government bond futures leg of exchange for physicals (EFPS).
U.S. High Grade and High Yield: All TRACE-eported corporates, excluding convertibles (see "footnotes" for segmentation methodology).

Chinese Bonds: Chinese interbank Bond Market (CIBM) instruments - government and corporate - transacted via Bond Connect Company Limited (BCCL) and CIBM Direct.
Other Credit Bonds: Other developed market (including non-TRACE-reported bonds, preferreds and structured notes), developing and emerging market corporate and govermment bonds.
Credit Swaps: Index and single name credit default swaps.
ETF: Exchange traded funds (ETFs), ETF leg of EFPs, and net asset value trades,
onvertibles/Swaps/Options: Convertible bonds, equity swaps, call and put strategies, and other equity derivatives excluding futures. Certain equity derivatives transactions have been reclassified as Equity Futures to better reflect the product group
Equities Futures: Equity futures including the futures leg of EFPs. Certain equity derivatives transactions have been reclassified as Equity Futures to better reflect the product group. Other Money Markets: Agency discount notes, commercial paper, certificates of deposits (including structured CDs), and deposits.

## VOLUMES

Volumes include Tradeweb, Dealerweb and Tradeweb Direct. Both sides of a trade are included in volume totals where the trade is fully-anonymous and a Tradeweb broker dealer is he matched principal counterparty. Note that, in wholesale markets, U.S. Treasuries volumes are single-sided, and riskless principal and intermediated trades on Tradeweb Direct are single-count.
All volumes are notional par values, unless otherwise stated, converted to U.S. Dollars
Volumes for Mortgages represent current face value at time of trade.
Volumes for Repo represent notional value of posted coll ateral.
Volumes can reflect cancellations, corrections and settlement of NAV trades on ETFs that occur after prior postings; historical volumes are periodically updated
In March 2020, certain transactions were reclassified based on availability of additional classification data.
Beginning on September 1, 2023, total volume across Rates (Cash and Derivatives), Credit, and Money Markets include Australia and New Zealand estimated volumes from the Yieldbroker business that Tradeweb acquired on August 31, 2023.

## FOOTNOTES

Day counts for corporate bonds reflect all SIFMA trading days
On July 12,2021 , FINRA announced changes to its methodology for aggregation of its monthly TRACE Volume Reports. FINRA has confirmed that adjustments were made to address the double reporting of certain ATS trades, but these changes do not affect the rea--time TRACE dissemination feeds; accordingly, tradeweb has made no adjustments to is methodology for calculating U.S. High Grade and U.S. High Yield reported market volumes or trades. Further, FINRA's methodology adjustment to is monthy reporting does no meterilly change Tradeweb volumes using market reporting standards Tradeweb's monthly yolume reporting therefore remains consistent with prior reported volumes
egmentation between HG and HY determined using the following methodology and ratings from Standards \& Poor's (S\&P), Moody's Investor Services and Fitch Ratings:
If 2 of 3 of the bond's ratings are equal to or worse than $\mathrm{BB}+/ \mathrm{Ba1} 1 / \mathrm{BB}+$ (but not including "other ratings") then the bond is HY .
If 1 of 3 of the bond's ratings is equal to or worse than $\mathrm{BB}+/ \mathrm{Ba} 1 / \mathrm{BB}+$, and none are better, then the bond is HY .
-If the bond is not rated by any agency then the bond is HY .
If 3 of 3 of the bond's ratings are better than $\mathrm{BB}+$ $+\mathrm{Ba} 1 / \mathrm{BB}+$ (but not including "other ratings") then the bond is HG .
If 2 of 3 of the bond's ratings are better than $\mathrm{BB}+\mathrm{Ba} 1 / \mathrm{BB}+$ then the bond is HG
If 1 of 3 of the bond's ratings is better than $\mathrm{BB}+/ \mathrm{Ba} 1 / \mathrm{BB}+$, and none are equal or worse, then the bond is HG .

- If 1 of 3 of the bond's ratings is better than $\mathrm{BB}+/ \mathrm{Ba} 1 / \mathrm{BB}+$ and 1 of 3 is equal or worse, then the bond is HG . (i.e. The bond is split rated: $1 \mathrm{HG}, 1 \mathrm{HY}$ ).

Tradeweb acquired Yieldbroker on August 31, 2023 and accuired r8fin on January 19, 2024 and total volume reported includes volumes from each acquired business subsequent to the date of each acquisition.

BASIS OF PRESENTATION
All reported amounts are presented in U.S. dollars, unless othervise indicated. In determining the reported U.S. dollar amounts for non-U.S. dollar denominated securities, the nonU.S. dollar amount for a particular month is translated into U.S. dollars based on the monthly average foreign exchange rate for the prior month. Volumes presented in this release exclude volumes generated by (i) unbiled trial agreements, (ii) products billed on an agreement basis where we do not calculate notional value, and (iii) products that are not rates, credit, equities or money markets products.

## MARKET AND INDUSTRY DATA

This report includes estimates regarding market and industry data that we prepared based on our management's knowledge and experience in the markets in which we operate, together with information obtained from various sources, including publicly available information, industry reports and publications, surveys, our clients, trade and business organizations and other contacts in the markets in which we operate. In presenting this information, we have made certain assumpions that we believe to be reasonable based on
such data and other similar sources and on our knowledge of and our experience to date in the markets in which we operate. While such information is believed to be reliable for the purposes used herein, no representations are made as to the accuracy or completeness thereof and we take no responsibility for such information.

FORWARD-LOOKING STATEMENTS
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