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Research Note

Actual Cleared Volumes vs. Mandated Cleared Volumes: Analyzing the US Derivatives Market

Encouraging the clearing of standardized derivatives has been a major priority for policy-makers. This has primarily been pursued through the implementation of clearing mandates, but other incentives also exist – netting and capital benefits, and the rollout of margining requirements for non-cleared derivatives, for example. As a result, the majority of interest rate derivatives (IRD) traded notional is now cleared.

This paper analyzes the volume of cleared derivatives to determine the impact of these incentives. In particular, the paper compares cleared notional amounts of over-the-counter (OTC) derivatives with the amounts subject to the US Commodity Futures Trading Commission (CFTC) clearing mandate. The results show that market participants clear more transactions than required under the CFTC's clearing mandate.

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ISDA research shows US market participants have been clearing more contracts than what is required under US clearing mandates

EXECUTIVE SUMMARY

The migration of new derivatives trades to central clearing is a key public policy goal. This has resulted in a number of regulatory initiatives, including the clearing mandate, revised capital requirements and margin rules for non-cleared derivatives.

Policy-makers and market participants are now assessing whether the goal of encouraging clearing has been achieved. Toward that end, ISDA has conducted research that examines publicly available data on derivatives trading and clearing volumes of transactions subject to US reporting requirements. A summary of the analysis is set out in Table 1, and shows:

- From 2014 to 2017, the percentage of IRD traded notional that was subject to US clearing mandates implemented by the CFTC rose from 73% (2014 and 2015) to 77% and 85% (2016 and 2017, respectively)¹.
- During the same four-year period, the percentage of IRD traded notional that was actually cleared increased from 77% (2014) to 78% (2015), 84% (2016) and 88% (2017).

Table 1: Percentage of US Cleared and Mandated to be Cleared IRD Traded Notional

	Total US IRD Trading Volume (US\$ trillions)	Cleared (%)	Mandated to be Cleared (%)
2014	143.8	77	73
2015	142.2	78	73
2016	166.3	84	77
2017	193.1	88	85

In short, against a backdrop of increased trading volumes, the percentage of centrally cleared derivatives has been steadily growing since the first CFTC clearing mandate was imposed in 2013².

Importantly, market participants have consistently cleared more than they are required to clear: four percentage points (\$5.8 trillion) more in 2014; five percentage points (\$7.1 trillion) more in 2015; seven percentage points (\$11.6 trillion) more in 2016; and three percentage points (\$5.8 trillion) more in 2017. The narrowing of the gap in 2017 between trading volumes of the contracts subject to the clearing mandate and those actually cleared likely reflects the fact that the scope of products mandated to clear broadened at the end of 2016.

¹ Since ISDA does not have data to determine whether transactions were executed by counterparties exempt from the clearing requirement, we assume that all transactions in products subject to the CFTC's clearing mandate were executed by counterparties that are required to clear. As the result of this assumption, the percentage of the notional mandated to clear is likely to be overestimated

² Compliance dates for the CFTC's clearing requirements were phased by type of market participant. Category 1 entities were required to clear on March 11, 2013 for swaps they enter into on or after that date. Category 2 entities were required to clear beginning on June 10, 2013 for swaps entered into on or after that date, and Category 3 entities were required to clear beginning on September 9, 2013 for swaps entered into on or after that date

These statistics reflect several important dynamics:

- The CFTC's clearing mandates for IRD currently cover the overwhelming majority of the market.
- The economic and other benefits of multilateral netting as firms novate trades from multiple counterparties to a single central counterparty (CCP) are a powerful incentive to clear, which is driving participants to clear more than the rules mandate. This includes both products not subject to the clearing mandate, as well as trades with counterparties that are exempt from clearing. For example, inflation swaps are not subject to the CFTC's clearing mandate, but about 80% of inflation swaps traded notional was cleared in 2017.
- There is little evidence to suggest that firms are seeking to evade the clearing requirements by structuring their transactions to render them non-clearable or by migrating to products that are not subject to the CFTC's clearing mandate. On an absolute basis, the notional amount of US non-cleared IRD declined from \$32.7 trillion in 2014 to \$23.9 trillion in 2017. On a relative basis, the percentage of IRD trading volumes represented by product types that are not subject to the CFTC's clearing mandate (such as cross-currency swaps, options and swaptions) has remained at approximately 10% throughout the four-year period from 2014 to 2017.

While this specifically relates to IRD, market participants also have been clearing other OTC derivatives for which there is no clearing mandate in the US, including single-name credit default swaps (CDS), foreign exchange (FX) – in particular, non-deliverable forwards (NDFs) – and equity derivatives. This is likely due to the desire of counterparties to mitigate credit risk and, in the case of banks, to reduce capital held against such trades. More recently, cleared volumes of these OTC derivatives have increased following the implementation of new margin rules for non-cleared derivatives, which require the mandatory posting of initial margin (IM) and variation margin (VM).

INTRODUCTION

This report analyzes cleared volumes for IRD, CDS, FX and equity products

This report examines cleared notional amounts of OTC derivatives from 2014 to 2017, and compares them with notional amounts that are subject to the clearing mandate. Using data on IRD traded notional from the Depository Trust & Clearing Corporation (DTCC) and Bloomberg swap data repositories (SDRs) from 2014 to 2017, which covers transactions subject to US reporting requirements, analysis was conducted on IRD traded and cleared notional amounts. Each major IRD product category that is subject to the CFTC's clearing mandate, including fixed-floating swaps, basis swaps, forward rate agreements (FRAs) and overnight index swaps (OIS), was then assessed in greater detail.

Cleared volumes for CDS indices and single-name CDS were also analyzed. Although there is no regulatory mandate requiring clearing of single-name CDS in the US, volumes cleared on ICE Clear Credit have been increasing.

Finally, centrally cleared volumes of FX and equity products were assessed. While cleared volumes in these asset classes are significantly lower than IRD and CDS, data from the Office of the Comptroller of the Currency (OCC) Quarterly Reports on Bank Trading and Derivatives Activities shows that notional outstanding of cleared FX derivatives and equity derivatives jumped following the implementation of new margin rules for non-cleared derivatives.

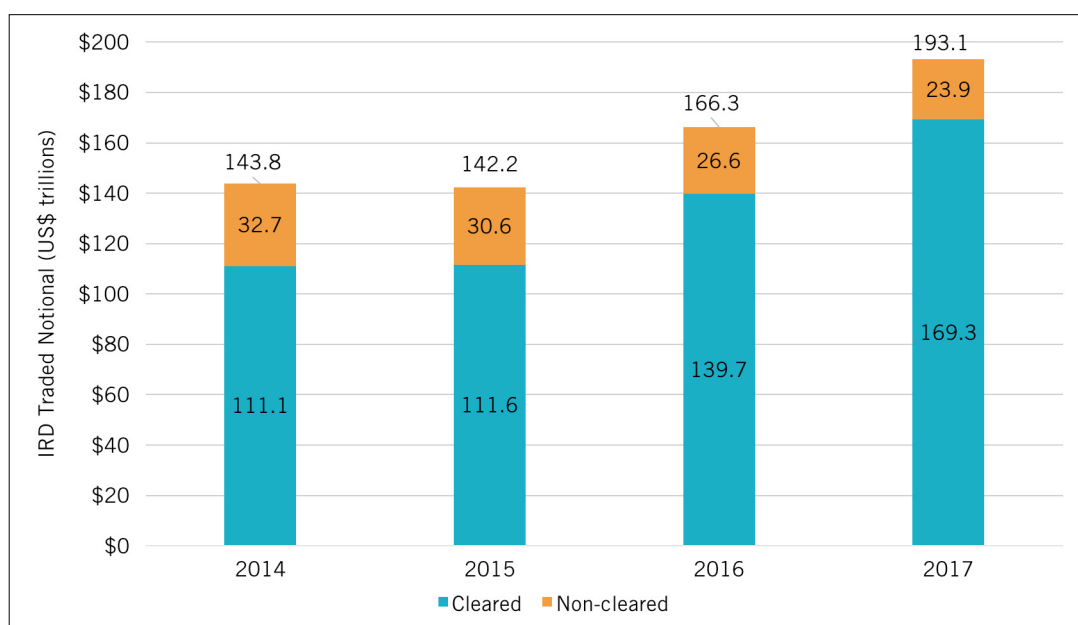
INTEREST RATE DERIVATIVES

The share of cleared IRD trades has steadily increased since 2014, and market participants are clearing more than required

IRD Traded and Cleared Notional

IRD traded notional has been consistently growing since 2015, and reached \$193.1 trillion for the full year 2017 compared with \$143.8 trillion for the full year 2014. The share of cleared transactions has also been steadily increasing over the same period. In 2014, cleared notional was \$111.1 trillion, accounting for 77% of total traded notional. In 2017, cleared notional totaled \$169.3 trillion, representing 88% of total traded notional (Chart 1).

