

IRD Block Trading Activity in the First Quarter of 2020

Interest rate derivatives (IRD) trading volumes increased in in the first quarter of 2020, driven largely by coronavirus-related market volatility. Despite this increase, however, the share of IRD block trades decreased, especially for fixed-for-floating interest rate swaps (IRS), indicating less liquidity for large-sized trades.

Total capped notional of fixed-for-floating IRS transactions decreased by 16.0% in the first quarter of 2020 versus the first quarter of 2019, while the number of trades with capped notional declined by 8.0% over the same period. The share of IRS trades with capped notional relative to total fixed-for-floating IRS transactions fell to 6.9% in the first quarter of 2020 from 9.5% in the first quarter of 2019.

This report uses data from the Depository Trust & Clearing Corporation swap data repository. It, therefore, only covers trades that are required to be disclosed under US regulations.

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SUMMARY

IRD trading spiked significantly in the first quarter of 2020, driven by market volatility caused by the coronavirus pandemic. This increase was noticeable in each of the first three months of 2020 compared with the first three months of 2019.

The growth in IRD trading volumes was mainly driven by a jump in the trading of overnight index swaps (OIS). OIS traded notional increased by 111.4% to \$30.3 trillion in the first quarter of 2020 versus the first quarter of 2019. Forward rate agreements (FRAs) traded notional increased by 8.7% over the same period, while fixed-for-floating IRS traded notional decreased by 3.4% to \$19.5 trillion in the first quarter of 2020 compared with the first three months of 2019.

The total number of IRD transactions with capped notional increased to 40.9 thousand in the first quarter of 2020 from 38.9 thousand in the first quarter of 2019¹. However, as a share of total IRD trades, transactions with capped notional declined to 8.5% in the first quarter of 2020 compared with 10.3% in the first quarter of 2019². This suggests that IRD block trading activity grew less rapidly than total IRD trading and a smaller portion of increased IRD trading was executed as block trades.

A closer look at the trading data, focusing specifically on fixed-for-floating IRS, reveals several interesting trends.

- Fixed-for-floating IRS traded notional decreased by 3.4% to \$19.5 trillion in the first quarter of 2020 from \$20.2 trillion in the first three months of 2019. Traded notional declined by 17.9% in January 2020 versus January 2019. It slightly increased in February 2020 compared with February 2019, and grew by 5.4% in March 2020 versus March 2019.
- Measured by trade count, the number of fixed-for-floating IRS transactions increased by 26.9% to 299.2 thousand in the first quarter of 2020 from 235.8 thousand in the first quarter of 2019. On a monthly basis, the increase was 3.7% in January, 28.0% in February and 47.9% in March.
- Total capped notional of fixed-for-floating IRS transactions decreased by 16.0% to \$5.4 trillion in the first quarter of 2020 from \$6.4 trillion in the first quarter of 2019. Capped notional of fixed-for-floating IRS declined in January 2020 compared with January 2019, as did total fixed-for-floating IRS traded notional. However, it also declined in February 2020 (by 3.7%) and in March 2020 (by 17.1%), while total fixed-for-floating IRS traded notional rose.

¹ The majority of block trades and large notional off-facility swaps (LNOFs) are reported to the DTCC SDR with a capped notional. Block trades and LNOFs are transactions above a designated notional threshold (block size). These transactions are reported with a delay at the capped amounts (cap size). Depending on the execution venue, some transactions with notional above the block size can't be designated as block trades, although they are still reported to the SDR at the capped notional threshold. There are some transactions that are also reported as block and LNOFs trades to the DTCC SDR, but do not have capped notional

² This report uses data from the DTCC SDR. It therefore only covers trades that are required to be disclosed under US regulations



