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July 2020

Interest Rate Swaps: Cleared and Customized

As policy-makers in emerging and frontier markets consider the regulatory framework for financial markets in their jurisdictions, the need for customized risk management tools by market participants remains important.

Market participants use over-the-counter (OTC) derivatives because they are able to customize the terms of their contracts to align more precisely with their specific hedging needs.

With the expansion of central clearing for OTC derivatives, there is a perception that cleared interest rate derivatives (IRD) transactions have become standardized, like interest rate futures.

Using data from the Depository Trust & Clearing Corporation (DTCC), this paper examines the population of cleared fixed-for-floating interest rate swaps (IRS) and demonstrates that cleared products remain highly customizable compared to futures contracts, enabling buyers and sellers to agree on bespoke terms to better manage the risks to which they are exposed in the normal course of their business operations.

INTRODUCTION

According to the Bank for International Settlements (BIS), the share of IRD activity involving end users (including both financial institutions that are not 'reporting dealers' and non-financial customers) totaled 76.0% in April 2019[1].

These participants are based in numerous jurisdictions around world, reflecting ISDA's membership, which includes derivatives users from 74 countries. They use OTC IRD because they are able to customize the terms of their contracts to align more precisely with their specific hedging needs.

OTC derivatives allow market participants to closely offset the risks they face and to ensure certainty in financial performance. For example, pension funds can use derivatives to hedge inflation and interest rate risk in long-dated pension liabilities, while governments and supranationals can use derivatives to reduce interest rate risk on new bond issuance.

As policy-makers in emerging and frontier markets consider the regulatory framework for financial markets in their jurisdictions, the need for customized risk management tools by market participants remains important. However, with the expansion of central clearing for OTC derivatives, there is a perception that cleared IRD transactions have become standardized, like interest rate futures.

This paper examines the population of cleared fixed-for-floating IRS and demonstrates that cleared products remain highly customizable, enabling buyers and sellers to agree on bespoke terms to better manage the risks to which they are exposed in the normal course of their business operations.

- Using data from the DTCC[2], ISDA identified 55 different reference rates for cleared fixed-for-floating IRS transactions in 2019. These swaps can further be differentiated by the underlying reference rate tenor, reset frequency, and the day count, business day and compounding convention.

- The transaction size of fixed-for-floating IRS is highly customizable. ISDA identified more than 480 different transaction sizes for cleared fixed-for-floating IRS as measured by rounded notional amount[3]. Based on 2019 data, transaction sizes varied from under 1,000 to 650 billion. The most common transaction sizes were 100 million, 50 million and 25 million[4].

[1] The BIS Triennial Central Bank Survey considers 'other financial institutions' (for example, pension funds, mutual funds, insurance companies, central banks, hedge funds, money market funds, building societies, leasing companies and smaller commercial and investment banks) as foreign exchange and interest rate derivatives market end users. 'Non-financial customers' (for example, corporates and non-financial government entities) are regarded as non-financial end users. Entities in both of these categories use derivatives products for a variety of hedging and investment purposes, with the aim of managing risk and enhancing returns https://stats.bis.org/statx/srs/table/d12.1

[2] This analysis is based on Depository Trust & Clearing Corporation interest rate derivatives traded and cleared notional and trade count data in 2019, and covers only transactions required to be disclosed under US regulations. Only fixed-for-floating interest rate swaps are included in this analysis

[3] All transactions that are reported with a '+' indicating a trade with capped notional were included in the block trade category; all transactions with cleared notional less than 1,000 were grouped in one category

[4] This part of the analysis is based on notional denominated in local currencies before being converted to US dollar

- ISDA identified 497 different tenors for fixed-for-floating IRS in 2019, which ranged from less than three months to over 40 years[5].
- In addition to various tenors, IRS can have a spot start, a forward start (international monetary market (IMM) and non-IMM) and a backward start. There were 366 different start dates for forward-starting IRS with non-IMM start dates.

