

SwapsInfo Full Year 2017 and Fourth Quarter 2017 Review

The ISDA SwapsInfo Quarterly Review provides analysis of interest rate derivatives (IRD) and index credit default swap (CDS) trading activity. The report provides a breakdown of publicly available data to analyze the impact of regulatory change on swap execution facility (SEF) and bilateral trading volumes, as well as cleared and non-cleared activity.

IRD and index CDS traded notional and trade count data is taken from the ISDA SwapsInfo website (swapsinfo.org), using information from the Depository Trust & Clearing Corporation and Bloomberg swap data repositories (SDRs). This report covers only trades required to be disclosed under US regulatory guidelines.

KEY HIGHLIGHTS FOR FULL YEAR 2017 AND THE FOURTH QUARTER OF 2017

Interest Rate Derivatives

IRD notional amount and trade count continued to increase in 2017. In the 12 months ended December 31, 2017, IRD traded notional amount and trade count rose by 16.1% and 5.7%, respectively, compared to the 12 months ended December 31, 2016.

In the full year 2017:

- Average daily notional for IRD totaled \$742.7 billion, while average trade size was \$157.8 million. Average daily trade count was 4,487.
- Cleared IRD transactions represented 87.6% of traded notional and 80.3% of trade count, compared with 84% of traded notional and 74.6% of trade count in full year 2016.
- SEF-traded IRD represented 55.0% of notional and 58.9% of trade count, compared with 54.7% of notional and 53.3% of trade count in full year 2016.
- Single currency fixed-for-floating interest rate swaps (IRS) accounted for 65.0% of total IRD trades, but represented only 30.1% of IRD traded notional. Forward rate agreements (FRAs) and overnight indexed swaps (OIS) represented 33.3% and 24.2% of traded notional and 14.7% and 5.1% of total trade count, respectively.
- IRD contracts in US dollars comprised 65.3% of traded notional and 52.4% of trade count. Euro-denominated transactions accounted for 15.3% of notional and 15.3% of trade count.

In the fourth quarter of 2017:

- IRD traded notional amount rose by 11.5% to \$44.7 trillion from \$40.1 trillion in the fourth quarter of 2016. Trade count grew by 0.1% over the same period, to 282,686 from 282,306.
- Average daily notional for IRD totaled \$687.1 billion, while average trade size was \$151.1 million. Average daily trade count was 4,349.
- Cleared IRD transactions represented 87.2% of traded notional and 80.7% of trade count.
- SEF-traded IRD represented 54.7% of notional and 58.9% of trade count.
- Single currency fixed-for-floating IRS accounted for 66.8% of total IRD trades, but represented only 34% of IRD traded notional. FRAs and OIS represented 31.6% and 21.2% of traded notional and 13.6% and 4.8% of total trade count, respectively.
- IRD contracts in US dollars remained the most actively traded instruments, contributing 63.5% of traded notional and 51.0% of trade count. Euro-denominated transactions accounted for a far smaller percentage of notional (13.4%) and trade count (14.7%).

Index Credit Default Swaps

Index CDS traded notional amount and trade count declined in 2017 compared with the prior year. In the 12 months ended December 31, 2017, index CDS traded notional and trade count fell by 6% and 17.5%, respectively, compared to the 12 months ended December 31, 2016.

In the full year 2017:

- Average daily notional for index CDS totaled \$26.1 billion, average trade size was \$34.6 million and average daily trade count was 741.
- Cleared transactions represented 79.7% of traded notional amount and 79.8% of trade count, compared with 80.8% of traded notional and 80.4% of trade count in the full year 2016.
- SEF-traded index CDS represented 74.9% of notional amount and 75.6% of trade count, compared with 75.8% and 77.5% in the full year 2016.
- CDX HY and CDX IG represented 15.3% and 31.4% of traded notional and 27.3% and 20.8% of total trade count, respectively. iTraxx Europe accounted for 30.4% of total index CDS traded notional and 27.9% of total trade count.
- US dollar-denominated index CDS represented 63.0% of index CDS traded notional and 68.2% of trade count. Euro-denominated transactions accounted for 36.8% and 31.4% of traded notional and trade count, respectively.

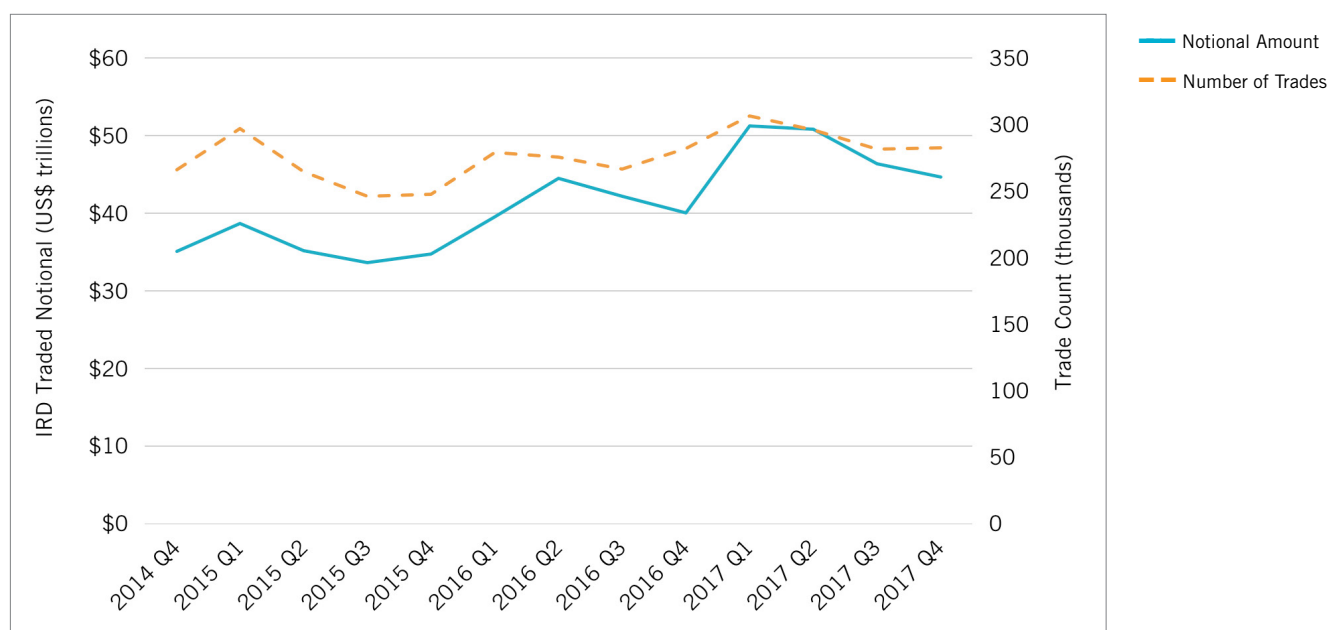
In the fourth quarter of 2017:

- Index CDS traded notional increased by 2% to \$1.54 trillion from \$1.51 trillion in the fourth quarter of 2016. Trade count contracted over the same period, with the number of trades falling by 15.1% to 41,327.
- Average daily notional for index CDS totaled \$24.1 billion, average trade size was \$37 million and average daily trade count was 646.
- Cleared transactions represented 80.1% of traded notional amount and 80.5% of trade count.
- SEF-traded index CDS represented 75.7% of notional amount and 76.9% of trade count.
- CDX HY and CDX IG represented 16.1% and 31.1% of traded notional and 28.8% and 20.6% of total trade count, respectively. iTraxx Europe accounted for 29.6% of total index CDS traded notional and 26.3% of total trade count.
- Index CDS contracts denominated in the US dollars remained the most actively traded instruments. US dollar-denominated index CDS represented 64.2% of index CDS traded notional and 69.8% of trade count. Euro-denominated transactions accounted for 35.7% and 29.9% of traded notional and trade count, respectively.

INTEREST RATE DERIVATIVES

During the fourth quarter of 2017, IRD traded notional amount rose by 11.5%, from \$40.1 trillion to \$44.7 trillion, versus the fourth quarter of 2016. Trade count grew by 0.1% over the same period, from 282,306 to 282,686.

IRD Traded Notional and Trade Count



Source: DTCC and Bloomberg SDRs

In the 12 months ended December 31, 2017, IRD traded notional rose to \$193.1 trillion, a 16.1% increase from \$166.3 trillion for the 12 months ended December 31, 2016. IRD trade count grew by 5.7% over the same period, from 1,103,671 to 1,166,532 transactions.