Chart 1: IRD Traded Notional



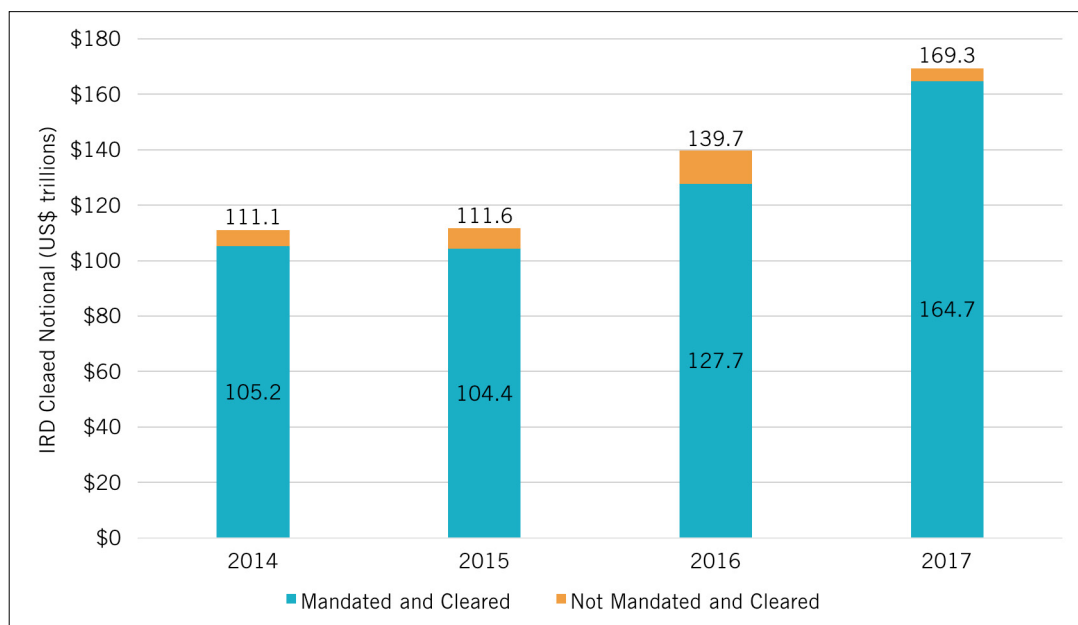
Source: ISDA analysis based on DTCC and Bloomberg SDRs data

As shown in Chart 2, market participants are clearing more than is required under the CFTC's clearing mandate³. For example, only \$105.2 trillion was subject to the clearing mandate compared to \$111.1 trillion that was cleared in 2014. In 2015, \$111.6 trillion was cleared, out of which \$104.4 trillion was subject to the clearing mandate. In 2016, \$139.7 trillion was cleared, out of which \$127.7 trillion was subject to the clearing mandate. Following the expansion of the clearing mandate by the CFTC at the end of 2016, the difference between cleared and subject-to-clearing-mandate percentages shrank. In 2017, out of \$169.3 trillion in cleared notional, \$164.7 trillion was subject to the clearing mandate and \$4.5 trillion was cleared but not mandated⁴.

³ Please see the appendix for a brief summary of the CFTC's clearing mandate and the list of products required to be cleared (Table 2 and Table 3)

⁴ While compliance dates in the CFTC expanded clearing determination vary for different products, it is assumed that all products included in the mandate were subject to clearing requirements at the beginning of 2017 for the purposes of this analysis

Chart 2: IRD Cleared Notional



Source: ISDA analysis based on DTCC and Bloomberg SDRs data

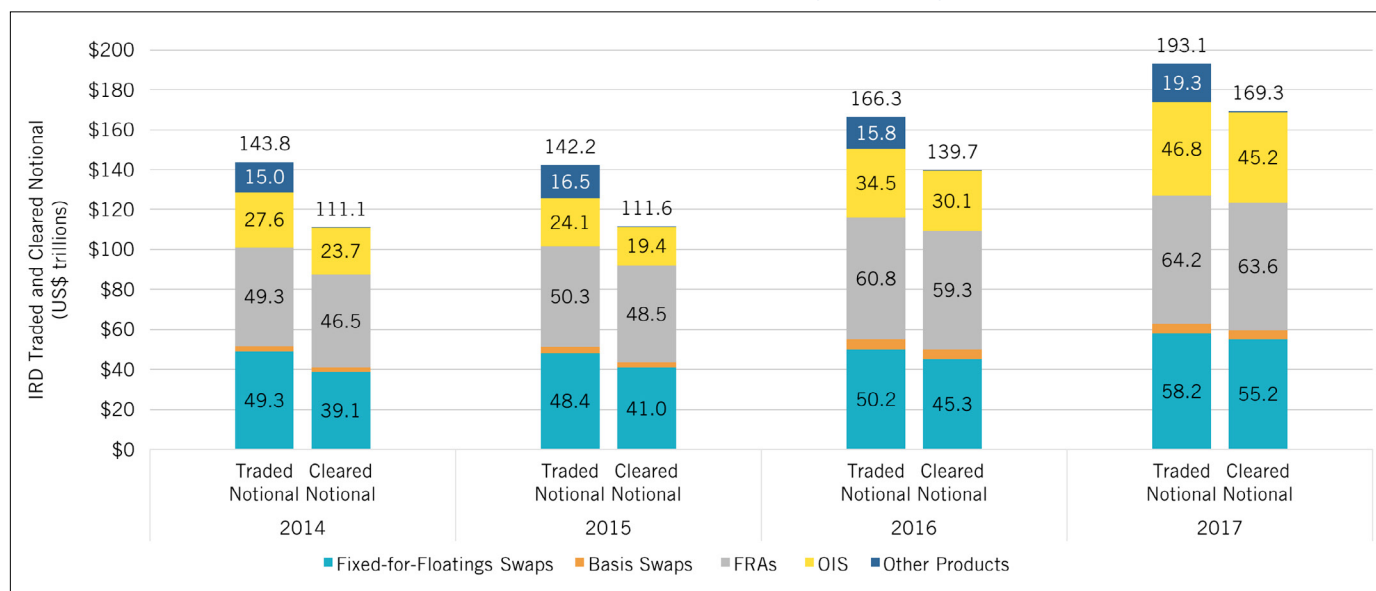
IRD Traded and Cleared Notional by Taxonomy

This section analyzes IRD traded and cleared notional by taxonomy. These taxonomies include fixed-for-floating swaps, FRAs, OIS, basis swaps and other products.

As shown in Chart 3, fixed-for-floating swaps traded notional totaled \$58.2 trillion in 2017, and represented 30% of total IRD traded notional. FRAs and OIS equaled \$64.2 trillion and \$46.8 trillion, respectively, and accounted for 33% and 24% of total IRD traded notional. Other products totaled \$19.3 trillion, accounting for about 10% of total IRD traded notional.

Fixed-for-floating swaps cleared notional totaled \$55.2 trillion in 2017, representing 33% of total IRD cleared notional. FRAs and OIS reached \$63.6 trillion and \$45.2 trillion, respectively, comprising 38% and 27% of total IRD cleared notional. Only \$0.7 trillion of other IRD products was cleared, accounting for less than 0.5% of total IRD cleared notional.

Chart 3: IRD Traded and Cleared Notional by Taxonomy



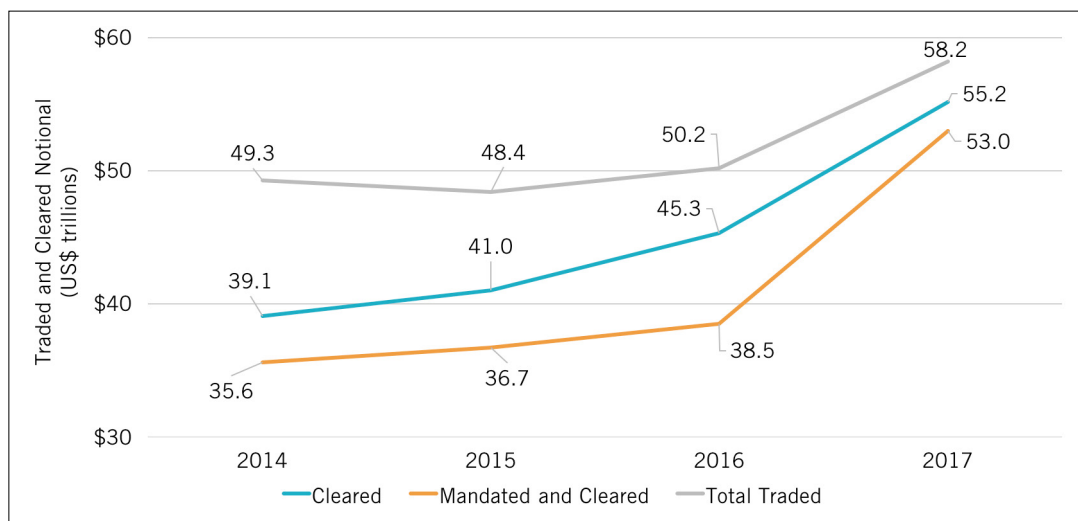
Source: ISDA analysis based on DTCC and Bloomberg SDRs data

Fixed-for-floating Interest Rate Swaps

As shown in Chart 4, the notional amount of fixed-for-floating interest rate swaps (IRS) that was cleared totaled \$39.1 trillion (79% of total traded notional) in 2014, \$41 trillion (85% of total traded notional) in 2015, \$45.3 trillion (90% of total traded notional) in 2016 and \$55.2 trillion (95% of total traded notional) in 2017. Each year, the cleared notional amounts were above the required level.