[5] Tenor is calculated as the difference between the effective date and the maturity date and it is counted by a number of months for the purpose of this analysis

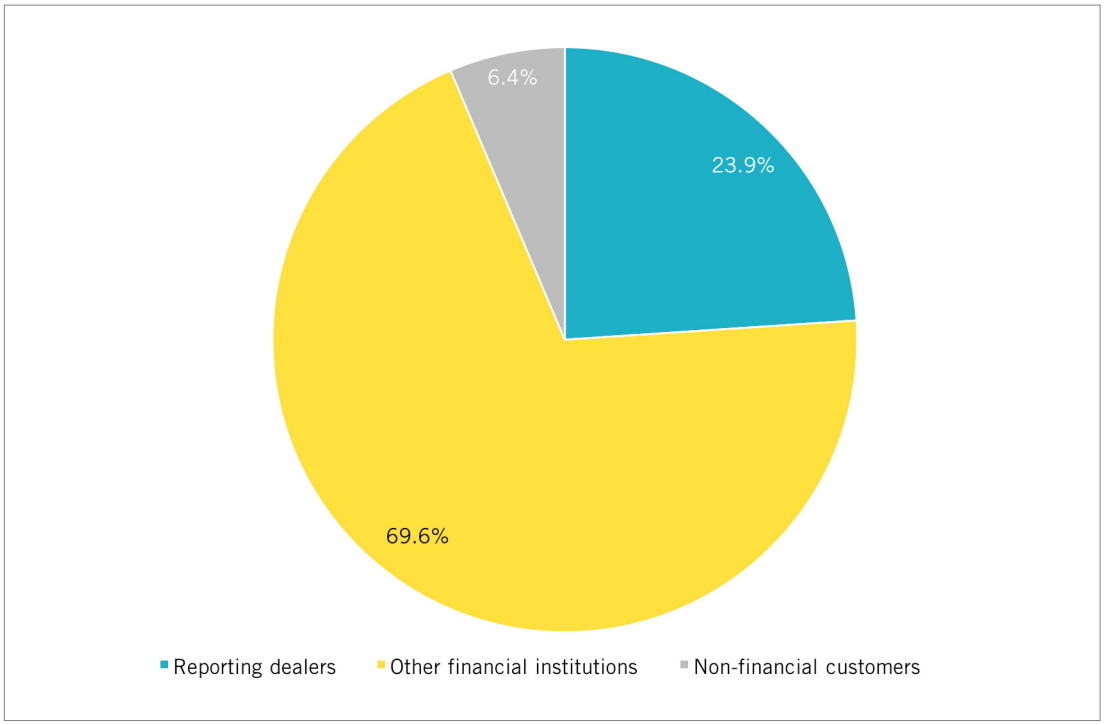
Interest Rate Derivatives

According to the BIS OTC derivatives statistics, notional outstanding of global IRD totaled $449.0 trillion with a gross market value of $8.4 trillion at the end of December 2019[6]. The BIS IRD statistics data incorporates forward rate agreements (FRAs), options and IRS, which include overnight index swaps, fixed-for-floating and floating-for-floating swaps. IRS accounted for 76.0% of notional outstanding and 89.4% of gross market value at the end of December 2019[7].

Daily average turnover of global OTC IRD totaled $6.5 trillion in April 2019, of which $4.1 trillion was IRS turnover[8,9]. The share of IRD activity involving end users (both 'other financial institutions' and 'non-financial customers') was 76.0% in April 2019[10].

Daily average turnover of IRD involving 'other financial institutions' totaled $4.5 trillion and accounted for 69.6% of total IRD turnover, while daily average turnover of IRD involving non-financial customers totaled $415.8 billion and accounted for 6.4% of IRD turnover. IRD trading activity between reporting dealers totaled $1.6 trillion and accounted for 23.9% of daily average IRD turnover in April 2010 (see Chart 1).