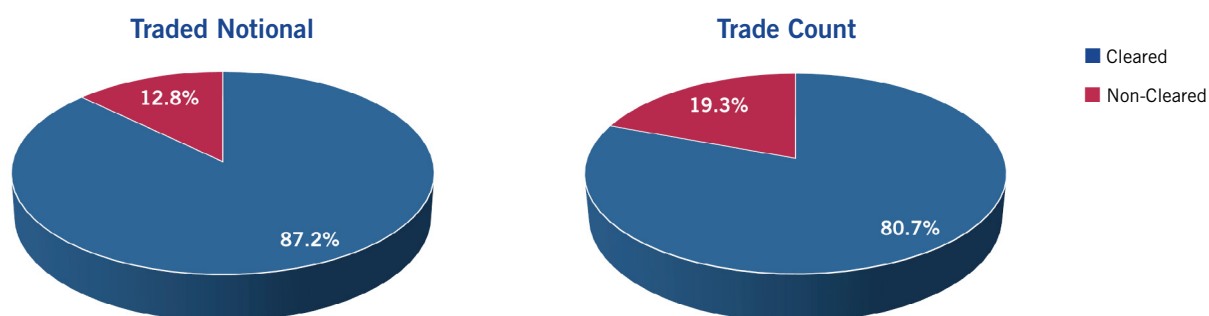
IRD Statistics: Average Daily Notional, Trade Count and Trade Size Quarterly Statistics

In the fourth quarter of 2017, average daily notional for IRD totaled \$687.1 billion, while average trade size was \$151.1 million. Average daily trade count was 4,349.

	Average Daily Notional (US\$ billions)	Average Daily Trade Count	Average Trade Size (US\$ millions)
Q4 2017	687.1	4,349	151.1
Q4 2016	616.2	4,343	134.3
Q4 2017 vs. Q4 2016	11.5%	0.1%	12.5%
LTM 2017	742.7	4,486.7	157.8
LTM 2016	637.1	4,229.3	143.8
LTM 2017 vs. LTM 2016	16.6%	6.1%	9.7%

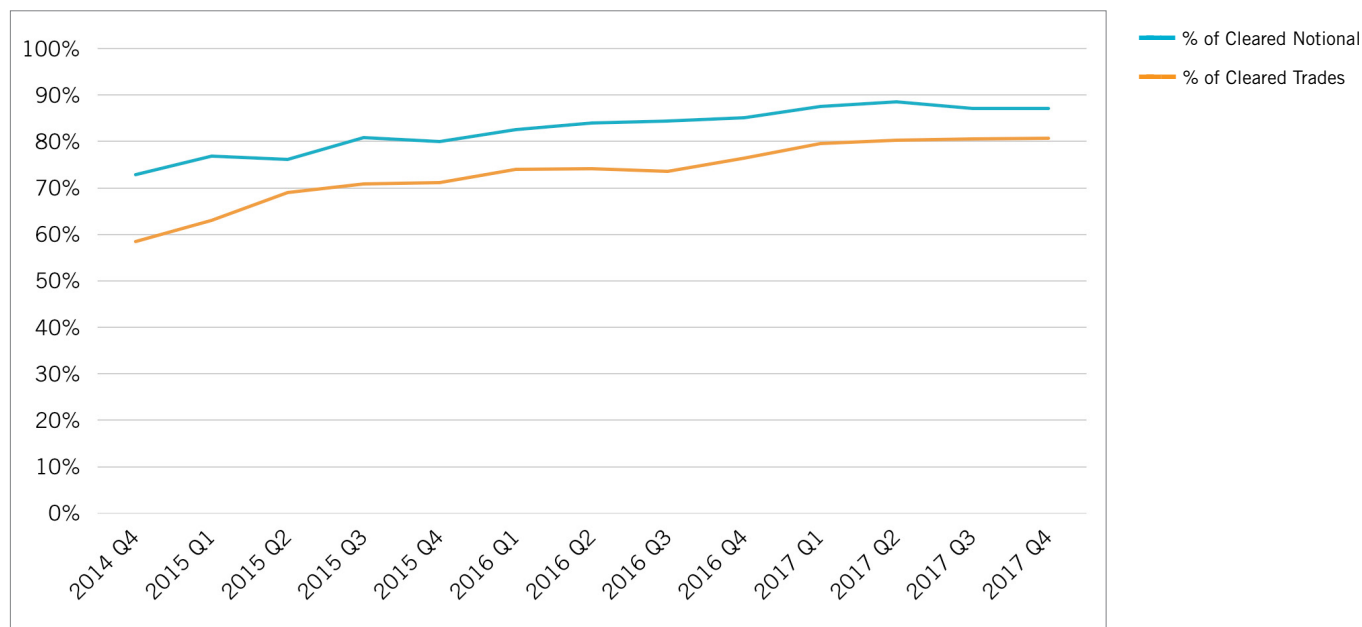
IRD Statistics: Central Clearing

Cleared IRD transactions represented 87.2% of traded notional and 80.7% of trade count during the fourth quarter of 2017. Traded notional amount of IRD cleared transactions was \$38.9 trillion and total trade count was 228,062.



The percentage of both cleared traded notional and cleared trade count has been gradually increasing over the past three years.

Percentage of IRD Cleared Notional and Trade Count



Source: DTCC and Bloomberg SDRs

IRD cleared notional totaled \$38.9 trillion in the fourth quarter of 2017, a 14.3% increase from \$34.1 trillion in the fourth quarter of 2016. Cleared trade count grew by 5.6% over the same period, from 215,875 to 228,062. Cleared notional also ticked up in the 12 months ended December 31, 2017 compared to the 12 months ended December 31, 2016, increasing by 21.1% from \$139.7 trillion to \$169.2 trillion. Trade count grew by 13.8% from 823,009 to 936,558 over the same period.

Non-cleared IRD notional amount fell by 4.1% in the fourth quarter of 2017 versus the fourth quarter of 2016, from \$5.98 trillion to \$5.7 trillion. Trade count decreased by 17.8% over the same period, from 66,431 to 54,624. Non-cleared notional amount for the 12 months ended December 31, 2017 declined to \$23.9 trillion, a 10.2% decrease compared with \$26.6 trillion for the 12 months ended December 31, 2016. Trade count declined by 18.1% from 280,662 to 229,974 over the same period.

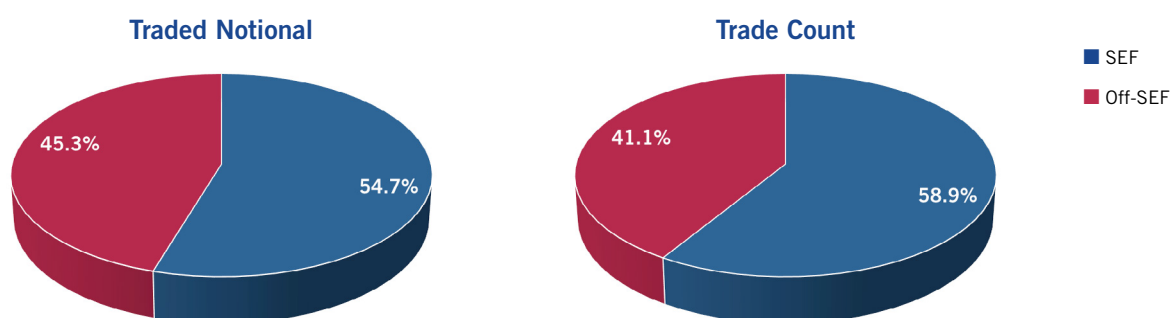
Central Clearing: IRD Traded Notional and Trade Count