The notional amount of fixed-for-floating swaps subject to the clearing mandate increased from \$35.6 trillion (72% of total traded notional) in 2014 to \$36.7 trillion (76% of total traded notional) in 2015, \$38.5 trillion (77% of total traded notional) in 2016 and \$53 trillion (91% of total traded notional) in 2017.

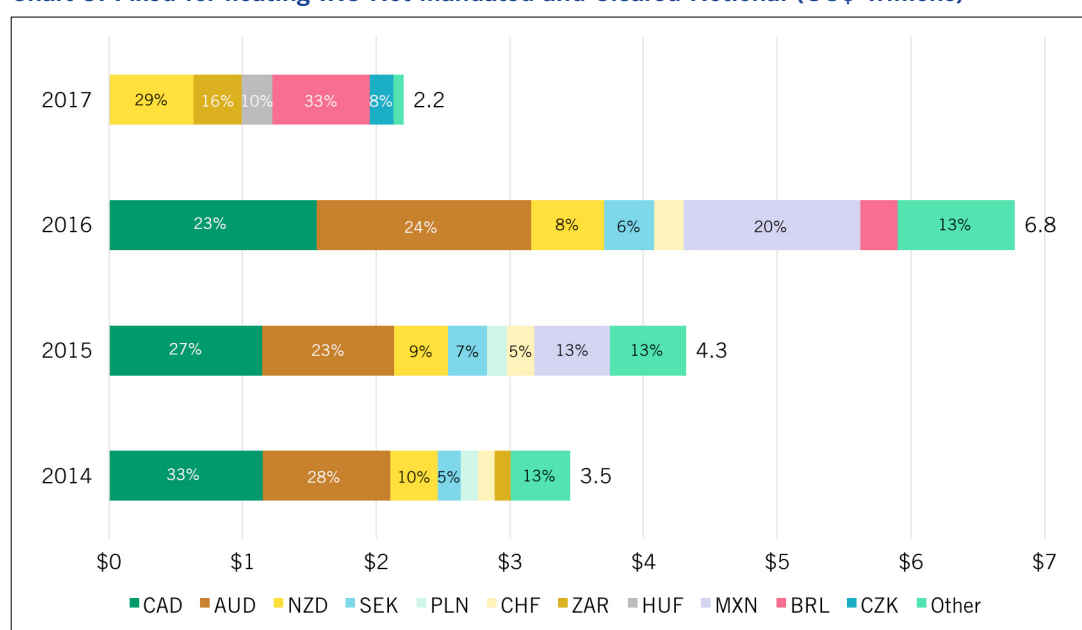
Chart 4: Fixed-for-floating IRS Traded and Cleared Notional



Source: ISDA analysis based on DTCC and Bloomberg SDRs data

As shown in Chart 5, there was \$3.5 trillion of fixed-for-floating IRS that were cleared but not covered by the CFTC's clearing mandate in 2014. That amount increased to \$4.3 trillion in 2015 and \$6.8 trillion in 2016. During this time, Canadian-dollar- and Australian-dollar-denominated swaps represented a significant portion of the swaps that were cleared but not subject to the CFTC's clearing mandate (these currencies were included in the CFTC expanded clearing mandate in 2016). In 2017, \$2.2 trillion of fixed-for-floating swaps were cleared but not subject to the CFTC's clearing mandate, 33% of which were denominated in Brazilian real and 29% in New Zealand dollar.

Chart 5: Fixed-for-floating IRS Not Mandated and Cleared Notional (US\$ Trillions)



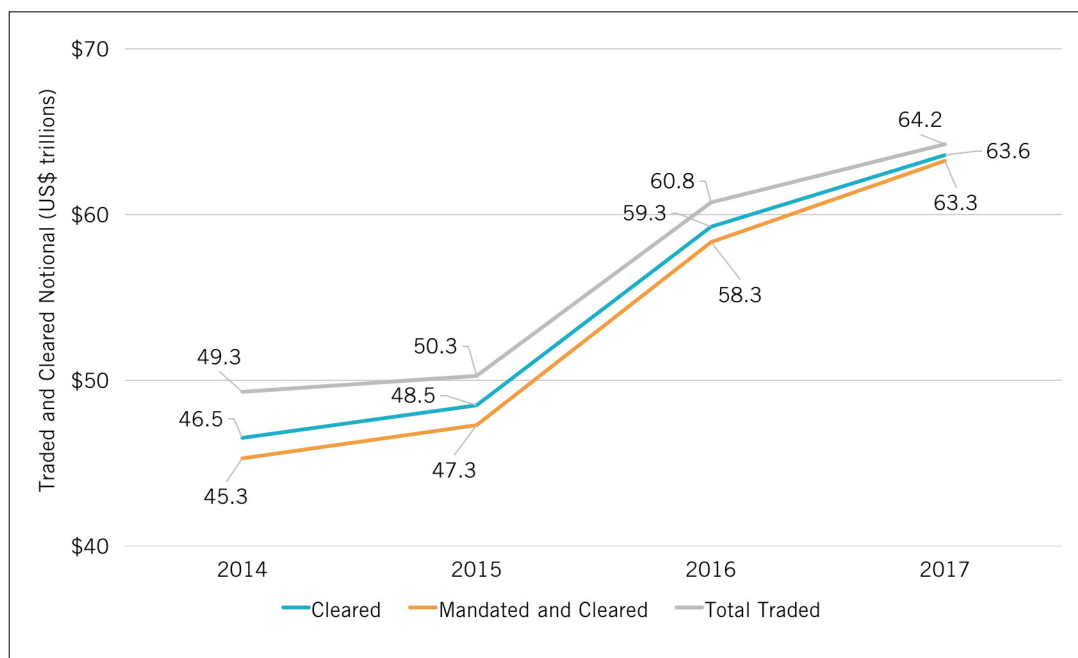
Source: ISDA analysis based on DTCC and Bloomberg SDRs data

Forward Rate Agreements

A very high percentage of FRAs has traditionally been cleared. As shown in Chart 6, the notional amount of FRAs that was cleared totaled \$46.5 trillion (94% of total traded notional) in 2014, \$48.5 trillion (97% of total traded notional) in 2015, \$59.3 trillion (98% of total traded notional) in 2016 and \$63.6 trillion (99% of total traded notional) in 2017.

The notional amount of FRAs subject to the CFTC's clearing mandate increased from \$45.3 trillion (92% of total traded notional) in 2014 to \$47.3 trillion (94% of total traded notional) in 2015, \$58.3 trillion (96% of total traded notional) in 2016 and \$63.3 trillion (98% of total traded notional) in 2017.