Chart 1: Share of IRD Daily Average Turnover by Counterparty in April 2019



Source: BIS Triennial Central Bank Survey 2019

[6] BIS OTC Derivatives Statistics https://stats.bis.org/statx/srs/table/d5.1?f=pdf

[7] Gross market value is the sum of the absolute values of all outstanding derivatives contracts with either positive or negative replacement values evaluated at market prices prevailing on the reporting date

[8] Turnover data provides a measure of market activity. It is defined as the gross value of all new deals entered into over a given period, and is measured in terms of the notional amount of the contracts. OTC derivatives transactions that are centrally cleared via central counterparties are reported on a pre-novation basis (ie, with the original execution counterpart as counterparty)

[9] The BIS Triennial Central Bank Survey 2019 https://stats.bis.org/statx/srs/table/d12.1

[10] The BIS Triennial Central Bank Survey considers 'other financial institutions' as foreign exchange and interest rate derivatives market end users. 'Non-financial customers' are regarded as non-financial end users. Entities in both of these categories use derivatives products for a variety of hedging and investment purposes, with the aim of managing risk and enhancing returns

Under the Bank for International Settlements (BIS) Triennial Central Bank Survey classification, 'other financial institutions' include financial entities that are not classified as 'reporting dealers' in the survey[11]. According to the BIS, these are typically regarded as foreign exchange and interest rate derivatives market end users. This category includes smaller commercial banks, investment banks and securities houses, mutual funds, pension funds, hedge funds, currency funds, money market funds, building societies, leasing companies, insurance companies, and financial subsidiaries of corporate firms and central banks.

These non-dealer financial institutions use derivatives for a variety of purposes. For example, pension plans hedge the interest rate and inflation risk inherent in long-dated pension liabilities. Insurance firms use derivatives to manage their assets and liabilities, hedge variable annuity guarantees and enhance investment income. Asset managers could use derivatives to hedge unwanted interest rate or foreign exchange risk, protect portfolios against market volatility, quickly rebalance asset allocations or take views on specific markets or sectors, and enhance returns[12].

'Non-financial customers' include mainly non-financial end users, such as corporations and non-financial government entities. This category may also include private individuals who directly transact with reporting dealers for investment purposes.

Non-financial market participants primarily use derivatives to mitigate risk, reduce balance-sheet volatility, and increase certainty in cash flows, allowing firms to invest in new business initiatives with greater confidence. For example, a corporate may decide to issue debt in foreign currency to access a new investor base or tap into cheaper funding rates, then use a cross-currency swap to eliminate interest rate and currency mismatches. Governments may use derivatives to hedge interest rate risk on new bond issuance through interest rate swaps.

Reporting dealers are financial institutions that participate as reporters in the triennial survey. These are mainly large commercial and investment banks and securities houses that: (i) participate in the interdealer market; and/or (ii) have an active business with large customers, such as large corporate firms, governments and non-reporting financial institutions.

Reporting dealers actively buy and sell over-the-counter derivatives both for their own account and/or in meeting customer demand. Much of the dealer activity likely relates to market-making and hedging of customer transactions, which is critical for market liquidity and the facilitation of client trades.

[11] Bank for International Settlement Triennial Central Bank Survey: OTC interest rate derivatives turnover in April 2019, September 2019 https://www.bis.org/statistics/rpfx19_ir.pdf

[12] Dispelling Myths: End-User Activity in OTC Derivatives, August 2014 https://www.isda.org/a/gSiDE/isda-dispelling-myths-final.pdf

Fixed-for-floating Interest Rate Swaps

This analysis is based on traded and cleared notional and trade count for single-currency fixed-for-floating IRS[13]. This information was compiled based on the trading data reported to the DTCC and Bloomberg swap data repositories (SDRs). This data includes only trades required to be disclosed under US regulations.

In 2019, fixed-for-floating IRS traded notional totaled $72.2 trillion and transaction count was 956.4 thousand. The majority of that – $69.2 trillion (95.8%) of traded notional and 889.3 thousand of transactions – was cleared. For comparison, fixed-for-floating IRS traded notional and transaction count in 2014 totaled $49.3 trillion and 639.7 thousand, respectively, and 79.3% of traded notional was cleared (see Table 1).