Source: DTCC and Bloomberg SDRs

IRD Statistics: Trading Venue

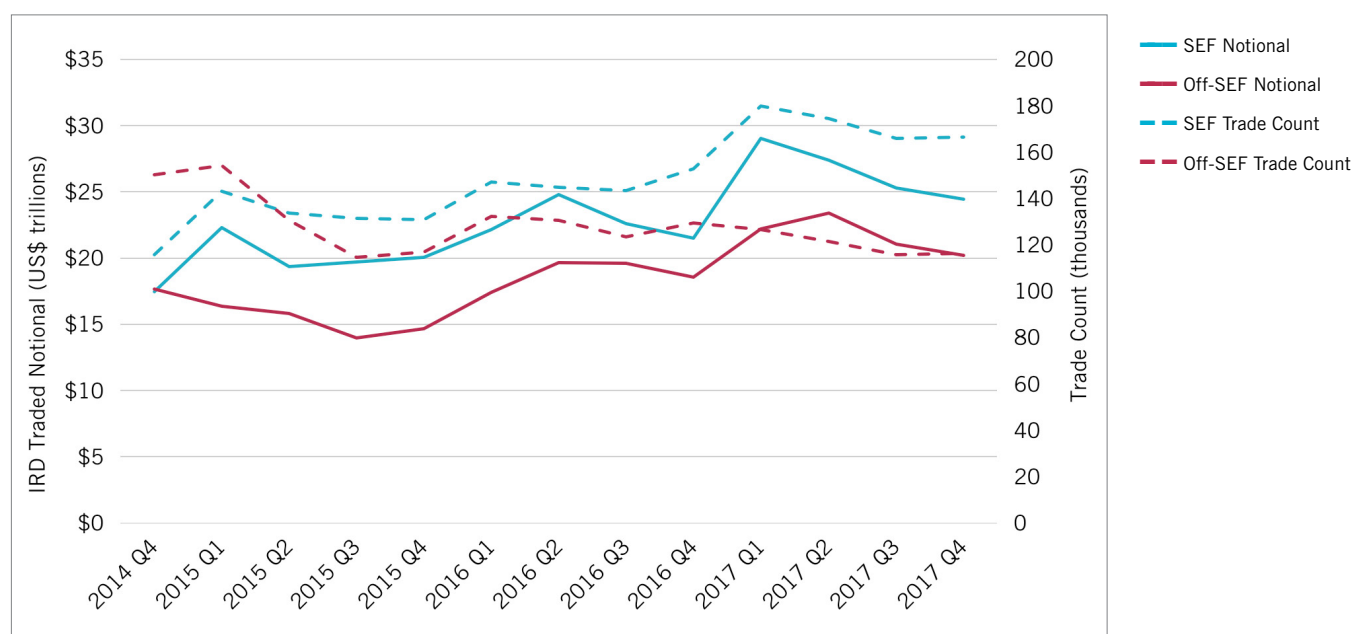
During the fourth quarter of 2017, SEF traded notional grew at a faster pace than off-SEF traded notional. SEF-traded IRD represented 54.7% of notional volume and 58.9% of trade count. Total IRD notional amount executed on SEFs was \$24.4 trillion, while \$20.2 trillion was executed off-SEF. 166,454 transactions were executed on SEFs and 116,232 transactions occurred off-SEF.



In the fourth quarter of 2017, notional IRD executed on SEFs grew by 13.7% compared with the same period a year ago, from \$21.5 trillion to \$24.4 trillion. The number of trades executed on SEFs increased by 8.9% from 152,886 to 166,454 over the same period. For the 12 months ended December 31, 2017, notional executed on SEFs jumped up by 16.7% to \$106.2 trillion from \$91.02 trillion in the 12 months ended December 31, 2016. Trade count also increased by 16.7% from 588,188 to 686,598 over the same period.

Notional amount transacted off-SEF increased by 9% from \$18.6 trillion in the fourth quarter of 2016 to \$20.2 trillion in the fourth quarter of 2017. However, the number of transactions decreased by 10.2% over the same period, from 129,420 to 116,232. For the 12 months ended December 31, 2017, notional amount executed off-SEF grew by 15.5%, but trade count declined by 6.9% compared with the prior year. Notional amount increased from \$75.3 trillion to \$86.9 trillion, and the number of transactions declined from 515,483 to 479,934.

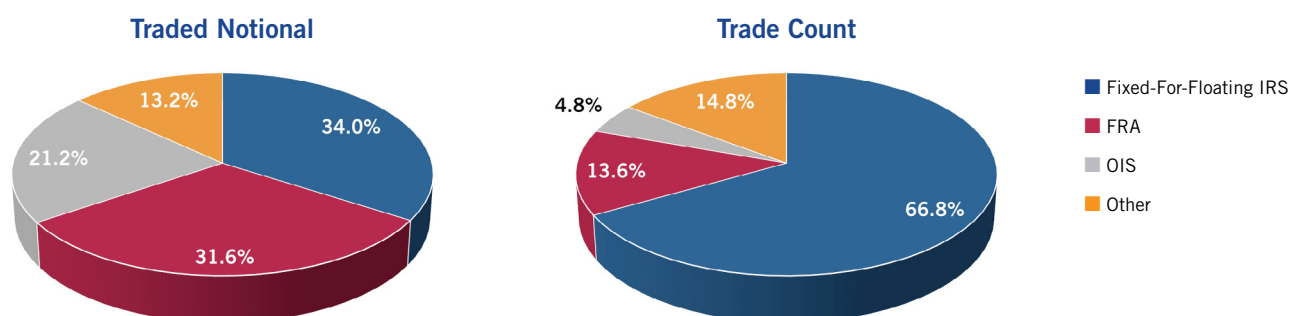
SEF and Off-SEF IRD Traded Notional and Trade Count



Source: DTCC and Bloomberg SDRs

IRD Statistics: Product Taxonomy

Single currency fixed-for-floating IRS accounted for 66.8% of IRD trade count, but represented only 34% of IRD traded notional. FRAs and OIS represented 31.6% and 21.2% of traded notional and 13.6% and 4.8% of trade count, respectively, in the fourth quarter 2017.

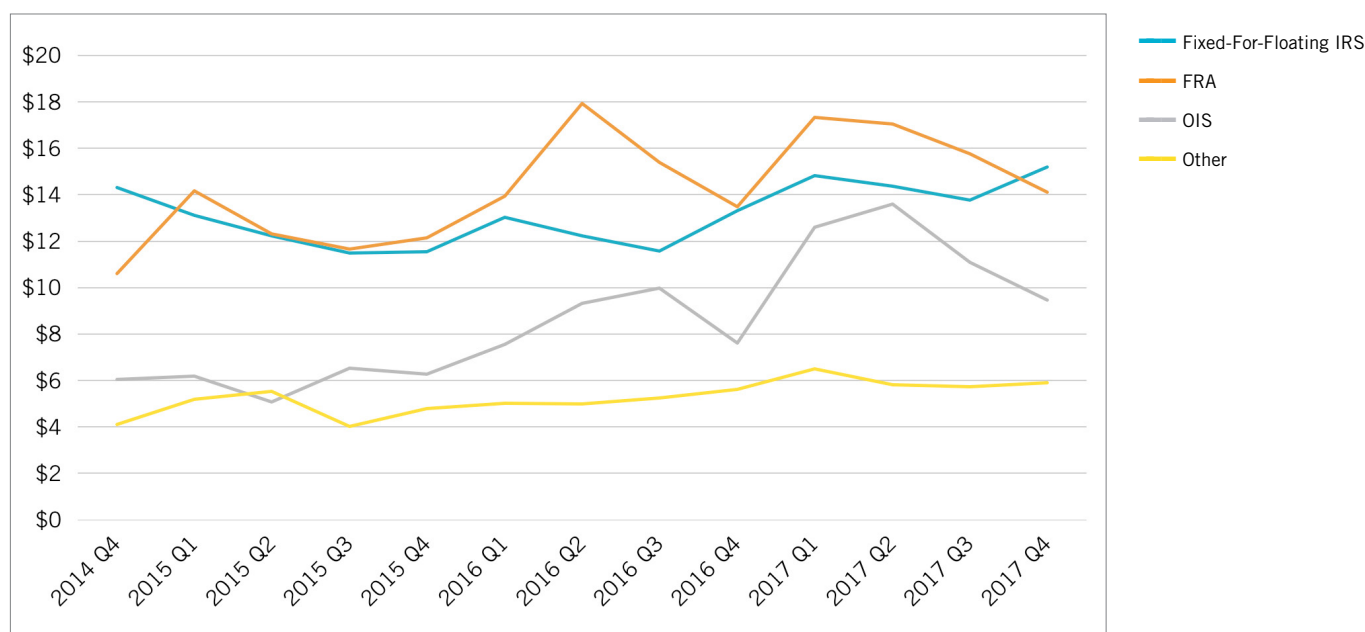


Fixed-for-floating IRS traded notional increased by 14.1% from \$13.3 trillion in the fourth quarter 2016 to \$15.2 trillion in the fourth quarter 2017. IRS trade count increased by 1.2% quarter-over-quarter. Traded notional for the 12 months ended December 31, 2017 increased by 16% to \$58.2 trillion from \$50.2 trillion a year before, and trade count grew by 4.9% year-over-year.

OIS traded notional increased by 24.2% from \$7.6 trillion in the fourth quarter of 2016 to \$9.5 trillion in the fourth quarter 2017, and grew by 35.6% from \$34.5 trillion to \$46.8 trillion year-over-year. OIS trade count decreased by 7.3% during the fourth quarter of 2017 compared with the fourth quarter of 2016, and increased by 12.4% year-over-year.