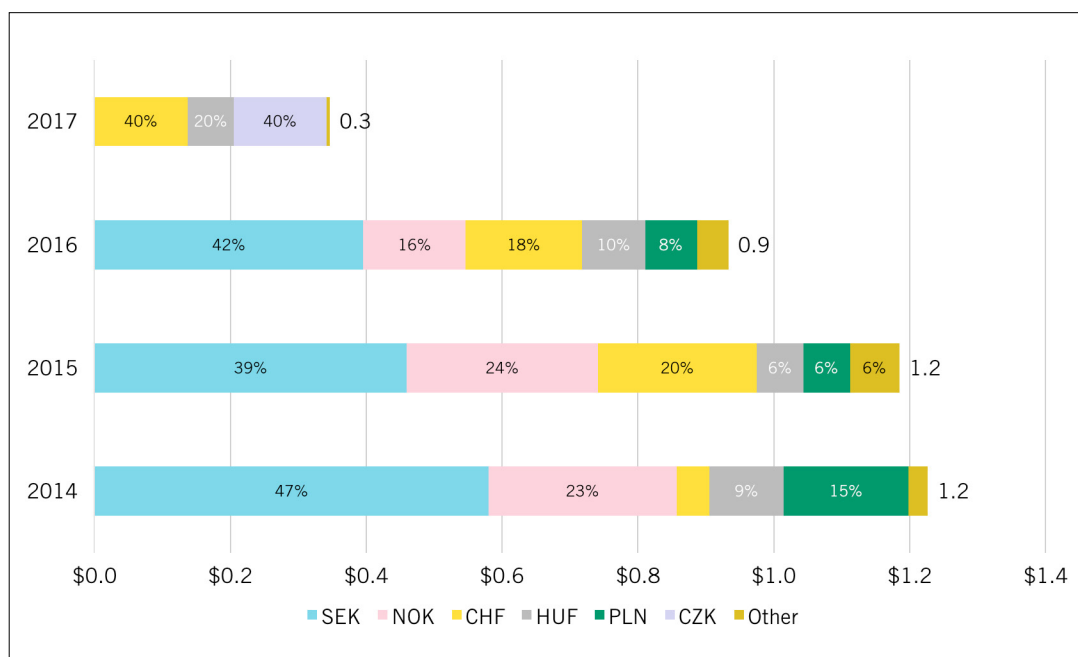
Chart 6: FRAs Traded and Cleared Notional



Source: ISDA analysis based on DTCC and Bloomberg SDRs data

Swedish-krona- and Norwegian-krona-denominated trades represented a significant portion of the transactions that were cleared but not subject to the CFTC's clearing mandate in 2014-2016, as shown in Chart 7 (these currencies were included in the CFTC's expanded clearing mandate in 2016). In 2017, Swiss-franc and Czech-koruna-denominated trades accounted for 80% of FRA traded notional that was cleared but not subject to the CFTC's clearing mandate.

Chart 7: FRAs Not Mandated and Cleared Notional (US\$ Trillions)



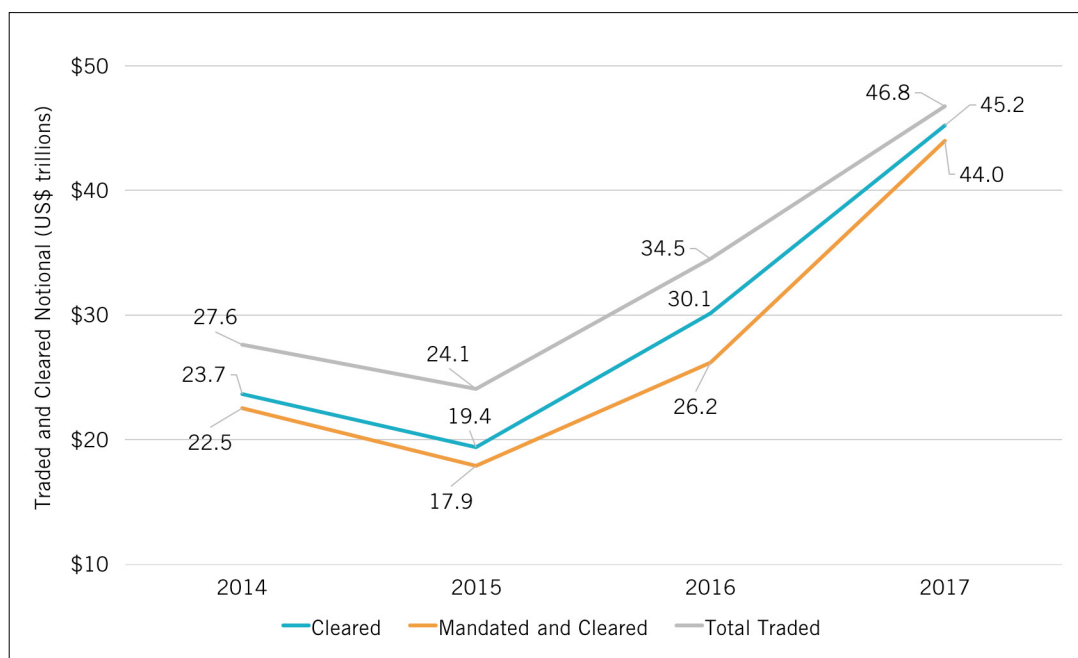
Source: ISDA analysis based on DTCC and Bloomberg SDRs data

Overnight Index Swaps

As shown in Chart 8, the notional amount of OIS that was cleared totaled \$23.7 trillion (86% of total traded notional) in 2014, \$19.4 trillion (81% of total traded notional) in 2015, \$30.1 trillion (87% of total traded notional) in 2016 and \$45.2 trillion (97% of total traded notional) in 2017.

The notional amount of OIS that was subject to the CFTC's clearing mandate rose from \$22.5 trillion (81% of total traded notional) in 2014 to \$17.9 trillion (74% of total traded notional) in 2015, \$26.2 trillion (76% of total traded notional) in 2016 and \$44.0 trillion (94% of total traded notional) in 2017.

Chart 8: OIS Traded and Cleared Notional

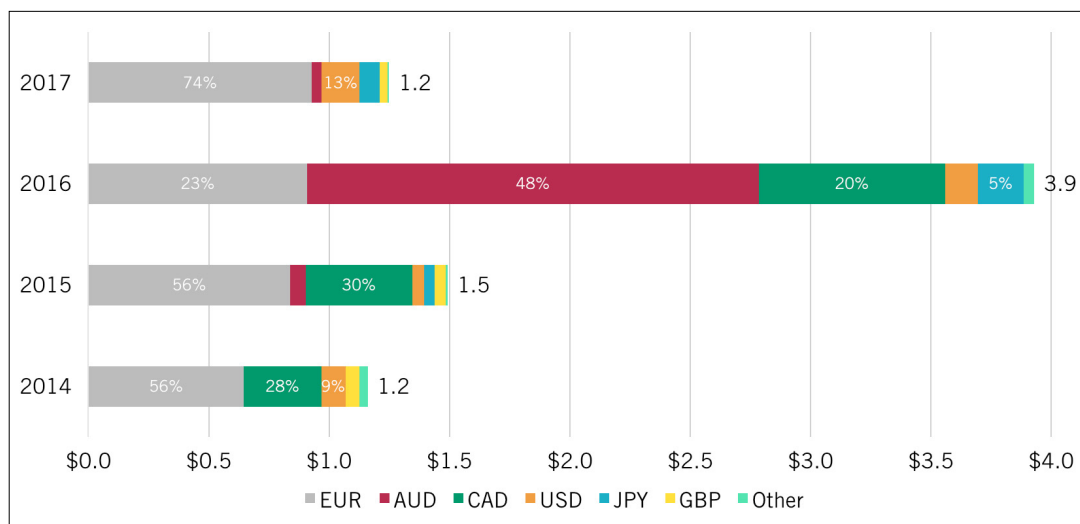


Source: ISDA analysis based on DTCC and Bloomberg SDRs data

As depicted in Chart 9, euro-denominated trades represented a significant portion of cleared OIS not subject to the CFTC's clearing mandate, which covers only euro-denominated OIS with a stated termination date range between seven days and three years (seven days and two years before the CFTC expanded its clearing mandate in 2016). However, market participants were also clearing euro-denominated OIS trades with a stated termination date range beyond the clearing requirement.

Canadian-dollar- and Australian-dollar-denominated trades represented a significant portion of transactions that were cleared but not subject to the CFTC's clearing mandate in 2014-2016 (these currencies were included in the CFTC expanded clearing mandate in 2016).

Chart 9: OIS Not Mandated and Cleared Notional (US\$ Trillions)



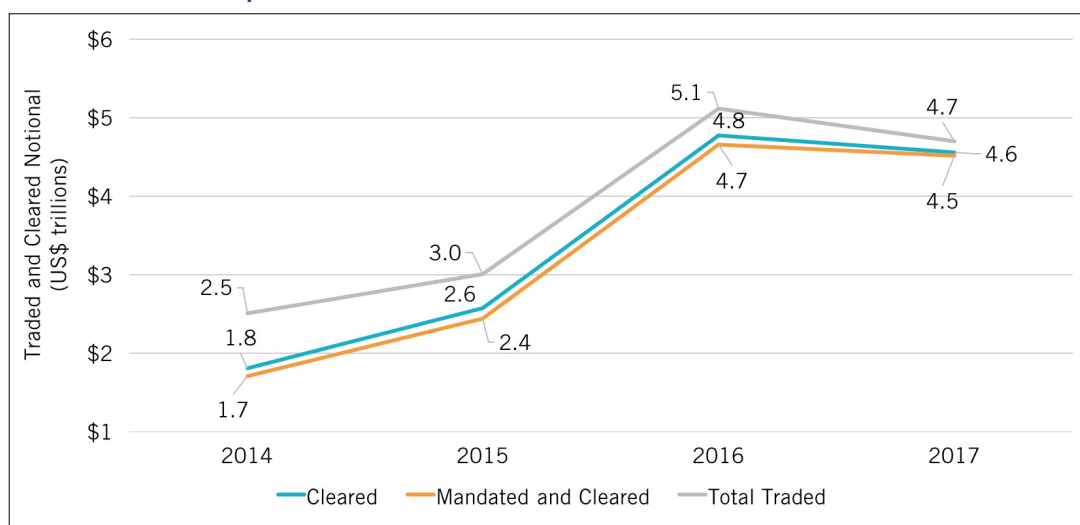
Source: ISDA analysis based on DTCC and Bloomberg SDRs data

Basis Swaps

As shown in Chart 10, the notional amount of basis swaps that was cleared totaled \$1.8 trillion (72% of total traded notional) in 2014, \$2.6 trillion (86% of total traded notional) in 2015, \$4.8 trillion (93% of total traded notional) in 2016 and \$4.6 trillion (97% of total traded notional) in 2017.