Table 1: Fixed-for-floating IRS Traded and Cleared Notional and Trade Count

	Traded Notional (US$ trillions)	Trade Count (thousands)	Cleared Notional (US$ trillions)	Cleared Trade Count (thousands)	% of Cleared Notional
2014	49.3	639.7	39.0	450.2	79.3%
2015	48.4	703.5	41.0	545.1	84.7%
2016	50.0	724.0	45.1	612.8	90.3%
2017	58.5	759.6	55.4	691.0	94.8%
2018	73.1	869.9	70.0	802.1	95.7%
2019	72.2	956.4	69.2	889.3	95.8%

Source: DTCC and Bloomberg SDRs

Fixed-for-floating IRS average daily cleared notional increased from $150.2 billion in 2014 to $266.0 billion in 2019, while average daily cleared trade count grew from 1,731 to 3,421 over the same period. Average cleared transaction size was $86.6 million in 2014 and $77.9 in 2019 (see Table 2).

Table 2: Fixed-for-floating IRS Average Daily Cleared Notional, Average Daily Cleared Trade Count and Average Cleared Trade Size

	Average Daily Cleared Notional (US$ billions)	Average Daily Trade Count	Average Trade Size (US$ millions)
2014	150.2	1,731	86.6
2015	157.8	2,096	74.7
2016	173.5	2,357	73.4
2017	213.1	2,658	80.3
2018	269.2	3,085	87.3
2019	266.0	3,421	77.9

Source: DTCC and Bloomberg SDRs

[13] A fixed-for-floating IRS is a swap in which one party makes periodic payments based on a fixed rate that is agreed upon at the execution of the swap, while the other party makes payments based on a floating rate that may be reset periodically

Underlying Reference Rate

The underlying reference rate is a specific interest rate that determines the floating interest rate portion of the IRS contract. Reference rates differ according to the particular type of borrowing cost that a rate is designed to measure and its methodology of compilation.

Different reference rates allow market participants to hedge or mitigate interest rate exposures related to a particular borrowing or debt issuance. For example, a firm may enter into a fixed-for-floating IRS to fix interest costs in connection with a floating rate loan or other borrowing.

ISDA identified 55 different underlying reference rates for cleared fixed-for-floating IRS transactions in 2019 (see Table 3). US dollar LIBOR, EURIBOR and sterling LIBOR were the most common underlying reference rates. Cleared notional of IRS referencing US dollar LIBOR totaled $34.0 trillion and trade count was 395.5 thousand. Cleared notional of the transactions referencing EURIBOR and sterling LIBOR was $11.9 and $4.7 trillion and trade count totaled 156.4 and 66.4 thousand, respectively.

Table 3: Fixed-for-floating IRS Cleared Notional and Trade Count by Underlying Reference Rates in 2019