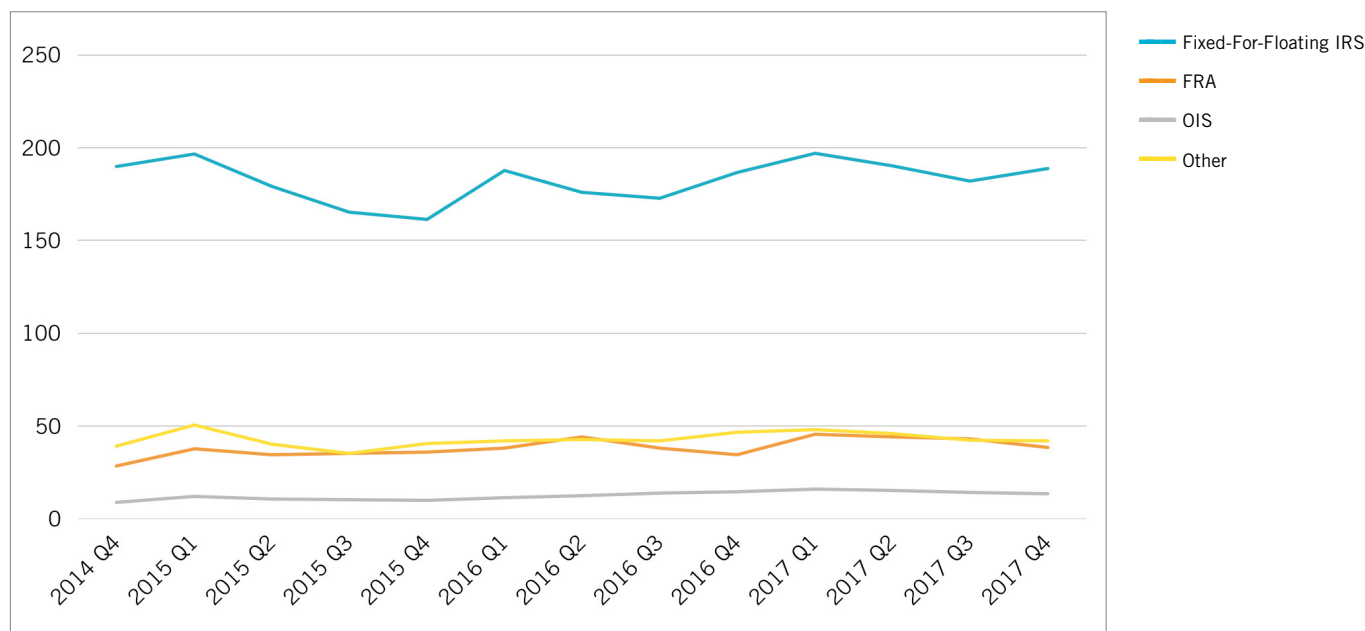
FRA traded notional increased by 4.5% from \$13.5 trillion in the fourth quarter of 2016 to \$14.1 trillion in the fourth quarter of 2017. Trade count increased by 11.1% over the same period. Traded notional for the 12 months ended December 31, 2017 increased by 5.8% to \$64.3 trillion from \$60.8 trillion the previous year. Trade count increased by 10.8% to 171,127 from 154,462 over the same period.

IRD Traded Notional by Product (US\$ trillions)



Source: DTCC and Bloomberg SDRs

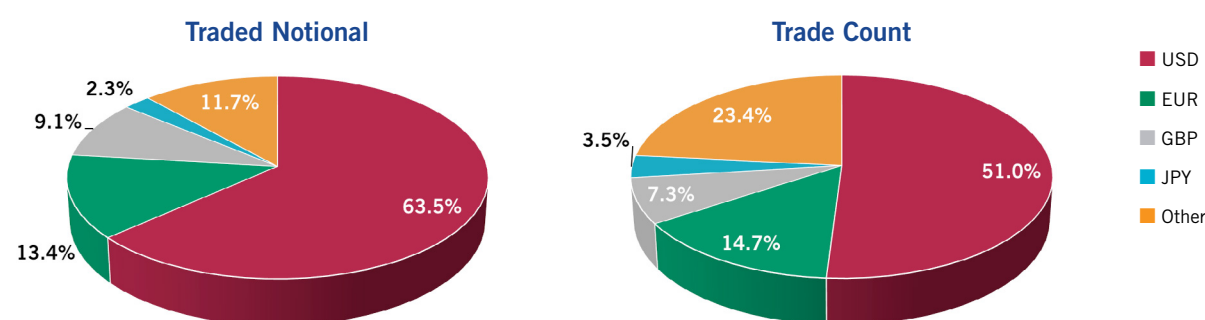
IRD Trade Count by Product (thousands)



Source: DTCC and Bloomberg SDRs

IRD Statistics: Currency

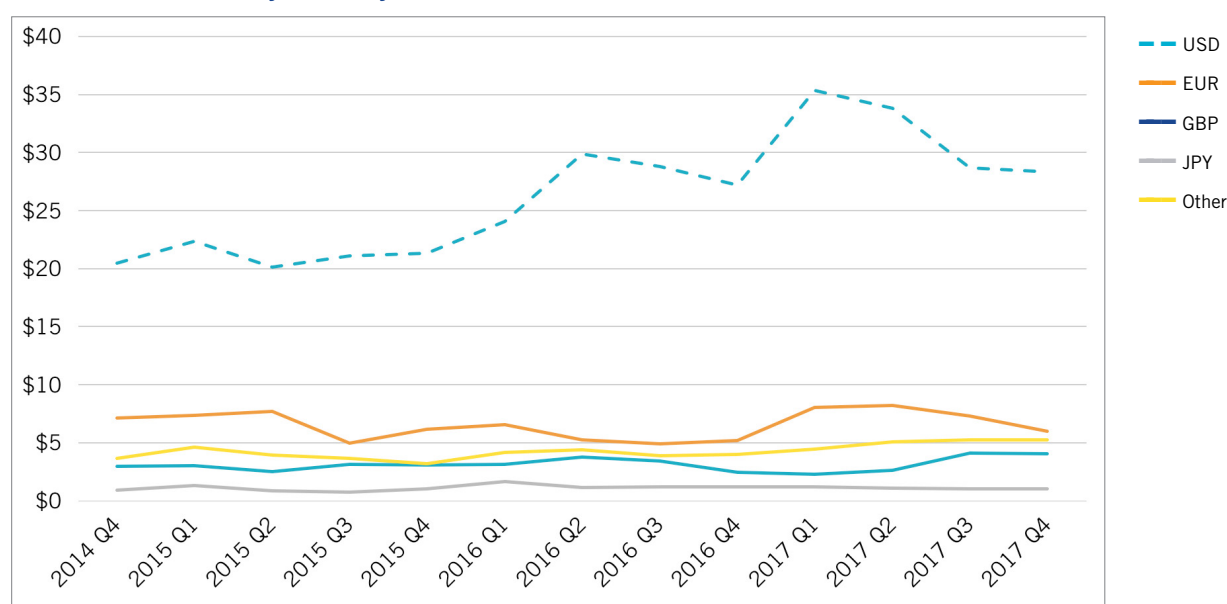
IRD contracts in US dollars remained the most actively traded instruments, with traded notional totaling \$28.4 trillion in the fourth quarter of 2017. US dollar-denominated IRD contributed 63.5% of traded notional and 51% of trade count. Euro-denominated transactions accounted for a far smaller percentage of traded notional (13.4%) and trade count (14.7%).



US dollar-, euro- and sterling-denominated IRD traded notional increased by 4.3%, 14.7% and 65.6%, respectively, in the fourth quarter of 2017 compared with the fourth quarter of 2016. Yen-denominated traded notional declined by 13.2%, respectively, over the same period. US dollar-denominated traded notional totaled \$28.4 trillion in the fourth quarter of 2017 compared with \$27.2 trillion in the fourth quarter of 2016. Euro-denominated traded notional reached \$5.97 trillion in the fourth quarter of 2017 compared with \$5.2 trillion in the fourth quarter of 2016. Traded notional for sterling- and yen-denominated trades totaled \$4.1 trillion and \$1.1 trillion, respectively, at the end of the fourth quarter of 2017. Trade count increased by 4.3% for euro-denominated trades and 8.3% for sterling trades, and declined by 6.4% and 8.2% for US dollar- and yen-denominated trades, respectively, in the fourth quarter of 2017 compared with the fourth quarter of 2016.