- On a trade count basis, the number of fixed-for-floating IRS transactions with capped notional declined by 8.0% to 20.6 thousand in the first quarter of 2020 from 22.4 thousand in the first three months of 2019. The number of capped trades declined by 16.2% in January, increased by 2.4% in February and decreased by 8% in March versus the same months in 2019.
- This resulted in the share of capped fixed-for-floating IRS trades relative to total fixed-for-floating IRS transactions decreasing over the period. Capped trades accounted for 6.9% of total fixed-for-floating IRS transactions in the first quarter of 2020 compared with 9.5% in the first quarter of 2019. In March 2020, the share of capped fixed-for-floating IRS transactions relative to total fixed-for-floating IRS transactions reached its lowest level of 6.5%.
- Average daily traded notional of fixed-for-floating IRS transactions with capped notional decreased by 17.3% in the first quarter of 2020 versus the first three months of 2019. Average daily trade count and average trade size declined by 9.4% and 10.3%, respectively, over the same period. The decline can be observed in each of the first three months of 2020 compared to the first three months of 2019³.
- This data analysis supports the views expressed by some market participants that recent market volatility affected their ability to execute larger fixed-for-floating IRS transactions and created relative illiquidity in this market segment.

³ Average daily trade count of fixed-for-floating IRS transactions with capped notional slightly increased in February 2020 compared with February 2019, but the rest of the metrics declined on a month-by-month comparison



IRD TRADED NOTIONAL AND TRADE COUNT

IRD traded notional and trade count significantly increased in the first quarter of 2020, driven by market volatility caused by the coronavirus pandemic. This increase was noticeable in each of the first three months of 2020 compared with the first three months of 2019.

IRD traded notional rose by 25.0% to \$87.4 trillion in the first quarter of 2020 from \$70.0 trillion in the first quarter of 2019. Trade count grew by 27.4% over the same period to 481.6 thousand from 378.0 thousand (see Chart 1).

\$100 600 87.4 500 \$80 Traded Notional (US\$ trillions) 70.0 68.8 68.0 rade Count (thousands 344 400 \$60 406 378 370 50.0 300 \$40 200 \$20 100 0 \$0 Traded Notional Number of Trades

Chart 1: Quarterly IRD Traded Notional and Trade Count

Source: DTCC SDR

This increase was driven by a jump in OIS trading. OIS traded notional increased by 111.4% to \$30.3 trillion in the first quarter of 2020 from \$14.3 trillion in the first quarter of 2019. OIS trade count increased by 92.9% over the same period (see Chart 2 and Chart 3).

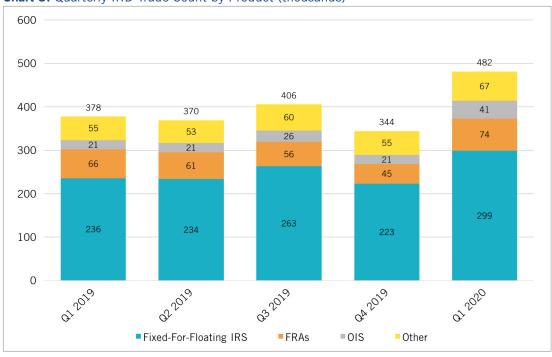
FRA traded notional increased by 8.7% to \$29.4 trillion in the first quarter of 2020 from \$27.1 trillion during the first three months of 2019, while FRA trade count increased by 11.4% from 66.3 thousand to 73.9 thousand.

Fixed-for-floating IRS traded notional decreased by 3.4% to \$19.5 trillion in the first quarter of 2020 from \$20.2 trillion in the first three months of 2019. Fixed-for-floating IRS trade count increased by 26.9% from 235.8 thousand to 299.2 thousand over the same period.

Chart 2: Quarterly IRD Traded Notional by Product (US\$ trillions)



Chart 3: Quarterly IRD Trade Count by Product (thousands)



Source: DTCC SDR

IRD traded notional rose by 17.6% in January, by 30.9% in February and by 28.0% in March 2020 versus the same months in 2019. IRD trade count grew by 11.5%, 25.9% and 44.8% over the same period (see Chart 4).



Chart 4: Monthly IRD Traded Notional and Trade Count

OIS traded notional increased by 80.4% to \$8.6 trillion in January 2020 from \$4.7 trillion in January 2019. It grew by 194.8% to \$11.1 trillion in February 2020 from \$3.8 trillion in February 2019, and increased by 82.8% to \$10.7 trillion in March 2020 from \$5.8 trillion in March 2019. OIS trade count increased by 55.3%, 119.7% and 108.5% over the same period (see Chart 5 and Chart 6).