The notional amount of basis swaps that was subject to the CFTC's clearing mandate increased from \$1.7 trillion (68% of total traded notional) in 2014 to \$2.4 trillion (81% of total traded notional) in 2015, \$4.7 trillion (91% of total traded notional) in 2016 and \$4.5 trillion (96% of total traded notional) in 2017.

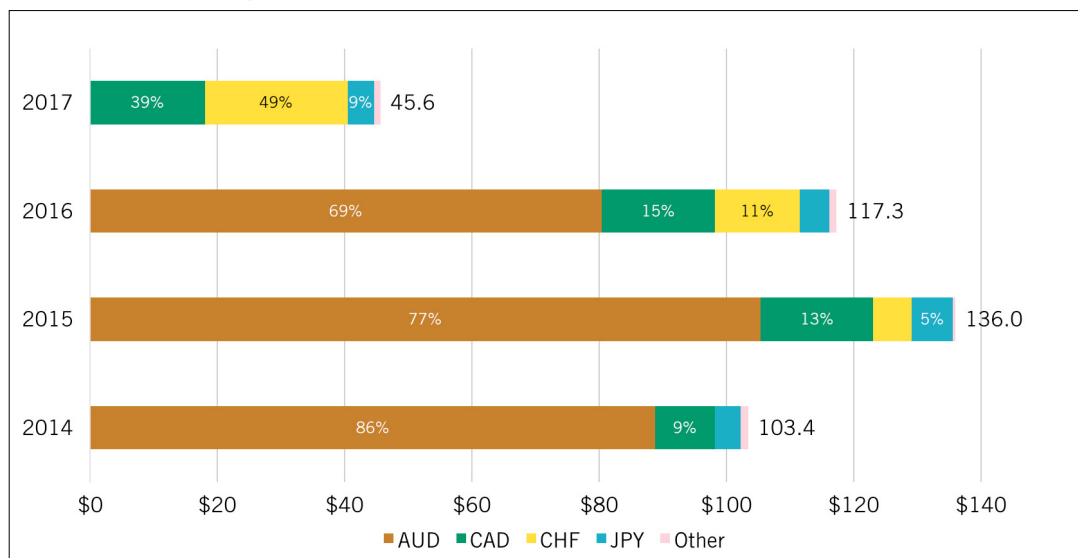
Chart 10: Basis Swaps Traded and Cleared Notional



Source: ISDA analysis based on DTCC and Bloomberg SDRs data

Australian-dollar-denominated trades represented the majority of transactions that were cleared but not subject to the CFTC's clearing mandate in 2014-2016, as shown in Chart 11 (basis swaps denominated in Australian dollar were included in the CFTC expanded clearing mandate in 2016).

Chart 11: Basis Swaps Not Mandated and Cleared Notional (US\$ Billions)

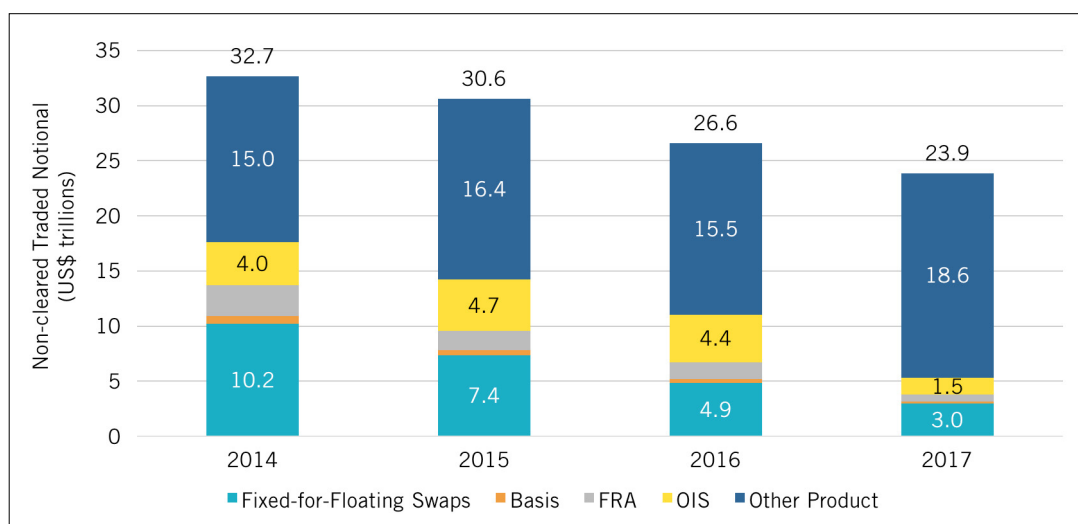


Source: ISDA analysis based on DTCC and Bloomberg SDRs data

IRD Non-cleared Notional

IRD non-cleared notional has been gradually declining from \$32.7 trillion in 2014 to \$23.9 trillion in 2017, as shown in Chart 12. Much of this decline resulted from increased clearing of fixed-for-floating swaps. Non-cleared fixed-for-floating swaps most likely included products with specifications not covered by the clearing mandate, or represented transactions involving counterparties not covered by the clearing mandate⁵. In 2014, non-cleared fixed-for-floating transactions totaled \$10.2 trillion and accounted for 31% of all non-cleared IRD volume. They totaled \$3 trillion and accounted for 13% of all non-cleared IRD volume in 2017.

Chart 12: IRD Non-cleared Notional



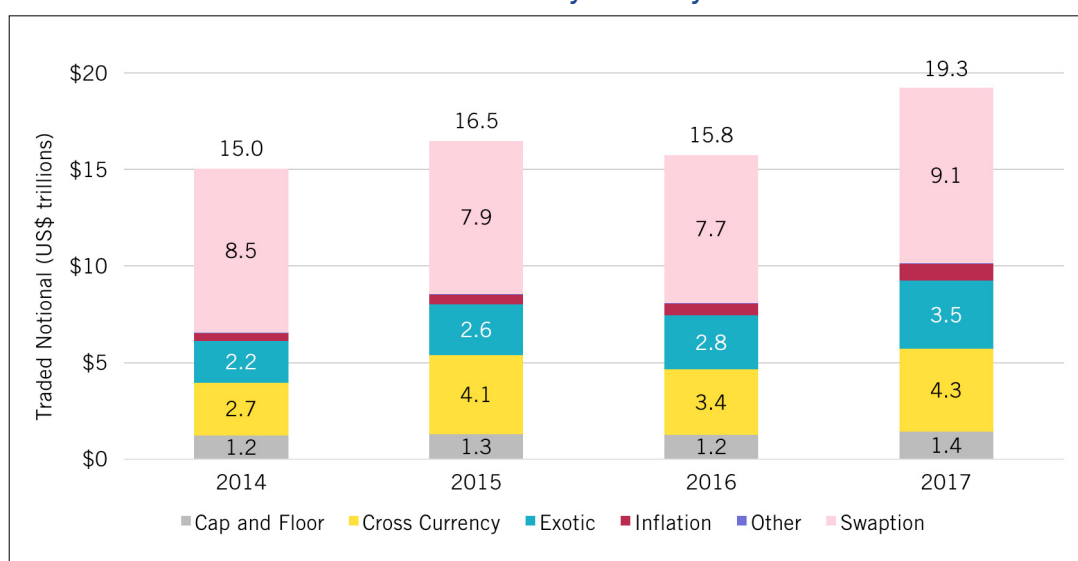
Source: ISDA analysis based on DTCC and Bloomberg SDRs data

⁵ We do not have data to determine whether transactions were executed by counterparties exempt from the clearing requirement. Please see the appendix on the end-user exception

Other IRD Products

Trading volume in other IRD product types for which there is no clearing mandate – cross-currency swaps, swaptions, caps and floors, inflation swaps and exotic products – has remained at approximately 10% of total IRD trading volume. In 2014, these products totaled \$15 trillion and accounted for 10.5% of all IRD trading volume. In 2017, other IRD products equaled approximately \$19.3 trillion and accounted for 10% of all IRD trading volume. Chart 13 shows other IRD traded notional by taxonomy.