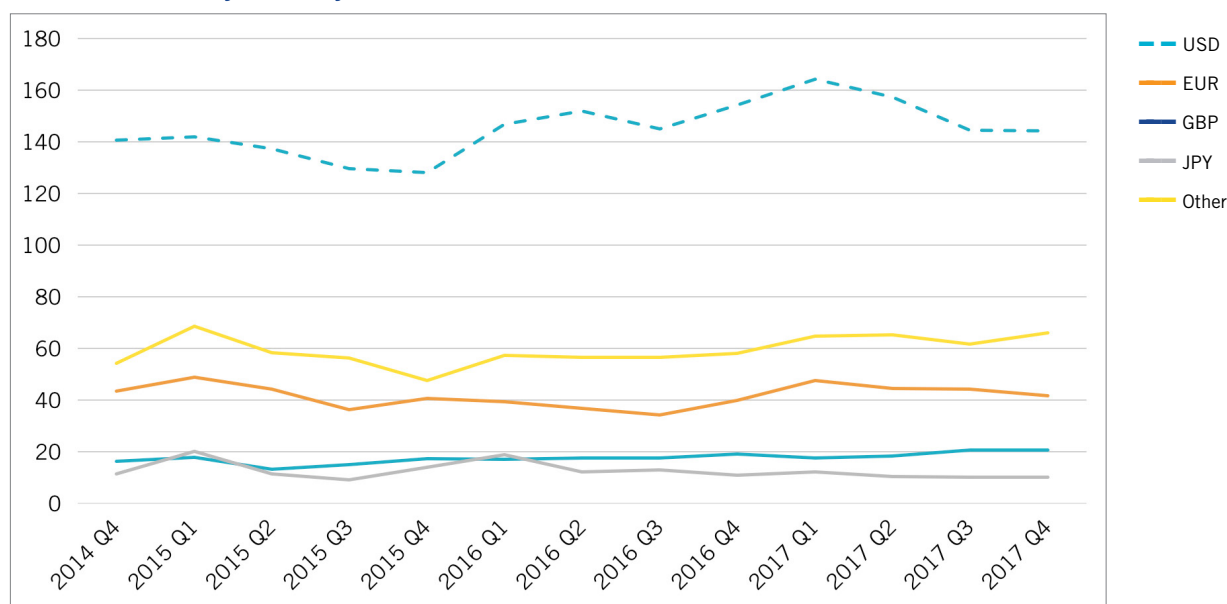
During the 12 months ended December 31, 2017, US dollar-denominated IRD traded notional increased by 14.8% to \$126.2 trillion from \$109.9 trillion in the 12 months ended December 31, 2016. Euro-denominated traded notional increased by 34.5% to \$29.5 trillion from \$21.9 trillion. Sterling-denominated national increased by 2.2% to \$13.1 trillion, while yen-denominated notional declined by 16.2% to \$4.4 trillion. Trade count increased by 2.1% for US dollar-denominated transactions from 598,326 to 610,772 year-over-year. Trade count for euro- and sterling-denominated transactions increased by 18.4% and 8.3% to 177,998 and 77,258, respectively, while trade count for yen trades declined by 22.6% to 42,584 year-over-year.

IRD Traded Notional by Currency (US\$ trillions)



Source: DTCC and Bloomberg SDRs

IRD Trade Count by Currency (thousands)

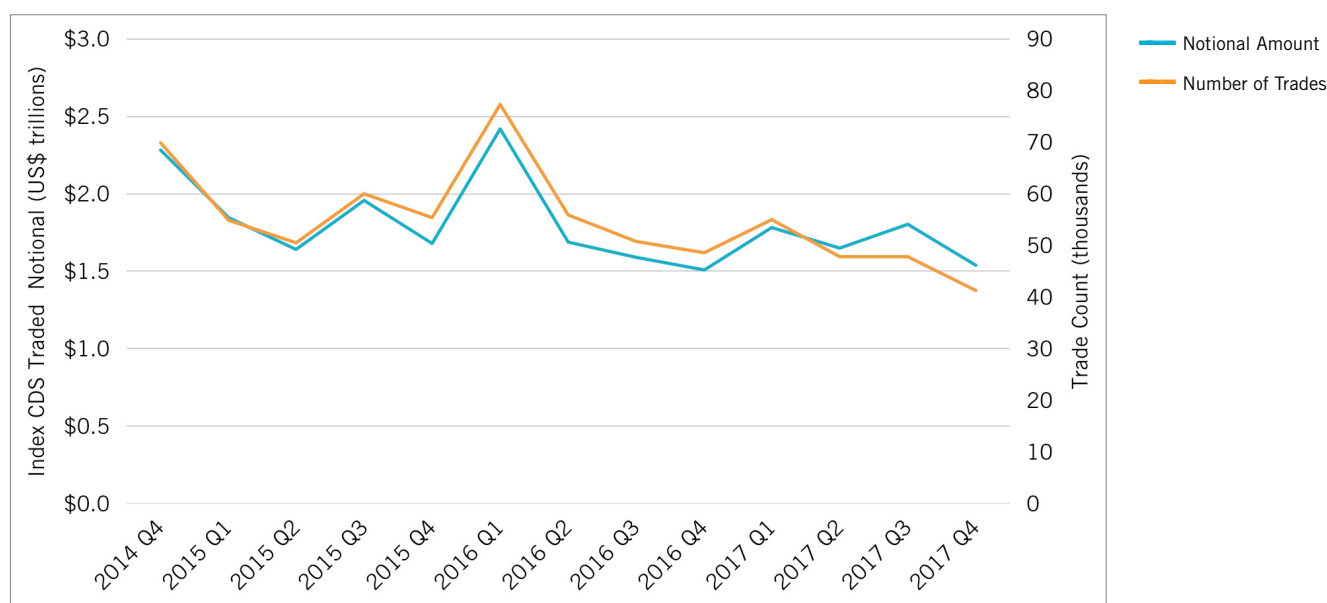


Source: DTCC and Bloomberg SDRs

INDEX CREDIT DEFAULT SWAPS

Index CDS trade count continued to fall during the fourth quarter of 2017. Traded notional amount increased by 2% to \$1.54 trillion in the fourth quarter of 2017 from \$1.51 trillion in the fourth quarter of 2016. The number of trades declined by 15.1% to 41,327 from 48,649 over the same period.

Index CDS Traded Notional and Trade Count



Source: DTCC and Bloomberg SDRs

In the 12 months ended December 31, 2017, index CDS traded notional fell to \$6.8 trillion, a 6.0% decline from \$7.2 trillion in the 12 months ended December 31, 2016. Index CDS trade count declined by 17.5% to 191,956 from 232,592 over the same period.

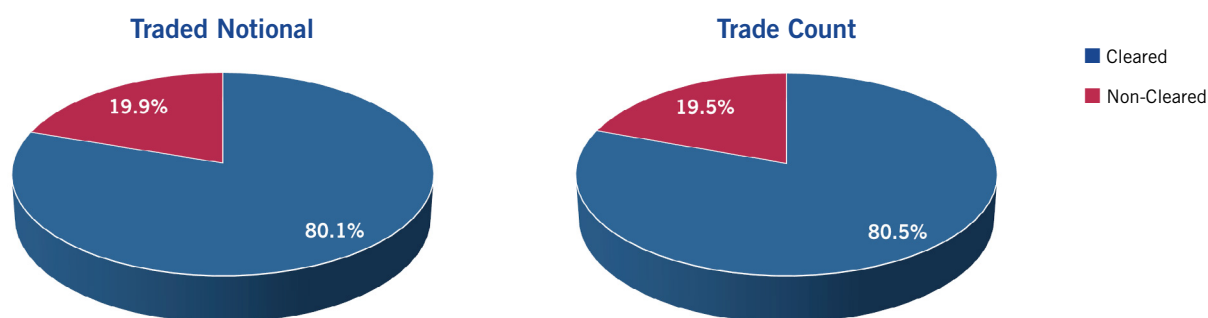
Index CDS Statistics: Average Daily Notional, Trade Count and Trade Size Quarterly Statistics

In the fourth quarter of 2017, average daily notional for index CDS totaled \$24.1 billion, average trade size was \$37 million and average daily trade count was 646.