FRA traded notional increased by 22.4% to \$13.7 trillion in January 2020 from \$11.2 trillion in January 2019. It declined by 15.4% in February 2020 compared with February 2019, and increased by 17.6% to \$8.2 trillion in March 2020 from \$7.0 trillion in March 2019. Trade count increased by 23.0% in January 2020, declined by 8.8% in February and increased by 19.5% in March versus the same months in 2019.

Fixed-for-floating IRS traded notional declined by 17.9% to \$5.9 trillion in January 2020 from \$7.1 trillion in January 2019. It increased by 3.3% in February 2020 compared with February 2019, and grew by 5.4% to \$7.9 trillion in March 2020 from \$7.5 trillion in March 2019. IRS trade count increased by 3.7%, 28.0% and 47.9% over the same period.

Chart 5: Monthly IRD Traded Notional by Product (US\$ trillions)

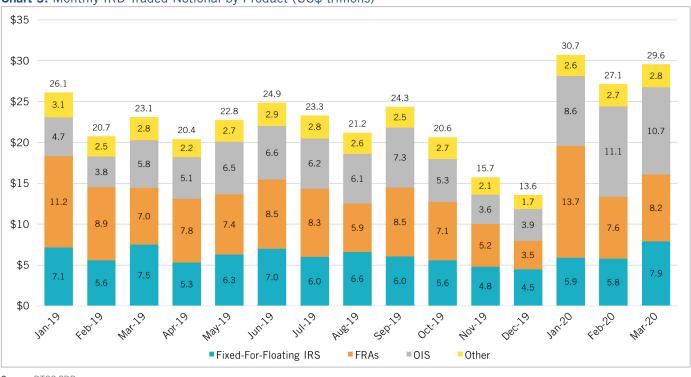
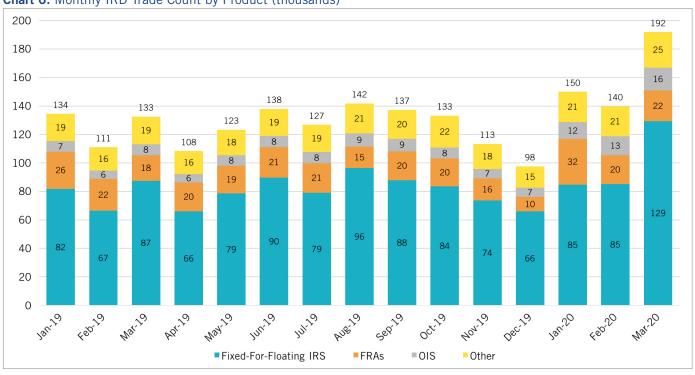


Chart 6: Monthly IRD Trade Count by Product (thousands)



Source: DTCC SDR

OIS average daily traded notional totaled \$466.5 billion in the first quarter of 2020, a 108.2% increase compared with the first quarter of 2019. OIS average daily trade count and trade size increased by 89.9% and 4.1% to 630 and \$685.1 million, respectively (see Table 1).



FRA average daily traded notional totaled \$459.7 billion in the first quarter of 2020, 7.0% higher than the first quarter of 2019. FRA average daily trade count increased by 9.7% to 1,154, while average trade size decreased by 0.7% to \$729.0 million.

Fixed-for-floating IRS average daily traded notional decreased by 6.3% in the first quarter of 2020 versus the first quarter of 2019, totaling \$300.6 billion. Fixed-for-floating IRS average daily trade count increased by 23.0% to 4,604, while average trade size decreased by 24.6% to \$64.9 million.