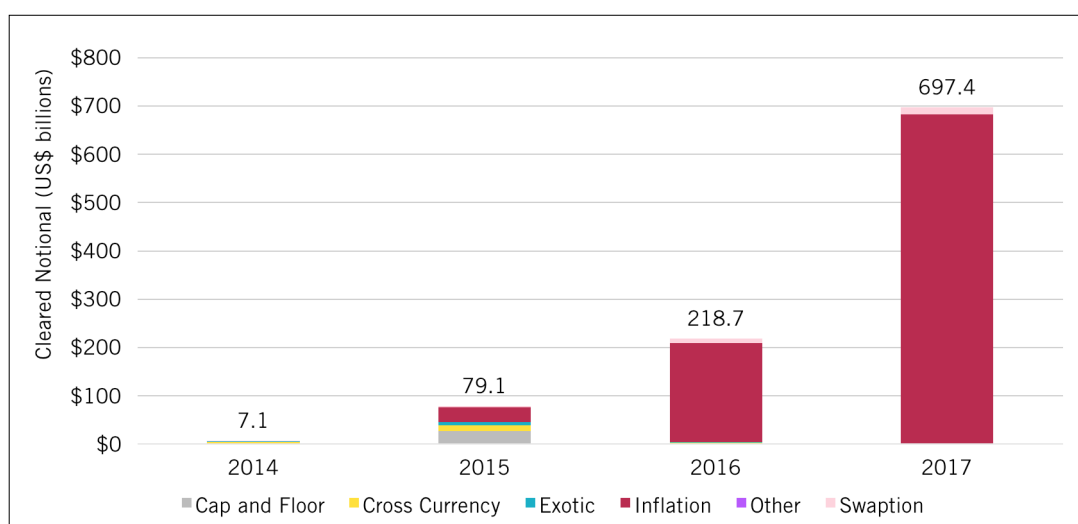
Chart 13: Other IRD Products Traded Notional by Taxonomy



Source: ISDA analysis based on DTCC and Bloomberg SDRs data

While there is no US clearing mandate for other IRD products, about \$0.7 trillion was cleared in 2017 (Chart 14). Inflation swaps accounted for the majority of cleared products. Cleared notional amount of inflation swaps jumped from \$30 billion in 2015 to \$0.7 trillion in 2017. Overall, about 80% of inflation swaps total traded notional was cleared in 2017.

Chart 14: Other IRD Products Cleared Notional



Source: ISDA analysis based on DTCC and Bloomberg SDRs data

OTHER OTC DERIVATIVES ASSET CLASSES

Clearing has been increasing in other asset classes, despite limited or no clearing mandates

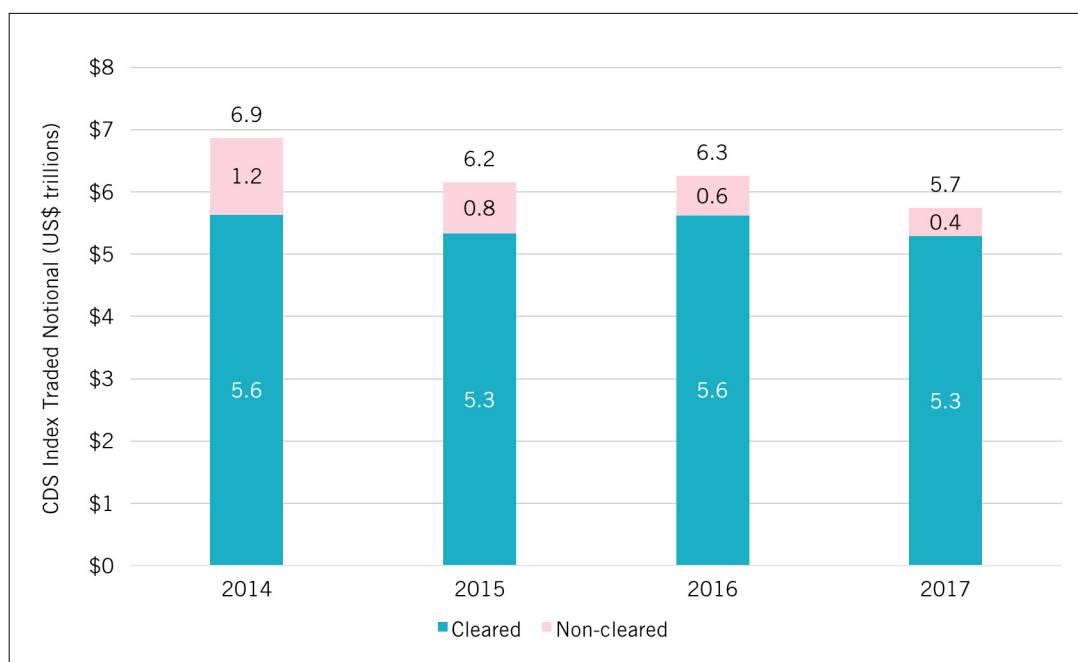
This paper focuses primarily on analyzing the percentage of trading that is mandated to clear versus the proportion actually cleared in the US IRD market. IRD is by far the largest derivatives asset class. Based on the Bank for International Settlements OTC derivatives statistics, IRD accounted for about 80% of total global notional amount outstanding at the end of the second half of 2017⁶.

Of the other four derivatives asset classes – credit, FX, equities and commodities – only credit has a clearing mandate. This covers several CDS index products, but there is no clearing mandate for single-name CDS.

Credit Default Swap Indices

CDS index traded notional has been declining since 2015, but the share of cleared transactions has been steadily increasing. As depicted in Chart 15, CDS index traded notional totaled \$6.9 trillion for the full year 2014 compared with \$5.7 billion for the full year 2017⁷. In 2014, cleared notional equaled \$5.6 trillion, accounting for 82% of total traded notional. In 2017, cleared notional totaled \$5.3 trillion, representing 92% of total traded notional.

Chart 15: CDS Index Traded Notional



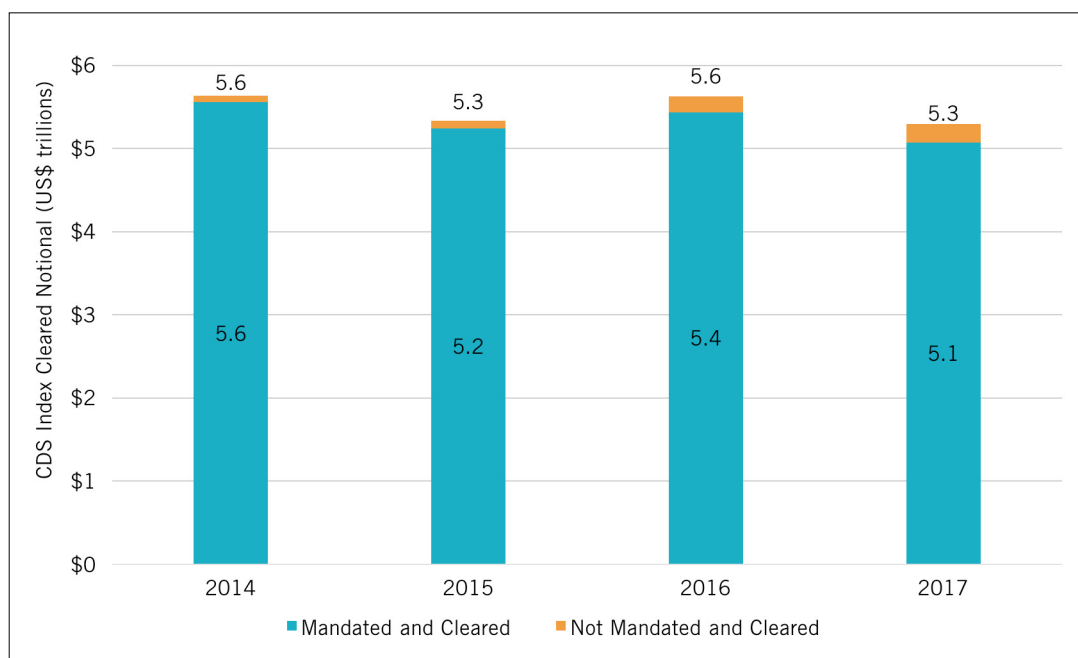
Source: ISDA analysis based on DTCC and Bloomberg SDRs data

As shown in Chart 16, market participants were clearing slightly more CDS index trades than was required under the CFTC's clearing mandate. In 2017, out of \$5.3 trillion in cleared notional, \$5.1 trillion was mandated to be cleared and \$0.2 trillion was cleared but not mandated.

