

Global Credit Default Swaps Market Study

ISDA's analysis of the credit default swaps (CDS) market reveals that market activity in single-name CDS has been stable since 2016. However, a relatively small number of reference entities account for a large proportion of transactions. Market activity in index CDS leveled off in 2016, and has been on an upward trend since the beginning of 2017.

This analysis explores credit derivatives market size from the start of 2014 until the middle of 2019, using data from the Depository Trust & Clearing Corporation (DTCC) Trade Information Warehouse (TIW).

SUMMARY

ISDA's analysis of CDS market size and structure reveals that market risk transfer activity (MRTA) in single-name CDS has been steady since 2016¹. The analysis also shows that the universe of single-name CDS with MRTA remains large. Over 500 names generated MRTA in each quarter over the past five and a half years. At the same time, MRTA is rather concentrated – 27 names account for about 45% of total single-name CDS MRTA. Meanwhile, MRTA in index CDS leveled off in 2016, and has been on an upward trend since the beginning of 2017.

- Single-name CDS market activity has stabilized over the past three and a half years. MRTA on a four-quarter rolling average basis ranged between \$600 billion and \$700 billion per quarter over the 13 quarters to June 30, 2019 (Chart 2).
- ISDA identified 1,284 unique reference entities underlying CDS contracts during the 22-quarter period between the first quarter of 2014 and the second quarter of 2019. Out of this universe, 542 unique reference names were executed on in each of the 22 quarters. These 542 names accounted for about 90% of total single-name CDS market activity during each quarter since mid-2015 (Chart 4).
- Of the 1,284 unique reference entities, 276 were included in the top 100 (ranked by MRTA) in at least one quarter between the first quarter of 2014 and the second quarter of 2019. Out of this group, 27 were in the top 100 in each of the 22 quarters (Table 1). These 27 names accounted for about 45% of all MRTA since 2017 (Chart 8).
- Sixty six of the 276 names were in the top 100 between 10 and 21 quarters, and 183 reference entities were included in the top 100 in nine quarters or less. That suggests instances of episodic liquidity – spikes in MRTA related to specific news or developments concerning a reference entity. The remaining 1,008 names were not included in the top 100 in any of the quarters (Chart 8).

¹ Market risk transfer activity (referred to as MRTA or market activity) covers only transactions that change the risk positions between two parties, including new transactions, termination of existing transactions or assignment of existing transactions to a third party. It is measured by executed notional of these transactions

- Index CDS market activity leveled off in 2016, but noticeably increased during 2018 and the first half of 2019. MRTA on a four-quarter rolling average basis jumped from \$4 trillion in the first quarter of 2017 to \$5.8 trillion in the second quarter of 2019 (Chart 14).
 - Five major CDS indices – iTraxx Europe, iTraxx Europe Crossover, iTraxx Europe Senior Financials, CDX IG and CDS HY – consistently made up more than 90% of index CDS market activity (Chart 15).
-

SCOPE AND METHODOLOGY

This study analyzes recent trends in the size and structure of the global single-name and index CDS market from the start of 2014 to the second quarter of 2019.

The analysis is based on data from the Depository Trust & Clearing Corporation (DTCC) Trade Information Warehouse (TIW), which provides warehouse, lifecycle event processing and central settlement services for approximately \$10 trillion of credit derivatives transactions worldwide².

ISDA used DTCC weekly transaction activity reports to calculate quarterly and annual market activity. Market activity, as opposed to outstanding notional, presents a more accurate picture of CDS market dynamics. DTCC data includes only those transactions where market participants engaged in market risk transfer activity. Risk transfer activity is defined as transactions that change the risk position between two parties. These transaction types include new trades between two parties, termination of existing transactions or the assignment of existing trades to a third party.