Table 1: IRD Average Daily Traded Notional, Daily Trade Count and Trade Size (Quarterly Analysis)

	Average Daily Traded Notional (US\$ billions)			Average Daily Trade Count			Average Trade Size (US\$ millions)		
	IRS	FRAs	OIS	IRS	FRAs	OIS	IRS	FRAs	OIS
Q1 2019	320.9	429.6	224.1	3,742	1,052	332	86.1	734.0	658.0
Q2 2019	285.3	375.3	283.3	3,604	969	333	79.1	775.6	858.4
Q3 2019	282.1	343.9	296.5	3,989	851	396	71.1	809.4	753.8
Q4 2019	224.6	243.4	196.6	3,383	695	320	66.3	743.2	610.8
Q1 2020	300.6	459.7	466.5	4,604	1,154	630	64.9	729.0	685.1

Source: DTCC SDR

In March 2020, OIS average daily traded notional totaled \$485.2 billion, a 74.5% increase compared with March 2019. OIS average daily trade count increased by 99.0% over this period, while trade size decreased by 23.4% to \$578.0 million (see Table 2).

FRA average daily traded notional totaled \$371.4 billion in March 2020, 12.2% higher than in March 2019. FRA average daily trade count increased by 14.1% to 982, while average trade size decreased by 0.3% to \$701.5 million.

Fixed-for-floating IRS average daily traded notional increased by 0.6% in March 2020 versus March 2019, totaling \$359.1 billion. Fixed-for-floating IRS average daily trade count increased by 41.2% to 5,875, while average trade size decreased by 29.2% to \$60.8 million.

Table 2: IRD Average Daily Traded Notional, Daily Trade Count and Trade Size (Monthly Analysis)

	Average Daily Traded Notional (US\$ billions)			Average Daily Trade Count			Average Trade Size (US\$ millions)		
	IRS	FRAs	OIS	IRS	FRAs	ois	IRS	FRAs	OIS
Jan-19	324.8	508.3	206.3	3,719	1,186	326	87.9	789.6	606.7
Feb-19	279.0	446.4	188.0	3,328	1,105	303	84.4	704.5	615.2
Mar-19	356.8	331.0	278.0	4,161	861	366	85.8	703.7	754.9
Jan-20	255.2	622.4	372.2	3,687	1,459	506	66.7	753.0	703.7
Feb-20	288.3	377.8	554.3	4,258	1,008	666	67.4	732.9	781.4
Mar-20	359.1	371.4	485.2	5,875	982	728	60.8	701.5	578.0

Source: DTCC SDR



IRD TRANSACTIONS WITH CAPPED NOTIONAL

The total number of IRD transactions with capped notional⁴ increased by 5.3% to 40.9 thousand in the first quarter of 2020 from 38.9 thousand in the first quarter of 2019. As a share of total IRD trades, however, transactions with capped notional declined to 8.5% in the first quarter of 2020 compared with 10.3% in the first quarter of 2019. This suggests that IRD block trading activity increased less rapidly than total IRD trading and a smaller portion of increased IRD trading was executed as block trades (see Chart 7).

500 100% 481.5 40 9 405.9 400 80% Capped Transactions as % of Total Trade Count 378.0 38.5 369.5 38.9 344 1 37.4 Frade Count (thousands) 29.4 300 60% 440.6 200 40% 367.4 339 1 314.8 100 20% 10.3% 10.1% 8.5% 9.5% 8.5% 0 0% Q1 2019 Q2 2019 Q3 2019 Q4 2019 Q1 2020 Non-capped Transactions Capped Transactions Capped Transactions as % of Total Trade Count

Chart 7: Quarterly IRD Transactions with Capped Notional as % of Total IRD Transactions

Source: DTCC SDR

The number of IRD transactions with capped notional declined by 1.5% to 13.1 thousand in January 2020 versus January 2019. It increased by 22.2% to 13.0 thousand in February and declined by 0.7% to 14.9 thousand in March 2020 versus the same months in 2019. The share of IRD transactions with capped notional relative to the total IRD transactions declined to its lowest level of 7.7% in March 2020 (see Chart 8).