⁶ <https://www.bis.org/statistics/derstats.htm>

⁷ CDS index traded notional includes CDS index and CDS index tranches; the clearing mandate covers only untranching CDS indices. See the appendix for the list of CDS products subject to the clearing mandate (Table 3)

Chart 16: CDS Index Cleared Notional



Source: ISDA analysis based on DTCC and Bloomberg SDRs data

Single-name Credit Default Swaps

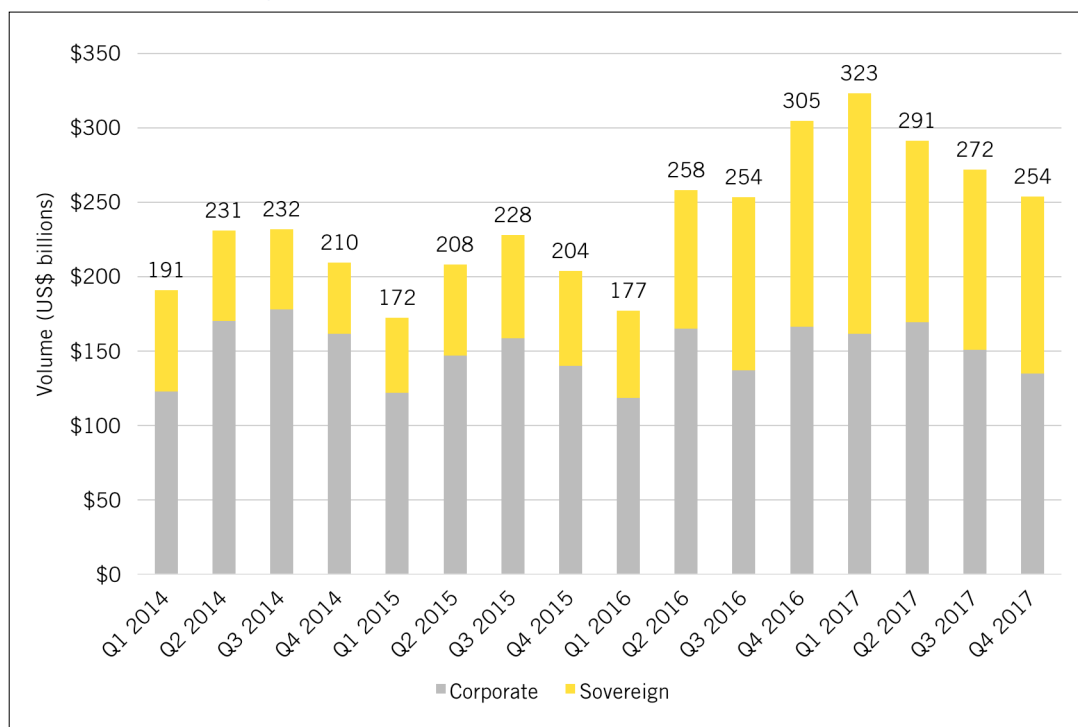
In the US, ICE Clear Credit and CDSClear (LCH's CDS clearing service) offer index and single-name CDS clearing^{8,9}. As illustrated in Chart 17, the cleared notional amount of single-name CDS trading has been growing. For 2017, total volume of cleared single-name CDS reached \$1.1 trillion compared with \$0.9 trillion in 2014¹⁰. While the amount of cleared corporate single-name CDS has been mostly steady over the past four years, the volume of cleared sovereign CDS has increased. This reflects the expansion of available cleared sovereign CDS reference entities, as well as capital and margin requirements for non-cleared CDS.

⁸ In 2017, the SEC authorized CDSClear as a registered clearing agency, enabling it to offer single-name CDS clearing to US clients through futures commission merchants. However, historical data on cleared volumes at CDSClear is not available for this research

⁹ CME discontinued clearing of CDS effective March 16, 2018

¹⁰ ICE Clear Credit corporate single-name CDS includes both North American and European instruments

Chart 17: Cleared Single-name CDS



Source: ISDA analysis based on ICE Clear Credit data

Foreign Exchange Derivatives

For FX and equity derivatives, data is used from the OCC Quarterly Reports on Bank Trading and Derivatives Activities on notional amounts of OTC and centrally cleared derivatives contracts sourced from Call Report Schedule RC-R¹¹.

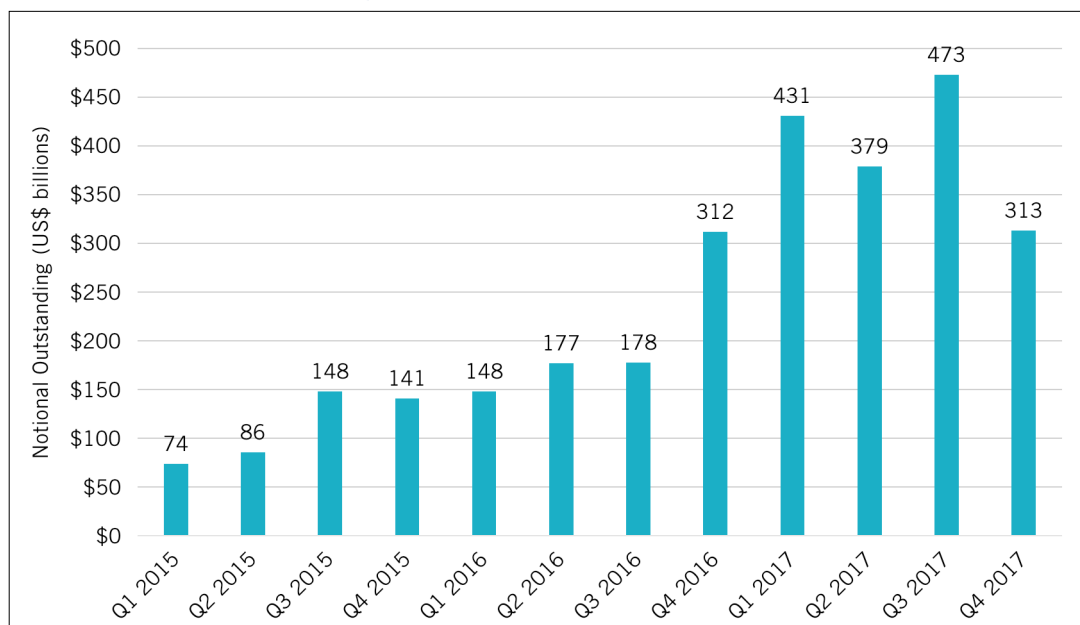
The notional outstanding of FX derivatives for US banks covered by OCC reports was \$31.4 trillion at the end of the fourth quarter of 2017. Out of this amount, about 1% (\$313 billion) was cleared and the rest was non-cleared¹². As shown in Chart 18, notional outstanding of cleared FX derivatives has been growing since the beginning of 2015, and peaked at \$473 billion at the end of the third quarter 2017¹³.

¹¹ Quarterly Report on Bank Derivatives Activities <https://www.occ.gov/topics/capital-markets/financial-markets/derivatives/derivatives-quarterly-report.html>

¹² For reporting purposes, as defined in §.2 of the regulatory capital rules, an OTC derivative contract is one that is not a cleared transaction <https://www.fdic.gov/regulations/resources/call/crinstr/2018-03/031-041-318rc-r-part-ii-032918-final.pdf>

¹³ While Call Report Schedule RC-R does not provide detailed information on FX derivatives asset sub-classes, we assume that most cleared FX products are NDFs. US-specific data for NDF clearing is not available for this research, but global NDF cleared volumes have been growing <https://www.clarusft.com/ndf-clearing-february-2018/>