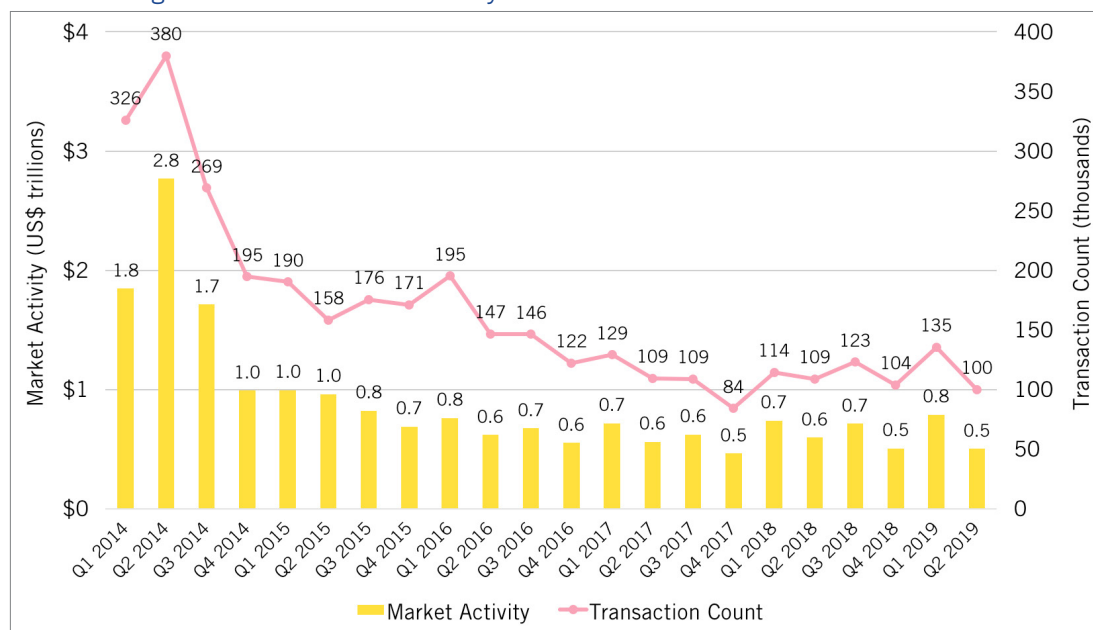
DTCC single-name CDS data includes the most active (top 1,000 transactions) single-name CDS. DTCC index CDS data covers both untranched and tranching CDS index transactions.

² <http://www.dtcc.com/derivatives-services/trade-information-warehouse>

SINGLE-NAME CDS MARKET ACTIVITY

As shown in Chart 1, single-name CDS market activity has been steady since 2016, after a decline between 2014 and 2016.

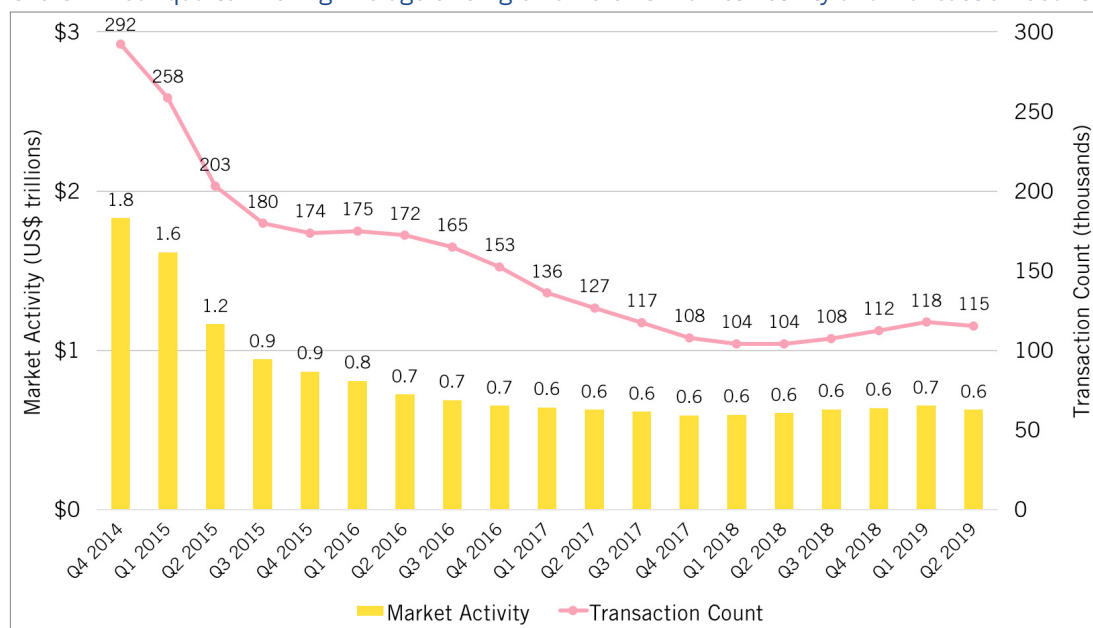
Chart 1: Single-name CDS Market Activity and Transaction Count