⁴ The majority of block trades and large notional off-facility swaps (LNOFs) are reported to the DTCC SDR with a capped notional. Block trades and LNOFs are transactions above a designated notional threshold (block size). These transactions are reported with a delay at the capped amounts (cap size). Depending on the execution venue, some transactions with notional above the block size can't be designated as block trades, although they are still reported to the SDR at the capped notional threshold. There are some transactions that are also reported as block and LNOFs trades to the DTCC SDR, but do not have capped notional

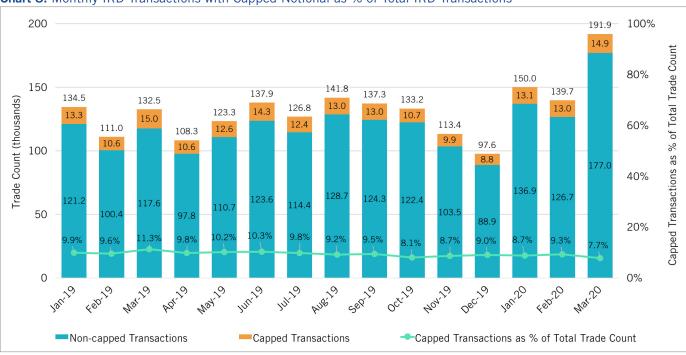


Chart 8: Monthly IRD Transactions with Capped Notional as % of Total IRD Transactions

The total number of capped OIS transactions jumped to 8.4 thousand in the first quarter of 2020 from 5.3 thousand in the first quarter of 2019. Capped OIS transactions accounted for 20.4% of total OIS transactions in the first quarter of 2020 compared with 25.0% in the first quarter of 2019 (see Chart 9).

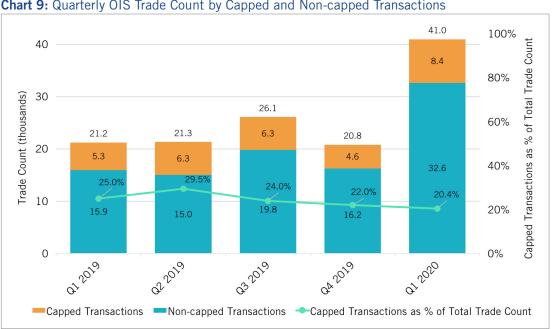


Chart 9: Quarterly OIS Trade Count by Capped and Non-capped Transactions

Source: DTCC SDR

In March 2020, the number of OIS transactions with capped notional totaled 2.8 thousand and accounted for 17.8% of total OIS transactions. In comparison, capped OIS transactions totaled 2.1 thousand and comprised 27.9% of total OIS transactions in March 2019 (see Chart 10).

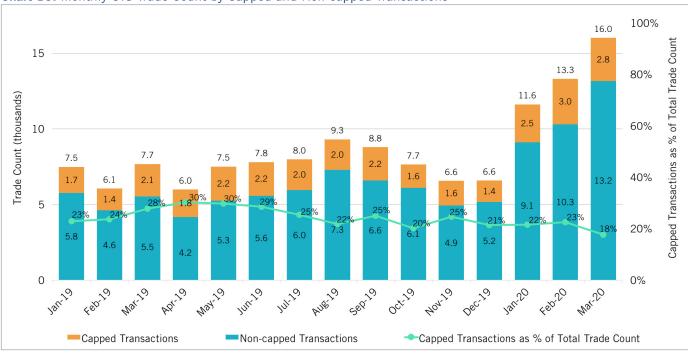


Chart 10: Monthly OIS Trade Count by Capped and Non-capped Transactions

The number of capped FRA transactions grew to 3.0 thousand in the first quarter of 2020 from 2.9 thousand in the first quarter of 2019. Capped FRA transactions accounted for 4.1% of total FRA transactions in the first quarter of 2020 compared with 4.3% in the first quarter of 2019 (see Chart 11).