	Average Daily Notional (US\$ billions)	Average Daily Trade Count	Average Trade Size (US\$ millions)
Q4 2017	24.1	646	37.0
Q4 2016	23.6	760	31.4
Q4 2017 vs. Q4 2016	2%	-15%	18%
LTM 2017	26.1	741	34.6
LTM 2016	27.7	897	30.3
LTM 2017 vs. LTM 2016	-6%	-17%	14%

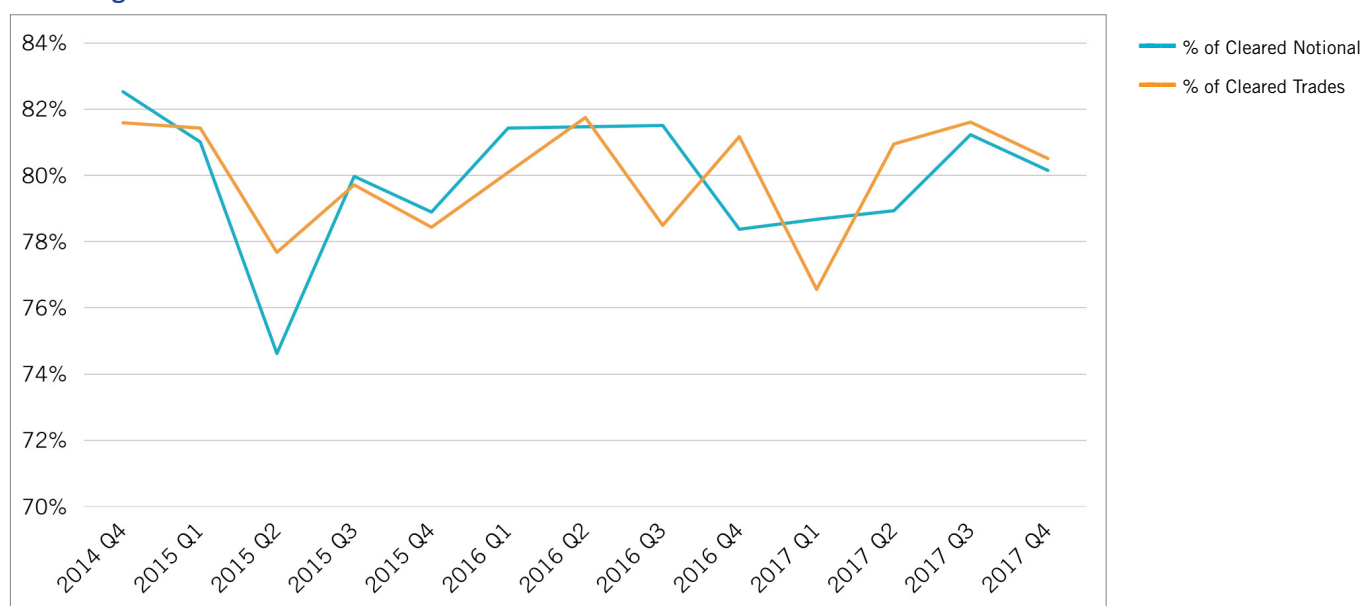
Index CDS Statistics: Central Clearing

During the fourth quarter of 2017, cleared CDS transactions represented 80.1% of traded notional amount and 80.5% of trade count. Traded notional amount of index CDS cleared transactions was \$1.2 trillion and total trade count was 33,269.



Over the past three years, the percentage of cleared index CDS notional and trade count has fluctuated between 74% and 83%.

Percentage of Index CDS Cleared Notional and Trade Count

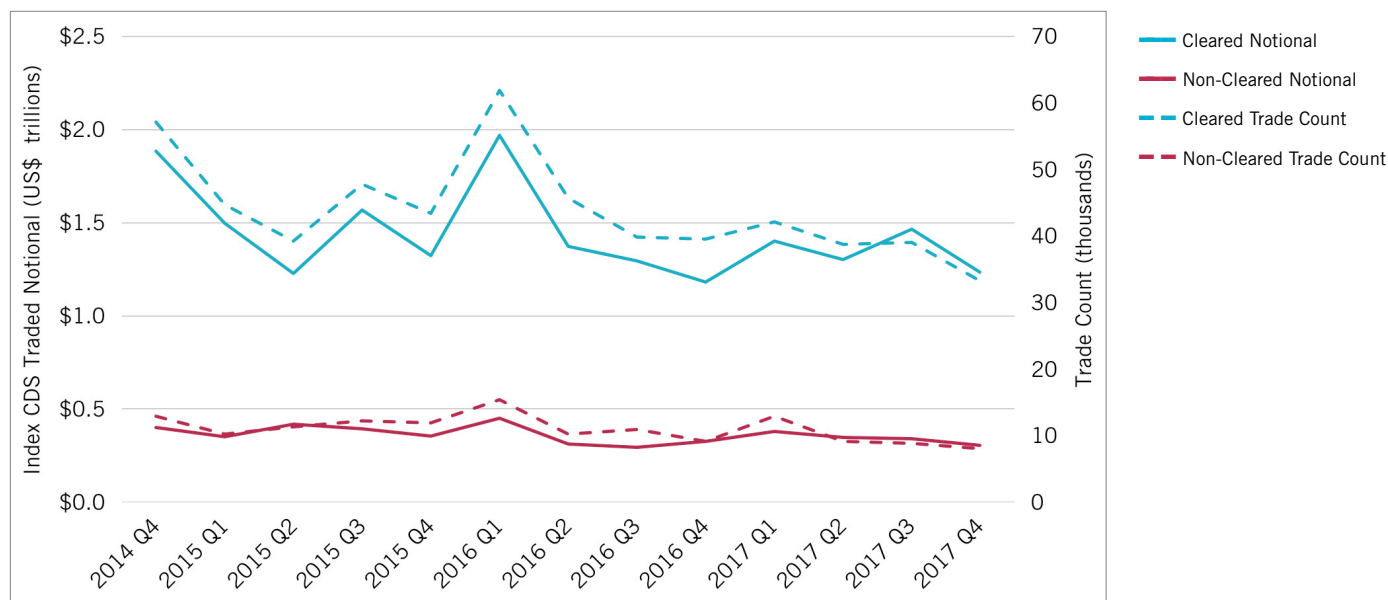


Source: DTCC and Bloomberg SDRs

Cleared index CDS notional increased by 4.3% to \$1.23 trillion in the fourth quarter of 2017 from \$1.18 trillion in the fourth quarter of 2016. Cleared trade count decreased by 15.7% over the same period to 33,269 from 39,484. Cleared notional also decreased in the 12 months ended December 31, 2017 compared to the 12 months ended December 31, 2016, shrinking by 7.2% to \$5.4 trillion from \$5.8 trillion. Trade count declined by 18.1% to 153,091 from 186,925 over the same period.

Non-cleared index CDS notional decreased by 6.3% in the fourth quarter of 2017 versus the fourth quarter of 2016, to \$305.7 billion from \$326.3 billion. Trade count decreased by 12.1% over the same period, to 8,058 from 9,165. Non-cleared notional amount for the 12 months ended December 31, 2017 declined to \$1.4 trillion, a 0.8% decrease compared with \$1.4 trillion in the prior year. Trade count declined by 14.9% to 38,865 from 45,667 over the same period.

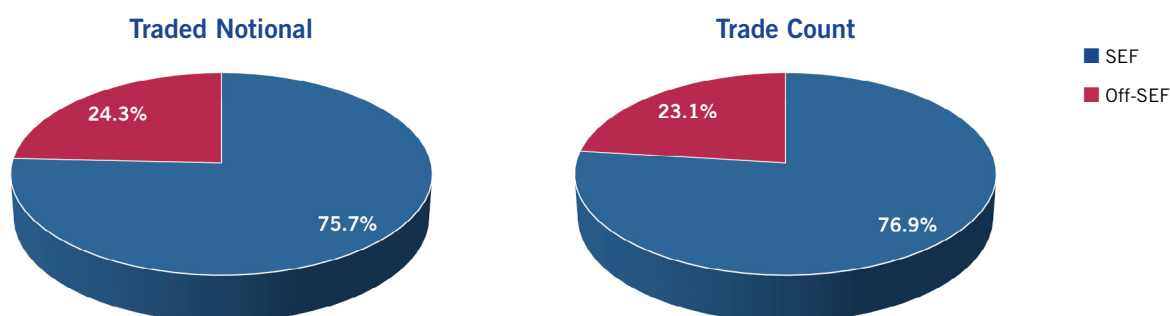
Index CDS Traded Notional and Trade Count