Source: DTCC TIW data

Chart 2 shows the four-quarter moving average for single-name CDS market activity and transaction count. As can be seen, market activity has leveled off since 2016, and has stayed in a range of between \$0.6 trillion and \$0.7 trillion.

Chart 2: Four-quarter Moving Average of Single-name CDS Market Activity and Transaction Count

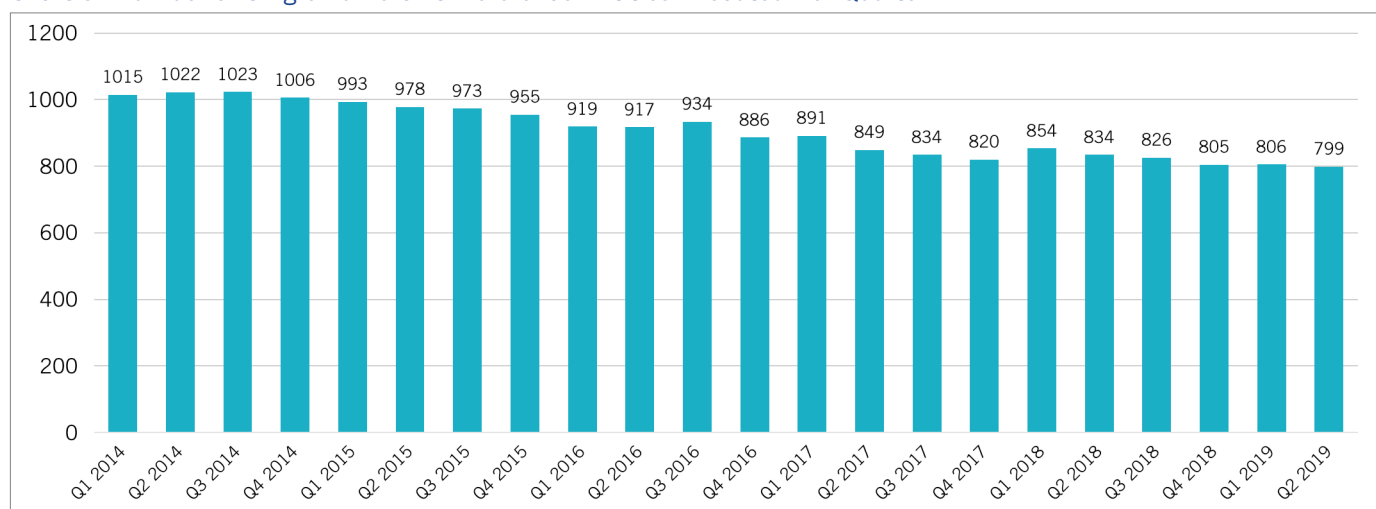


Source: DTCC TIW data

Single-name CDS Market Activity by Reference Entities

ISDA identified 1,284 unique reference entities underlying CDS contracts in the 22-quarter period between the start of 2014 and the second quarter of 2019³. As demonstrated in Chart 3, the number of reference names executed in each quarter has been gradually declining since 2014. There was market activity in 1,015 unique reference names in the first quarter of 2014, and 799 in the second quarter of 2019.