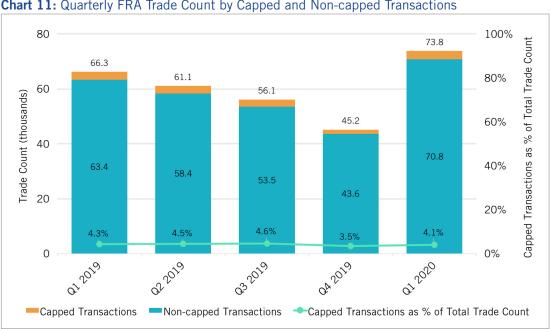


Chart 11: Quarterly FRA Trade Count by Capped and Non-capped Transactions

Source: DTCC SDR

In March 2020, the number of FRA transactions with capped notional totaled 844 and comprised 3.9% of total FRA transactions. In comparison, there were 787 capped FRA transactions in March 2019, accounting for 4.4% of total FRA transactions (see Chart 12).



Chart 12: Monthly FRA Trade Count by Capped and Non-capped Transactions

The number of capped fixed-for-floating IRS transactions declined to 20.6 thousand in the first quarter of 2020 from 22.4 thousand in the first quarter of 2019. Capped fixed-for-floating IRS transactions accounted for 6.9% of total fixed-for-floating transactions in the first quarter of 2020 compared with 9.5% in the first quarter of 2019 (see Chart 13).

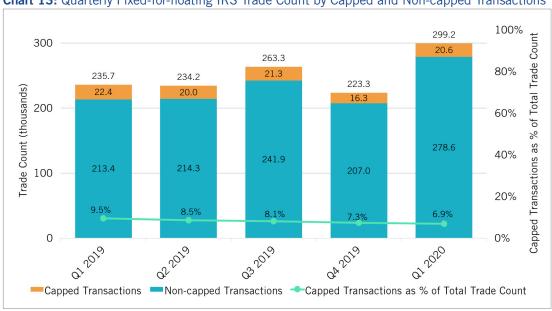


Chart 13: Quarterly Fixed-for-floating IRS Trade Count by Capped and Non-capped Transactions

Source: DTCC SDR

In March 2020, the number of fixed-for-floating IRS transactions with capped notional was 8.4 thousand and accounted for 6.5% of total fixed-for-floating transactions. In comparison, fixed-for-floating IRS transactions totaled 9.1 thousand and accounted for 10.4% of total fixed-for-floating transactions in March 2019 (see Chart 14).

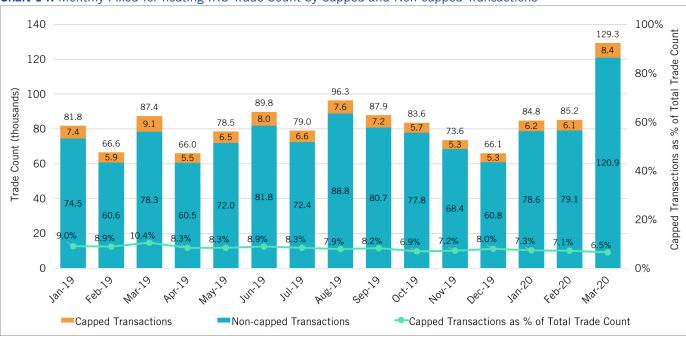


Chart 14: Monthly Fixed-for-floating IRS Trade Count by Capped and Non-capped Transactions

Total capped notional of OIS transactions increased to \$14.9 trillion in the first quarter of 2020 from \$7.6 trillion in the first quarter of 2019, while total capped notional of FRAs increased to \$5.7 trillion from \$5.2 trillion over the same period. Total capped notional of fixed-for-floating IRS decreased to \$5.4 trillion in the first quarter of 2020 from \$6.4 trillion in the first quarter of 2019 (see Chart 15).