Underlying Reference Rate	Cleared Notional (US$ billions)	Cleared Trade Count	Underlying Reference Rate	Cleared Notional (US$ billions)	Cleared Trade Count
USD-LIBOR-BBA	33,960.9	395,498	GBP-SONIA-COMPOUND	20.9	59
EUR-EURIBOR-Reuters	11,940.9	156,429	MXN-TIIE-MEX06	16.4	428
GBP-LIBOR-BBA	4,703.0	66,355	OTHER	11.6	227
JPY-LIBOR-BBA	3,639.2	35,521	CAD-CORRA-OIS-COMPOUND	9.2	5
AUD-BBR-BBSW	2,986.1	33,851	KRW-CD-3220	7.3	199
MXN-TIIE-Banxico	2,858.0	54,861	DKK-CIBOR2-DKNA13	3.2	59
CAD-BA-CDOR	2,815.5	28,224	HUF-BUBOR	2.0	53
NZD-BBR-FRA	1,156.9	16,664	JPY-TIBOR-ZTIBOR	1.8	18
BRL-CDI	631.3	7,877	TWD-Reuters-6165	1.4	37
ZAR-JIBAR-SAFEX	602.9	9,817	ILS-TELBOR01-Reuters	1.4	34
SEK-STIBOR-SIDE	525.9	10,417	JPY-TIBOR-17097	1.3	26
KRW-CD-KSDA-BLOOMBERG	357.6	6,668	COP-IBR-OIS-COMPOUND	1.2	34
CHF-LIBOR-BBA	325.9	5,920	USD-Federal Funds-H.15	1.2	8
SGD-SOR-VWAP	323.4	8,600	INR-MIBOR-OIS-COMPOUND	0.7	13
CZK-PRIBOR-PRBO	317.7	7,780	RUB-MOSPRIME-NFEA	0.5	17
PLN-WIBOR-WIBO	307.6	8,277	NZD BKBM	0.5	9
HKD-HIBOR-HKAB	281.1	5,352	NZD-NZIONA-OIS-COMPOUND	0.2	1
CNY-CNREPOFIX=CFXS-Reuters	275.5	6,535	GBP-WMBA-SONIA-COMPOUND	0.2	1
CLP-TNA	256.1	7,099	ZAR-BBA	0.1	5
NOK-NIBOR-OIBOR	241.9	4,568	CNY_REPO_CNRR007_BLMBERG_7DAY	0.1	5
HUF-BUBOR-Reuters	238.0	6,953	DKK-CIBOR-DKNA13	0.1	4
AUD-AONIA-OIS-COMPOUND	75.8	57	MYR-KLIBOR-BNM	0.1	3
THB-THBFIX-REUTERS	75.7	2,123	CNY-SHIBOR-Reuters	0.1	1
NOK-NIBOR-NIBR	51.0	839	SGD-SOR-T7310	0.0	1
SGD-SOR-Reuters	41.4	926	USD-SIFMA Municipal Swap Index	0.0	1
EUR-EONIA-OIS-COMPOUND	36.3	26	USD-OIS-3:00-NY-ICA	0.0	4
USD-Federal Funds-H.15-OIS-COMPOUND	29.6	27	SAR-SRIOR-SUAA	0.0	1
TWD-TAIBOR-Reuters	26.3	832			

Source: DTCC SDR

Fixed-for-floating IRS with these underlying reference rates can be further differentiated by the underlying reference rate tenor and reset frequency. As shown in Table 4, swaps cleared on CME that reference USD-LIBOR-BBA have three different underlying index tenors (one, three and six months) and seven different frequencies of the rate reset[14] (one week, two weeks, one month, two months, three months, six months and one year)[15,16].

Table 4: Underlying Reference Rates by Tenor and Reset Frequency

Underlying Reference Rate	Reference Rate Tenor	Reset Frequency
AUD-BBR-BBSW	3M, 6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
CAD-BA-CDOR	3M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
CHF-LIBOR-BBA	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
CLP-TNA	N/A	1M, 3M, 6M, 1Y
CNY-CNREPOFIX=CFXS-Reuters	1W	1W
CZK-PRIBOR-PRBO	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
DKK-CIBOR-DKNA13	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
DKK-CIBOR2-DKNA13	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
EUR-EURIBOR-Reuters	1M, 3M, 6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
EUR-EURIBOR-Telerate	1M, 3M, 6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
GBP-LIBOR-BBA	1M, 3M, 6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
HKD-HIBOR-HKAB	3M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
HUF-BUBOR-Reuters	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
JPY-LIBOR-BBA	1M, 3M, 6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
KRW-CD-KSDA-Bloomberg	3M	3M
MXN-TIIE-Banxico	28D	28D
NOK-NIBOR-OIBOR	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
NOK-NIBOR-NIBR	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
NZD-BBR-FRA	3M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
PLN-WIBOR-WIBO	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
SEK-STIBOR-SIDE	3M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
SGD-SOR-VWAP	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
SGD-SOR-Reuters	6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
USD-LIBOR-BBA	1M, 3M, 6M	1W, 2W, 1M, 2M, 3M, 6M, 1Y
ZAR-JIBAR-SAFEX	3M	1W, 2W, 1M, 2M, 3M, 6M, 1Y

Source: CME

Additionally, IRS transactions may have different day count conventions (which determine how interest accrues over time), business day conventions (which specify how dates are adjusted when, for example, a payment day falls on a day that is not a business day), and compounding conventions (which may apply if reset dates occur more frequently than payment dates).