Source: DTCC and Bloomberg SDRs

Index CDS Statistics: Trading Venue

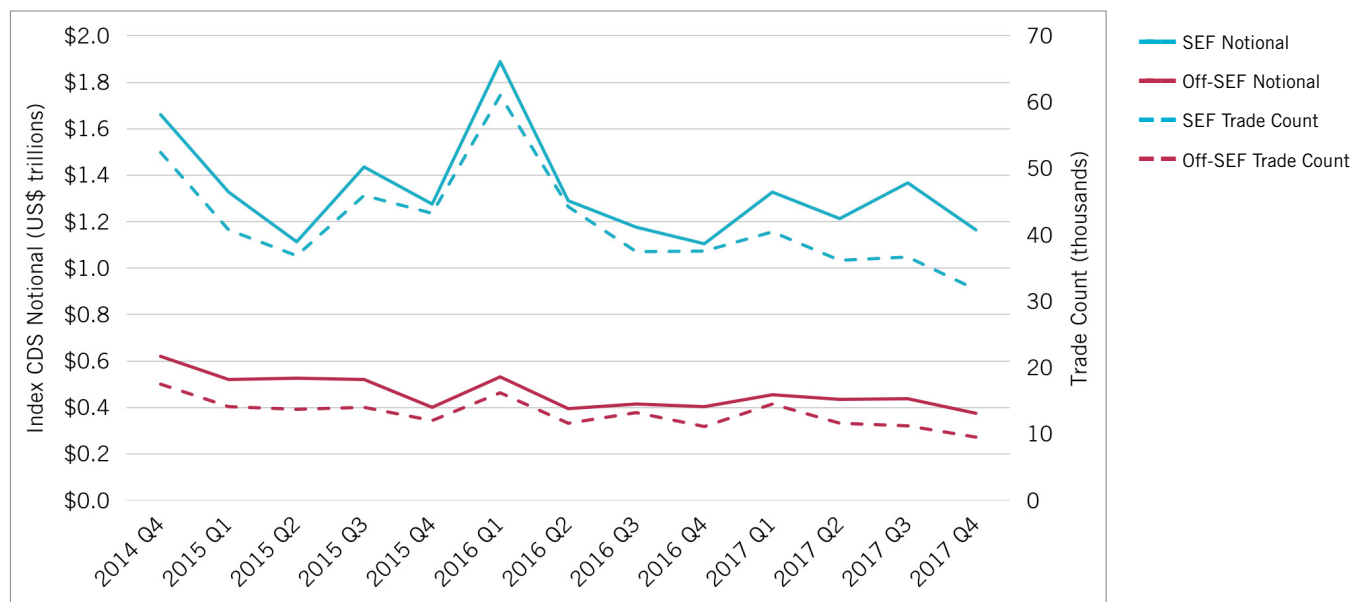
During the fourth quarter of 2017, SEF traded notional increased, while off-SEF traded notional decreased. Both SEF and off-SEF trade count declined compared with the fourth quarter of 2016. SEF-traded index CDS represented 75.7% of traded notional and 76.9% of trade count. Total notional amount executed on SEFs was \$1.2 trillion, while \$0.4 trillion was executed off-SEF. 31,770 transactions were executed on SEFs and 9,557 transactions were off-SEF.



In the fourth quarter of 2017, index CDS notional executed on SEFs increased by 5.3% compared with the fourth quarter of 2016, to \$1.2 trillion from \$1.1 trillion. The number of trades executed on SEFs declined by 15.4% to 31,770 from 37,553 over the same period. For the 12 months ended December 31, 2017, notional executed on SEFs shrank by 7.1% to \$5.1 trillion from \$5.5 trillion in the 12 months ended December 31, 2016. Trade count decreased by 19.5% to 145,069 from 180,300 over the same period.

Notional amount transacted off-SEF decreased by 7.0% to \$374.4 billion in the fourth quarter of 2017 from \$402.6 billion in the fourth quarter of 2016. The number of transactions decreased by 13.9% over the same period, to 9,557 from 11,096. For the 12 months ended December 31, 2017, notional amount and transaction count executed off-SEF declined by 2.5% and 10.3%, respectively, compared with the prior year. Notional amount decreased to \$1.70 trillion from \$1.74 trillion, and the number of transactions declined to 46,887 from 52,292.

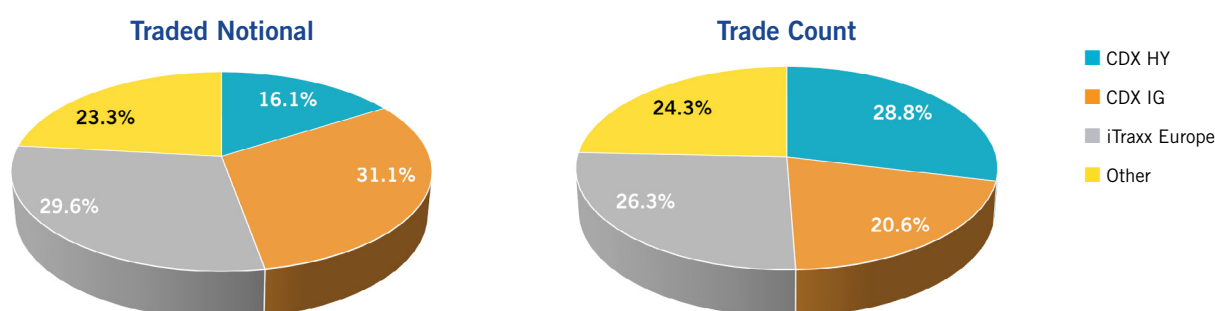
SEF and Off-SEF Index CDS Indices Traded Notional and Trade Count



Source: DTCC and Bloomberg SDRs

Index CDS: Product Taxonomy

In the fourth quarter of 2017, CDX HY and CDX IG represented 16.1% and 31.1% of traded notional and 28.8% and 20.6% of total trade count, respectively. iTraxx Europe accounted for 29.6% of index CDS traded notional and 26.3% of total trade count.

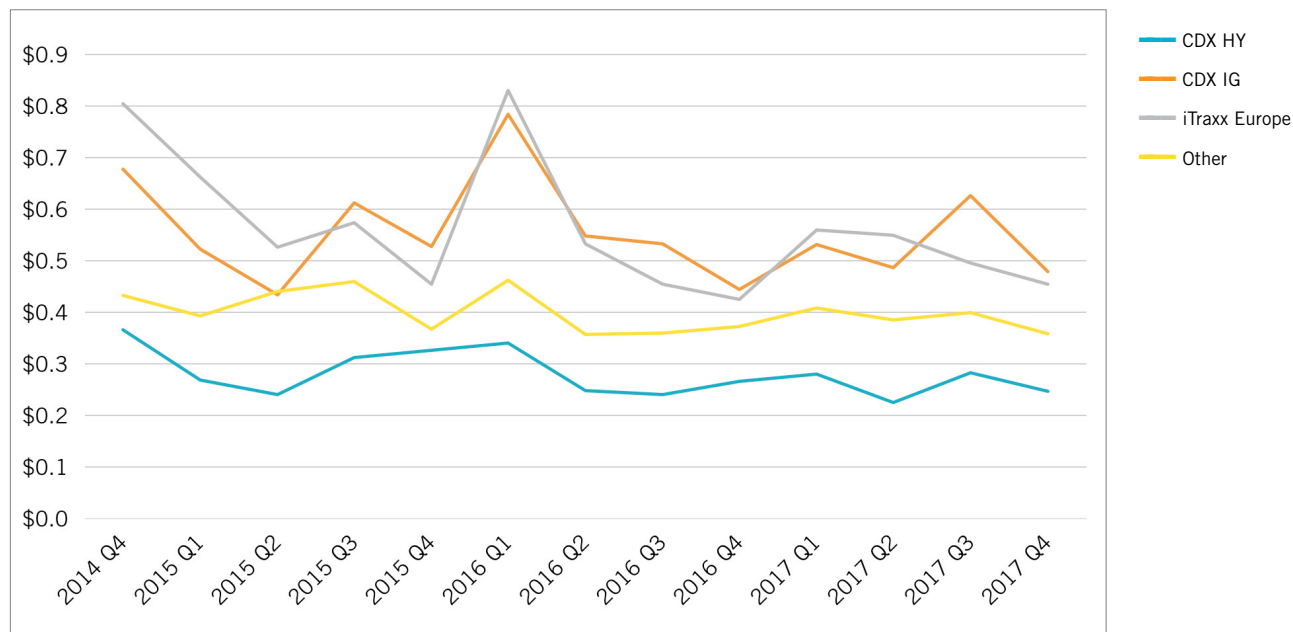


In the fourth quarter of 2017, CDX HY traded notional decreased by 7.4%, while CDS IG traded notional increased by 7.8% compared with the fourth quarter of 2016. CDX HY declined to \$247.1 billion from \$266.7 billion, and CDX IG increased to \$478.8 billion from \$444.1 billion. Trade count decreased quarter-over-quarter by 18.5% for CDX HY and by 13.1% for CDX IG.

In the 12 months ended December 31, 2017, CDX HY traded notional decreased by 5.6% to \$1.03 trillion from \$1.1 trillion in the 12 months ended December 31, 2016. CDX IG traded notional declined by 8% over the same period, to \$2.1 trillion from \$2.3 trillion. Trade count for CDX HY and CDX IG fell by 14.1% and 17.4% year-over-year to 52,349 and 39,869, respectively.