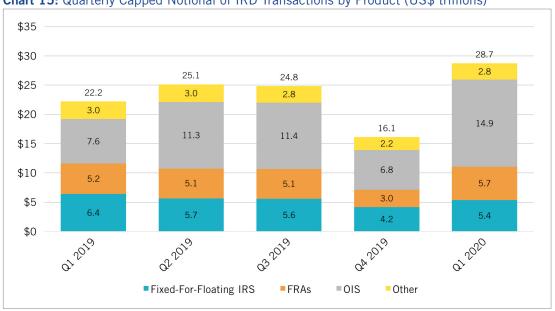


Chart 15: Quarterly Capped Notional of IRD Transactions by Product (US\$ trillions)

Source: DTCC SDR

In March 2020, total capped notional of OIS transactions increased to \$4.8 trillion from \$3.3 trillion in March 2019, while total capped notional of FRAs increased to \$1.6 trillion from \$1.3 trillion over the same period. Total capped notional of fixed-for-floating IRS totaled \$2.1 trillion in March 2020, which was higher relative to the prior months, but lower compared with \$2.5 trillion in March 2019 (see Chart 16).

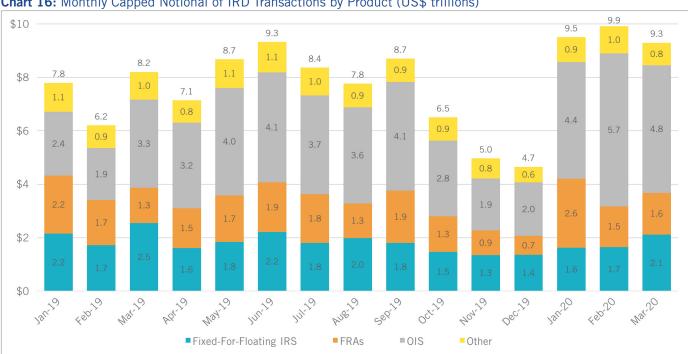


Chart 16: Monthly Capped Notional of IRD Transactions by Product (US\$ trillions)

Average daily traded notional of OIS transactions with capped notional was \$232.4 billion in the first quarter of 2020 compared with \$121.1 billion in the first quarter of 2019. Average daily trade count and trade size of the transactions with capped notional increased to 131 and \$1.7 billion, respectively (see Table 3).

Average daily traded notional of FRA transactions with capped notional totaled \$88.6 billion in the first quarter of 2020 compared with \$82.4 billion in the first quarter of 2019. Average daily trade count of FRA capped transactions was 47, while average trade size totaled \$1.8 billion in the first quarter of 2020.

Average daily traded notional of fixed-for-floating IRS transactions with capped notional decreased by 17.3% to \$84.1 billion in the first quarter of 2020 versus \$101.7 billion in the first quarter of 2019. Average daily trade count of fixed-for-floating IRS transactions with capped notional declined by 9.4% to 322, while average trade size declined by 10.3% to \$262.9 million in the first quarter of 2020 from the first quarter of 2019.

Table 3: Average Daily Traded Notional, Daily Trade Count and Trade Size of IRD Transactions with Capped Notional (Quarterly Analysis)

	Average Daily Traded Notional (US\$ billions)			Average Daily Trade Count			Average Trade Size (US\$ millions)		
	IRS	FRAs	OIS	IRS	FRAs	OIS	IRS	FRAs	OIS
Q1 2019	101.7	82.4	121.1	355	46	84	292.9	1,698.5	1,422.1
Q2 2019	87.2	80.7	177.2	307	43	98	284.4	1,807.5	1,807.9
Q3 2019	84.9	76.7	172.3	323	39	95	263.9	1,907.6	1,817.5
Q4 2019	64.0	45.8	104.4	251	24	70	254.3	1,814.3	1,533.6
Q1 2020	84.1	88.6	232.4	322	47	131	262.9	1,775.2	1,708.3

Source: DTCC SDR



Average daily traded notional of OIS transactions with capped notional was \$217.1 billion in March 2020 compared with \$157.6 billion in March 2019. Average daily trade count and trade size of the transactions with capped notional increased to 129 and \$1.6 billion, respectively (see Table 4).

Average daily traded notional of FRA transactions with capped notional totaled \$71.3 billion in March 2020 compared with \$62.9 billion in March 2019. Average daily trade count of FRA capped transactions was 38, while average trade size totaled \$1.8 billion in March 2020.