Transaction Size

IRS transaction size is the predetermined notional amount that is used to calculate the periodic payments due between parties. This amount is not actually exchanged in the transactions, and does not reflect the amount of risk being transferred.

[14] Reset dates are days during the term of a rates transaction on which a floating reference rate is measured and reset
[15] https://www.cmegroup.com/trading/interest-rates/cleared-otc/files/cme-otc-irs-supported-product-list.xlsx
[16] This table includes the data only for the reference rates that are provided on the CME website

The flexibility to customize the notional amount of IRS transactions allows market participants to precisely match the payment amounts between an IRS and a specific loan agreement, bond indenture or other debt instrument. Additionally, this flexibility allows market participants to better tailor their hedge positions to enter into transactions with certain risk exposures[17].

The transaction size of fixed-for-floating IRS is highly customizable. ISDA identified more than 480 different transaction sizes for cleared fixed-for-floating IRS as measured by rounded notional amount[18]. Based on 2019 data, the transaction sizes varied from under 1,000 to 650 billion.

Table 5 shows that most cleared fixed-for-floating transactions fell in the transaction size range between 10 million and 50 million and between 100 million and 500 million. There were 43 different transactions sizes in the range between 10 million and 50 million, 50 transaction sizes in the range between 50 million and 100 million, and 40 transaction sizes in the range between 100 million and 500 million[19].

The most common transaction sizes are 100 million, 50 million and 25 million. In 2019, there were 38.1 thousand of 100 million transactions, 34.1 thousand of 50 million transactions and 25.3 thousand of 25 million transactions.

Table 5: Fixed-for-floating IRS Cleared Trade Count by Transaction Size in 2019

Transaction Size (TS) Range	Cleared Trade Count Within Each Range	Number of Different TS within Each Range	Most Frequent TS within Each Range	Cleared Trade Count for Most Frequent TS
< 1 million	28,460	219	500,000	1,293
1 million ≤ TS < 10 million	121,792	9	2,000,000	19,544
10 million ≤ TS < 50 million	254,011	43	25,000,000	25,281
50 million ≤ TS < 100 million	134,973	50	50,000,000	34,095
100 million ≤ TS < 500 million	176,261	40	100,000,000	38,055
500 million ≤ TS < 1 billion	25,562	10	500,000,000	7,535
1 billion ≤ TS < 5 billion	38,535	4	1,000,000,000	14,559
5 billion ≤ TS < 10 billion	11,028	5	5,000,000,000	4,310
10 billion ≤ TS < 50 billion	17,563	40	10,000,000,000	3,274
50 billion ≤ TS < 100 billion	2,974	50	50,000,000,000	482
≥ 100 billion	1,430	10	100,000,000,000	537
Block trades	76,760	101	170,000,000	13,935

Source: DTCC SDR

Additionally, some market participants use variable notional swaps (VNS), also known as amortizing swaps, to hedge non-standard risks. These instruments have legs with increasing or decreasing notionals. For example, parties may enter into VNS to offset balloon payment provisions of loans or lease agreements or to reduce risk exposure to securities that have a sinking fund or early redemption provisions.