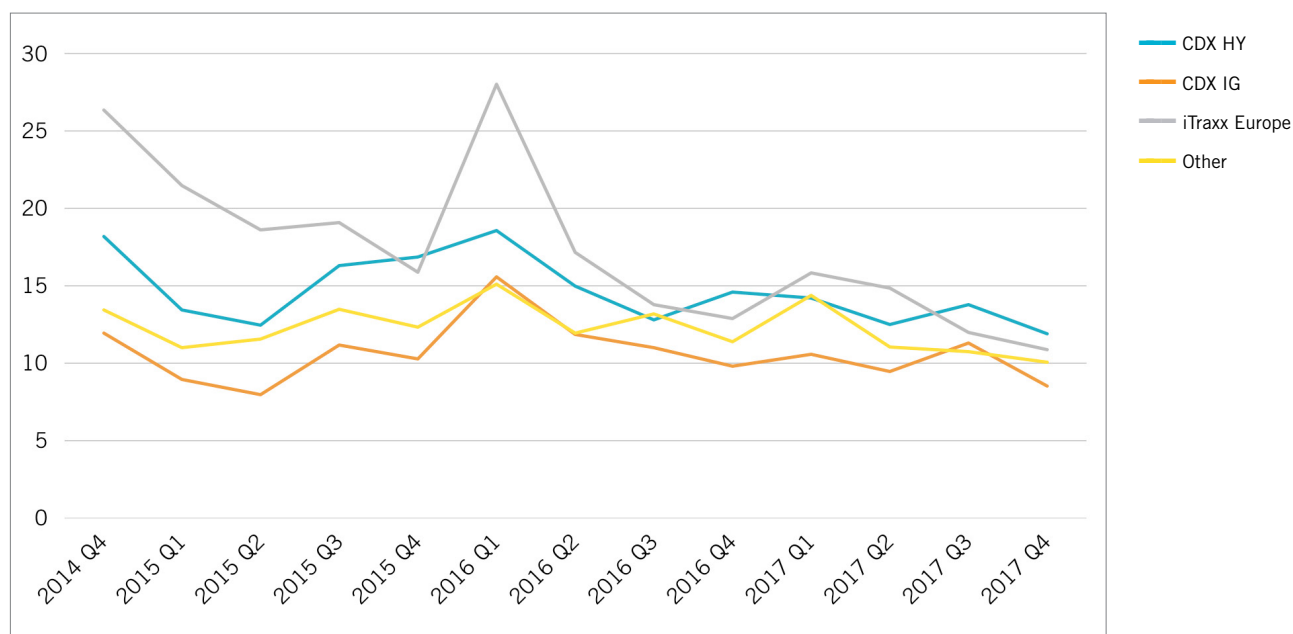
In the fourth quarter of 2017, iTraxx Europe traded notional increased by 7% compared with the fourth quarter of 2016, to \$455 billion from \$425.2 billion. Trade count declined by 15.6% to 10,863 from 12,866 over the same period. In the 12 months ended December 31, 2017, iTraxx Europe traded notional declined by 8.2% to \$2.1 trillion compared with \$2.2 trillion in the 12 months ended December 31, 2016. Trade count decreased by 25.4% over the same period.

Index CDS Traded Notional (US\$ trillions)



Source: DTCC and Bloomberg SDRs

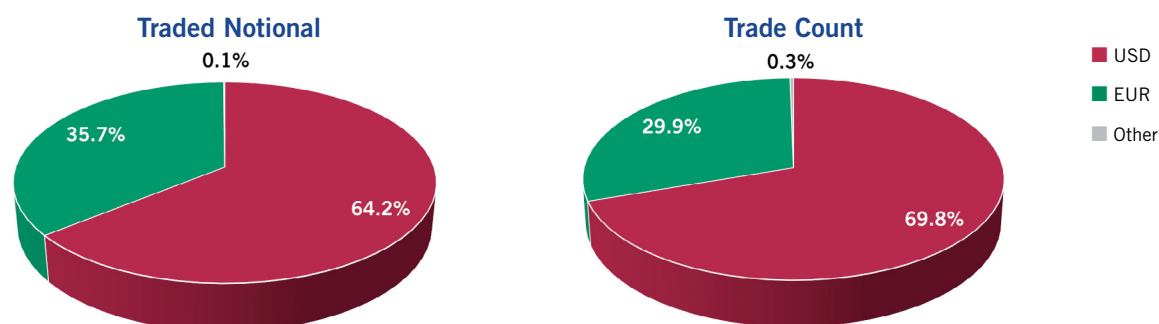
Index CDS Trade Count (thousands)



Source: DTCC and Bloomberg SDRs

Index CDS Statistics: Currency

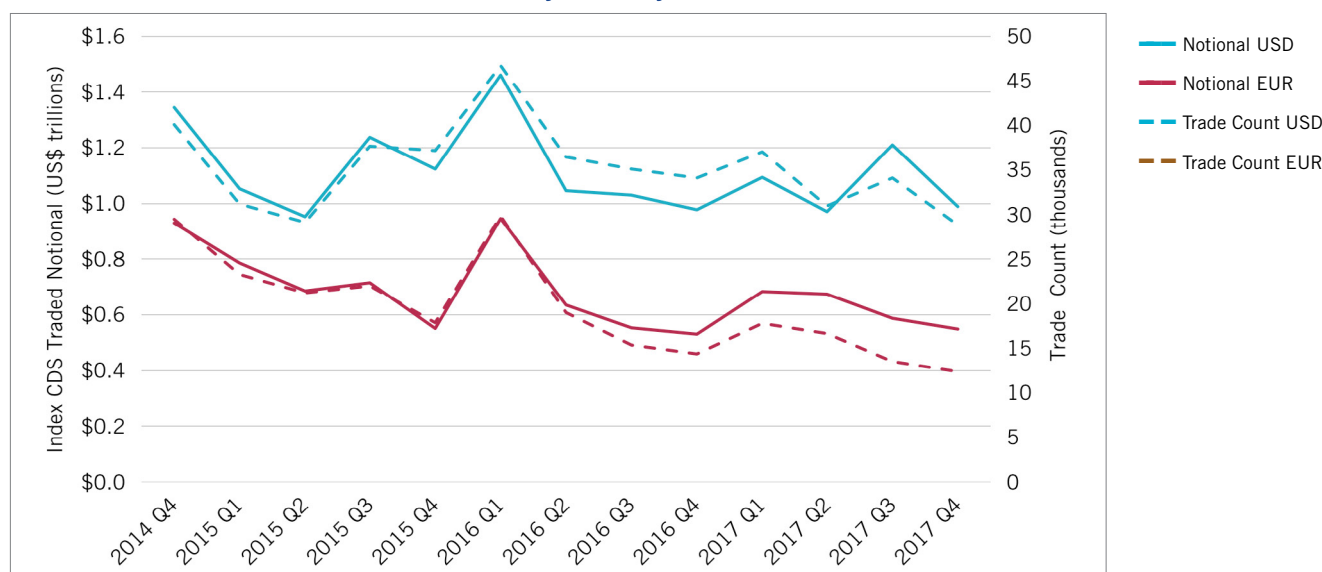
In the fourth quarter of 2017, index CDS contracts denominated in US dollars remained the most actively traded instruments. US dollar-denominated index CDS represented 64.2% of traded notional and 69.8% of trade count. Euro-denominated transactions accounted for 35.7% and 29.9% of traded notional and trade count, respectively.



US dollar- and euro-denominated index CDS traded notional increased by 1.1% and 3.8%, respectively, in the fourth quarter of 2017 compared with the fourth quarter of 2016. US dollar-denominated index CDS traded notional totaled \$0.99 trillion in the fourth quarter of 2017 compared with \$0.98 trillion in the fourth quarter of 2016. Euro-denominated traded notional reached \$549.8 billion in the fourth quarter of 2017 versus \$529.5 billion in the fourth quarter of 2016. Trade count declined by 15.4% for US dollar trades and by 14.0% for euro-denominated trades to 28,830 and 12,376, respectively, over the same period.

During the 12 months ended December 31, 2017, US dollar-denominated index CDS traded notional declined by 5.5% to \$4.3 trillion from \$4.5 trillion in the 12 months ended December 31, 2016. Euro-denominated index CDS traded notional also decreased by 6.3% to \$2.5 trillion from \$2.7 trillion over the same period. Trade count declined by 14.1% and 23.2% for US dollar- and euro-denominated transactions year-over-year, respectively. For other currencies, notional and trade count declined by 47.4% and 53.6% year-over-year, respectively.

Index CDS Traded Notional and Trade Count by Currency



Source: DTCC and Bloomberg SDRs



ISDA has published other recent research papers:

- ***Asia-Pacific OTC Derivatives Study, November, 2017***

<https://www.isda.org/a/jRTEE/Asia-Pacific-Derivatives-Study-November-2017.pdf>

- ***ISDA Margin Survey 2017, September, 2017***

<http://www2.isda.org/attachment/OTYyMg==/Margin%20Survey%20FINAL1.pdf>

- ***SwapsInfo Third Quarter 2017 Review, October 2017***

<https://www.isda.org/a/9yKDE/Swaps-review-Q3-2017-FINAL.pdf>

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