Chart 18: Notional Outstanding of Cleared FX Derivatives

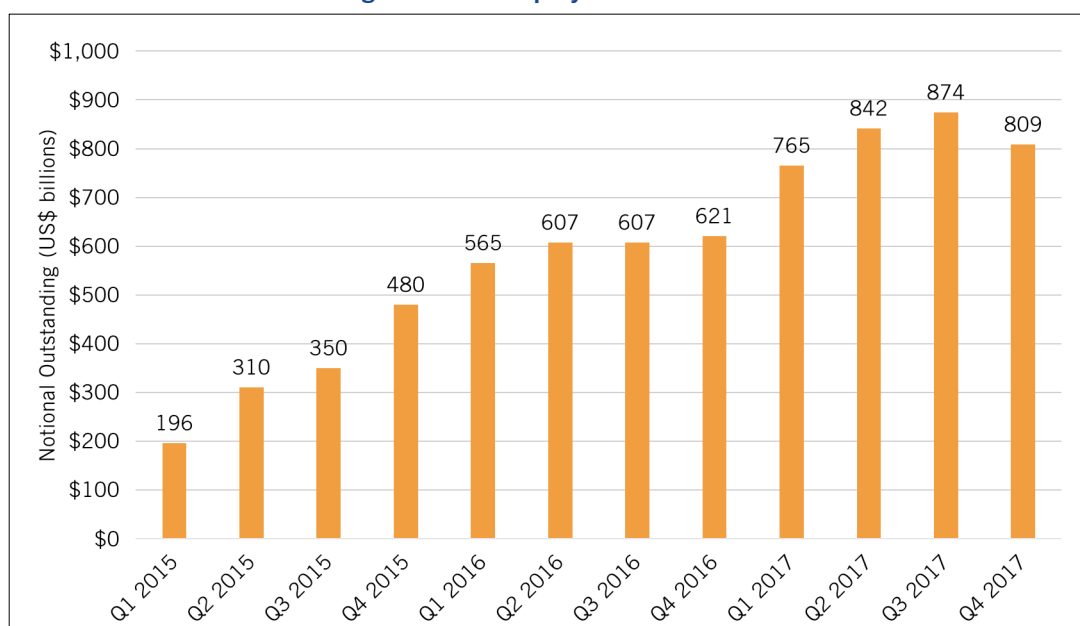


Source: ISDA analysis based on OCC data

Equity Derivatives

Notional outstanding of equity derivatives for US banks covered by OCC reports totaled \$3.1 trillion at the end of the fourth quarter of 2017. Out of this amount, 25.7% (\$809 billion) was cleared and the rest was non-cleared. As illustrated in Chart 19, notional outstanding of cleared equity derivatives peaked at \$874 billion at the end of the third quarter 2017.

Chart 19: Notional Outstanding of Cleared Equity Derivatives



Source: ISDA analysis based on OCC data

CONCLUSION

The amount of cleared transactions has been consistently growing in the US, and market participants clear more contracts than required under the CFTC's clearing mandate

ISDA's analysis shows that the amount of cleared transactions has been consistently growing in the US since 2014, and market participants clear more contracts than required under the CFTC's clearing mandate. By novating trades from multiple counterparties to CCPs, firms are able to realize economic and other benefits of multilateral netting, which serve as a powerful incentive to clear. This is driving firms to clear more than the rules mandate. There is also a desire to mitigate credit risk and, in the case of banks, reduce the capital held against these trades. The introduction of new margin requirements for non-cleared derivatives has also resulted in increased clearing volumes.

APPENDIX: OVERVIEW OF THE CLEARING MANDATE

In 2012, the CFTC issued the final rule to implement the clearing requirement determination under section 723 of the Dodd-Frank Wall Street Reform and Consumer Protection Act¹⁴. The final rule required four classes of IRD (fixed-for-floating swaps, basis swaps, FRAs and OIS) in the top four currencies (US dollar, euro, sterling and yen) to be cleared by derivatives clearing organizations registered with the CFTC¹⁵. The rule also required mandatory clearing of two classes of CDS, including North American untranch CDS indices and European untranch CDS indices. In 2016, the CFTC expanded the clearing requirement to apply to additional classes of IRD¹⁶.

The end-user exception exempts non-financial entities that use swaps to hedge or mitigate commercial risk from the clearing requirement. The rule also provides an exemption for cooperatives and swaps between affiliates that meet certain requirements. Additionally, the rule exempts small banks, savings associations, farm credit institutions and credit unions with total assets of \$10 billion or less from the definition of 'financial entity'. This means they are not subject to the mandatory clearing requirement with respect to swaps they use to hedge or mitigate commercial risk¹⁷.

The below tables list the specifications of all products subject to mandatory clearing rules (interest rate products that were added by the CFTC's expanded clearing determination in 2016 are highlighted in grey).

¹⁴ CFTC 17 CFR Parts 39 and 50 Clearing Requirement Determination Under Section 2(h) of the CEA; Final Rule <https://www.cftc.gov/sites/default/files/idc/groups/public/@Irfederalregister/documents/file/2012-29211a.pdf>

¹⁵ OIS denominated in yen were not included in the clearing mandate

¹⁶ CFTC 17 CFR Part 50 Clearing Requirement Determination Under Section 2(h) of the CEA for Interest Rate Swaps; Final Rule <https://www.cftc.gov/sites/default/files/idc/groups/public/@Irfederalregister/documents/file/2016-23983a.pdf>

¹⁷ 17 CFR Part 39 End-User Exception to the Clearing Requirement for Swaps, Final Rule <http://www.cftc.gov/idc/groups/public/@Irfederalregister/documents/file/2012-17291a.pdf>

Table 2: IRD Mandated to Clear

Product	Currency	Floating Rate Indexes	Stated Termination Date Range
Fixed-for-Floating Swaps	AUD	BBSW	28 days to 30 years
	CAD	CDOR	28 days to 30 years
	EUR	EURIBOR	28 days to 50 years
	HKD	HIBOR	28 days to 10 years
	MXN	TIIE-BANXICO	28 days to 21 years
	NOK	NIBOR	28 days to 10 years
	PLN	WIBOR	28 days to 10 years
	SGD	SOR-VWAP	28 days to 10 years
	SEK	STIBOR	28 days to 15 years
	CHF	LIBOR	28 days to 30 years
	GBP	LIBOR	28 days to 50 years
	USD	LIBOR	28 days to 50 years
	JPY	LIBOR	28 days to 30 years
Basis Swaps	AUD	BBSW	28 days to 30 years
	EUR	EURIBOR	28 days to 50 years
	GBP	LIBOR	28 days to 50 years
	USD	LIBOR	28 days to 50 years
	JPY	LIBOR	28 days to 30 years
Forward Rate Agreements	EUR	EURIBOR	3 days to 3 years
	PLN	WIBOR	3 days to 2 years
	NOK	NIBOR	3 days to 2 years
	SEK	STIBOR	3 days to 3 years
	GBP	LIBOR	3 days to 3 years
	USD	LIBOR	3 days to 3 years
	JPY	LIBOR	3 days to 3 years
Overnight Index Swaps	AUD	AONIA-OIS	7 days to 2 years
	CAD	CORRA-OIS	7 days to 2 years
	EUR	EONIA	7 days to 3 years
	GBP	SONIA	7 days to 3 years
	USD	FedFunds	7 days to 3 years
*All products have no optionality, no dual currencies and no conditional notional amounts			
**The stated termination range for euro-, sterling- and US-dollar-denominated OIS was changed to seven days to three years from seven days to two years under the 2016 expanded clearing mandate			

Table 3: CDS Mandated to Clear

	North American unrated CDS indices class
Reference Entities	Corporate
Region	North America
Indices	CDX.NA.IG; CDX.NA.HY
Tenor	CDX.NA.IG: 3Y, 5Y, 7Y, 10Y; CDX.NA.HY: 5Y
Applicable Series	CDX.NA.IG 3Y: Series 15 and all subsequent series, up to and including the current series CDX.NA.IG 5Y: Series 11 and all subsequent series, up to and including the current series CDX.NA.IG 7Y: Series 8 and all subsequent series, up to and including the current series CDX.NA.IG 10Y: Series 8 and all subsequent series, up to and including the current series CDX.NA.HY 5Y: Series 11 and all subsequent series, up to and including the current series
Tranched	No
	European unrated CDS indices class
Reference Entities	Corporate
Region	Europe
Indices	iTraxx Europe; iTraxx Europe Crossover; iTraxx Europe HiVol
Tenor	iTraxx Europe: 5Y, 10Y; iTraxx Europe Crossover: 5Y; iTraxx Europe HiVol: 5Y
Applicable Series	iTraxx Europe 5Y: Series 10 and all subsequent series, up to and including the current series iTraxx Europe 10Y: Series 7 and all subsequent series, up to and including the current series iTraxx Europe Crossover 5Y: Series 10 and all subsequent series, up to and including the current series iTraxx Europe HiVol 5Y: Series 10 and all subsequent series, up to and including the current series
Tranched	No



ISDA has published other recent research papers:

- ***Uses of Notional Amount in Derivatives Regulation***, May 25, 2018
<https://www.isda.org/2018/05/25/uses-of-notional-amount-in-derivatives-regulation/>
- ***SwapsInfo First Quarter 2018 Review***, May 14, 2018
<https://www.isda.org/2018/05/14/swapsinfo-first-quarter-2018-review/>
- ***ISDA Margin Survey Full Year 2017***, April 25, 2018
<https://www.isda.org/2018/04/25/isda-margin-survey-full-year-2017/>

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