[17] The objective of hedging a fixed income position with IRS is to ensure that, if an underlying security loses its value, then this loss would be offset by a comparable gain in the hedge position. Instead of matching notional values of the positions, the best way to hedge is to match the dollar value of a one basis point change (DV01) in the yield of the underlying security and that of the hedging transaction

[18] All transactions that are reported with a '+' indicating trades with capped notional were included in the block trade category; all transactions with cleared notional less than 1,000 were grouped in one category

[19] This part of the analysis is based on notional denominated in local currencies before being converted to US dollar

Tenor

Tenor is the time between the effective date and the maturity date of an IRS contract, and can range from a few days to many years. Transactions with a longer tenor are considered more risky because there is more time in which the value might change.

Depending on risk tolerance and financial objectives, market participants may choose transactions with shorter or longer tenors. For example, a company that needs to manage its short and medium-term interest rate risk might use IRS with tenors of five years or less. Additionally, the ability to customize tenors allows investors to better align the tenor of hedges with the maturity of debt instruments being hedged.

ISDA identified 497 different tenors for fixed-for-floating IRS in 2019, which ranged from less than three months to over 40 years. For the purpose of this analysis, tenor was measured by the number of months between the effective date and the maturity date of the trade.

Based on cleared notional within each tenor range set out in Table 6 and Table 7, most transactions were between one and three years and five and seven years. Based on the trade count for the same tenor ranges, most transactions were between five and seven years and 10 and 15 years.

The most common tenors for fixed-for-floating IRS in 2019 were 24 months, 60 months and 120 months.

Table 6: Fixed-for-floating IRS Cleared Notional by Tenor in 2019

Tenor	Cleared Notional (US$ trillions)	Number of Different Tenors within Each Range	Most Frequent Tenor (months)	Cleared Notional for Most Frequent Tenor (US$ trillions)
Tenor < 3M	0.90	3	2	0.62
3M ≤ Tenor < 6M	6.61	3	3	6.13
6M ≤ Tenor < 1Y	2.23	6	6	1.61
1Y ≤ Tenor < 3Y	25.42	24	24	12.65
3Y ≤ Tenor < 5Y	5.91	24	36	3.35
5Y ≤ Tenor < 7Y	12.79	24	60	11.37
7Y ≤ Tenor < 10Y	3.51	36	84	1.53
10Y ≤ Tenor < 15Y	8.31	60	120	7.93
15Y ≤ Tenor < 20Y	0.65	60	180	0.49
20Y ≤ Tenor < 30Y	1.03	120	240	0.57
30Y ≤ Tenor < 40Y	1.76	80	360	1.74
Tenor ≥ 40Y	0.04	57	480	0.02

Source: DTCC SDR

Table 7: Fixed-for-floating IRS Cleared Trade Count by Tenor in 2019

Tenor	Cleared Trade Count (thousands)	Number of Different Tenors within Each Range	Most Frequent Tenor (months)	Trade Count for Most Frequent Tenor (thousands)
Tenor < 3M	3.2	3	2	2.9
3M ≤ Tenor < 6M	26.3	3	3	23.3
6M ≤ Tenor < 1Y	12.9	6	6	8.2
1Y ≤ Tenor < 3Y	157.9	24	24	100.9
3Y ≤ Tenor < 5Y	69.0	24	36	39.6
5Y ≤ Tenor < 7Y	212.6	24	60	192.1
7Y ≤ Tenor < 10Y	66.8	36	84	26.0
10Y ≤ Tenor < 15Y	201.4	60	120	191.2
15Y ≤ Tenor < 20Y	17.7	60	180	13.8
20Y ≤ Tenor < 30Y	33.3	120	240	18.8
30Y ≤ Tenor < 40Y	85.9	80	360	84.5
Tenor ≥ 40Y	2.4	57	480	1.3

Source: DTCC SDR

Start Date

The start date of an IRS is the date on which parties begin calculating accrued fixed and floating interest rate payments. IRS can have a spot start, a forward start (IMM and non-IMM) or a backward start (which includes trades reported late or underlying swaps from exercised swaptions).