Average daily traded notional of fixed-for-floating IRS transactions with capped notional decreased to \$95.9 billion in March 2020 versus \$121.1 billion in March 2019. Average daily trade count of fixed-for-floating IRS transactions with capped notional decreased to 381, while average trade size declined to \$249.3 million in March 2020 from \$279.6 million in March 2019.

Table 4: Average Daily Traded Notional, Daily Trade Count and Trade Size of IRD Transactions with Capped Notional (Monthly Analysis)

	Average Daily Traded Notional (US\$ billions)			Average Daily Trade Count			Average Trade Size (US\$ millions)		
	IRS	FRAs	OIS	IRS	FRAs	ois	IRS	FRAs	ois
Jan-19	97.7	99.0	108.2	335	53	78	301.4	1,812.3	1,396.5
Feb-19	85.7	84.6	97.2	295	46	72	297.6	1,673.0	1,357.1
Mar-19	121.1	62.9	157.6	434	37	102	279.6	1,603.6	1,510.8
Jan-20	73.7	117.1	198.9	280	62	114	264.7	1,706.2	1,739.6
Feb-20	82.5	76.2	286.1	303	41	150	275.8	1,791.4	1,804.0
Mar-20	95.9	71.3	217.1	381	38	129	249.3	1,829.5	1,590.1

Source: DTCC SDR



CONCLUSION

IRD trading spiked significantly in the first quarter of 2020, driven by market volatility caused by the coronavirus pandemic. However, the share of transactions with capped notional relative to total IRD transactions declined. This suggests that IRD block trading activity increased at a slower pace relative to total IRD trading and a smaller portion of increased IRD trading was executed as block trades. This trend was noticeable in each of the first three months of 2020 compared with the first three months of 2019.

In particular, the total number of fixed-for-floating IRS with capped notional declined by 8.0% to 20.6 thousand in the first quarter of 2020 from 22.4 thousand in the first quarter of 2019. The share of capped fixed-for-floating IRS transactions relative to total fixed-for-floating IRS trades decreased to 6.9% in the first quarter of 2020 compared with 9.5% in the first quarter of 2019.

Average daily traded notional of fixed-for-floating IRS transactions with capped notional decreased by 17.3% in the first quarter of 2020 versus the first quarter of 2019. Average daily trade count and average trade size of such transactions declined by 9.4% and 10.3%, respectively, over the same period. The decline can be observed in each of the first three months of 2020 compared to the first three months of 2019.

This data analysis supports the views expressed by some market participants that recent market volatility affected their ability to execute larger fixed-for-floating IRS transactions and created relative illiquidity in this market segment.



APPENDIX

A fixed-for-floating interest rate swap (IRS) is a swap in which one party makes periodic payments based on a fixed rate that is agreed at the execution of the trade. The other party makes payments based on a floating rate that may be reset periodically. Fixed-for-floating IRS can be used to fix interest rate costs in connection with a floating rate loan or other borrowing.

An overnight index swap (OIS) is a fixed-for-floating swap in which the floating reference rate is an overnight interbank rate. The fixed leg would be set at a rate agreed by both parties. OIS can be used to hedge short-term interest rate risk, manage arbitrage opportunities between pricing discrepancies in the short-term interest rate markets or speculate on interest rate changes based on central bank monetary policies.

A forward rate agreement (FRA) is a swap in which parties exchange payments based on the difference between a fixed rate that is agreed at execution and a floating rate that will be observed at some future date. The specified floating rate may be an interest rate or a yield on a specified bond. FRAs can be used to hedge the interest rate that one will be required to pay under an expected future financing.





ISDA has published other recent research papers:

- SwapsInfo First Quarter of 2020 Review, April 2020
 https://www.isda.org/a/8b0TE/SwapsInfo-Q1-2020-Review-Full-Report.pdf
- Interest Rate Benchmarks Review: First Quarter of 2020, April 2020 https://www.isda.org/a/k6qTE/Interest-Rate-Benchmarks-Review-First-Quarter-of-2020.pdf
- ISDA Margin Survey Year-End 2019, April 2020
 https://www.isda.org/a/1F7TE/ISDA-Margin-Survey-Year-end-2019.pdf

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