A spot start date means that a transaction becomes effective typically within one or two business days after the execution date, although the effective date for some IRS can be the same as the execution date. For forward-starting IRS, the effective date is usually further ahead of the execution date. For IRS with an IMM start, the effective date falls on the third Wednesday in March, June, September and December. Other forward-starting IRS have non-IMM start dates. Backward-starting IRS have the effective date before the execution date.

Forward-starting IRS allow market participants to lock in certain rates that are being offered today based on the expectation that interest rates might change in the future. Investors can use different start dates to align the effective date of the forward-starting IRS with the funding date of a loan being hedged.

In 2019, $24.9 trillion of cleared IRS transactions had a spot start; $36.2 trillion had a forward start, including $8.5 trillion with an IMM start and $27.7 trillion with non-IMM start dates; and $8.1 trillion had a backward start (see Table 8).

Table 8: Fixed-for-floating IRS Cleared Notional and Trade Count by Start Date in 2019

	Cleared Notional (US$ trillions)	Cleared Trade Count (thousands)
Spot start	24.86	372.3
IMM start date	8.51	139.7
Non-IMM start date	27.65	223.6
Backward start	8.14	153.7

Source: DTCC SDR

ISDA identified 366 different start dates (calculated in months) for forward-starting IRS with non-IMM start dates (see Table 9 and Table 10).

Table 9: Fixed-for-floating IRS Cleared Notional by Non-IMM Forward Start in 2019

Non-IMM Forward Start (FS)	Cleared Notional (US$ trillions)	Number of Different Forward Start within Each Range	Most Frequent Forward Start (months)	Cleared Notional for Most Frequent Forward Start (US$ trillions)
FS < 3M	8.54	3	1	3.09
3M ≤ FS < 6M	3.95	3	3	2.04
6M ≤ FS < 1Y	4.41	6	6	1.26
1Y ≤ FS < 3Y	6.07	24	12	1.44
3Y ≤ FS < 5Y	2.17	24	36	0.54
5Y ≤ FS < 7Y	1.19	24	60	0.64
7Y ≤ FS < 10Y	0.56	36	84	0.10
10Y ≤ FS < 15Y	0.40	60	120	0.19
15Y ≤ FS < 20Y	0.17	60	180	0.06
20Y ≤ FS < 30Y	0.16	92	240	0.06
30Y ≤ FS < 40Y	0.02	29	360	0.01
FS ≥ 40Y	0.00	5	480	0.00

Source: DTCC SDR

Table 10: Fixed-for-floating IRS Cleared Trade Count by Non-IMM Forward Start in 2019

Non-IMM Forward Start (FS)	Cleared Trade Count (thousands)	Number of Different Forward Start within Each Range	Most Frequent Forward Start (months)	Trade Count for Most Frequent Forward Start (thousands)
FS < 3M	71.9	3	0	26.5
3M ≤ FS < 6M	28.7	3	3	15.2
6M ≤ FS < 1Y	30.9	6	6	11.1
1Y ≤ FS < 3Y	37.6	24	12	9.0
3Y ≤ FS < 5Y	19.5	24	36	3.6
5Y ≤ FS < 7Y	16.4	24	60	9.7
7Y ≤ FS < 10Y	6.8	36	84	0.9
10Y ≤ FS < 15Y	5.9	60	120	3.0
15Y ≤ FS < 20Y	2.8	60	180	0.9
20Y ≤ FS < 30Y	2.6	92	240	1.1
30Y ≤ FS < 40Y	0.4	29	360	0.2
FS ≥ 40Y	0.1	5	480	0.1

Source: DTCC SDR

CONCLUSION

This paper examines the population of cleared fixed-for-floating IRS and demonstrates that cleared derivatives remain highly customizable as compared to futures contracts, enabling buyers and sellers to agree on bespoke terms to better manage the risks to which they are exposed to in the normal course of their business operations.

The ability to customize cleared derivatives allows end users to better hedge interest rate, currency, foreign exchange and inflation risk; manage their assets and liabilities; protect investment portfolios against market volatility; reduce balance-sheet volatility; and increase certainty in cash flows. All these activities have important economic and social benefits.

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