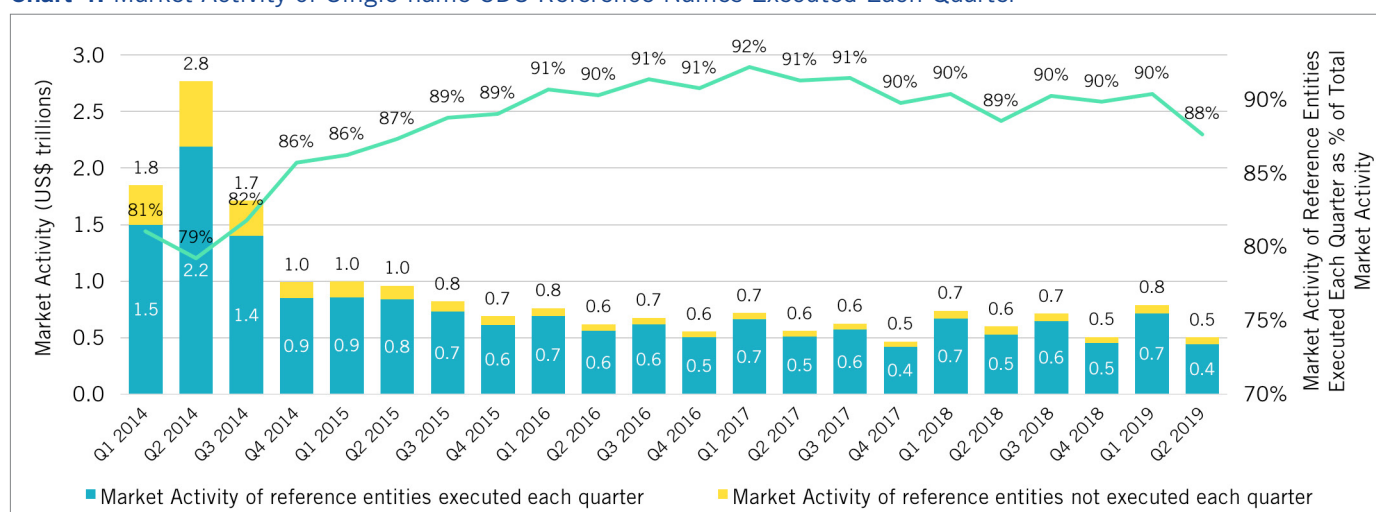
Chart 3: Number of Single-name CDS Reference Entities Executed Per Quarter



Source: DTCC TIW data

Out of the data sample, 542 unique reference names had market activity in each quarter since the start of 2014. As shown in Chart 4, these contracts accounted for about 90% of single-name CDS market activity. Since 2016, market activity in these contracts has remained relatively stable, totaling \$2.4 trillion in 2016, \$2.2 trillion in 2017, \$2.3 trillion in 2018 and \$2.3 trillion in the 12 months to June 30, 2019.

Chart 4: Market Activity of Single-name CDS Reference Names Executed Each Quarter



Source: DTCC TIW data

³ DTCC data was cleaned up to remove duplicate CDS reference entities due to misspelling or name changes. Different legal entities in the same corporate group were considered to be separate reference entities if there was concurrent market activity in CDS referencing each of those entities. However, if market activity ceased under one legal entity and resumed under a different legal entity in the same corporate group, ISDA would count those legal entities as one reference entity, on the basis that this likely reflected a successor (where the CDS contract moves from one legal entity to another). In addition, if a reference entity was renamed, ISDA would treat both names as one reference entity.

Top 10, 50 and 100 Single-name CDS Market Activity

Chart 5 shows market activity for the top 10, 50 and 100 single-name CDS within the group of 1,284 unique reference names⁴. MRTA in these names has been relatively stable since 2016.

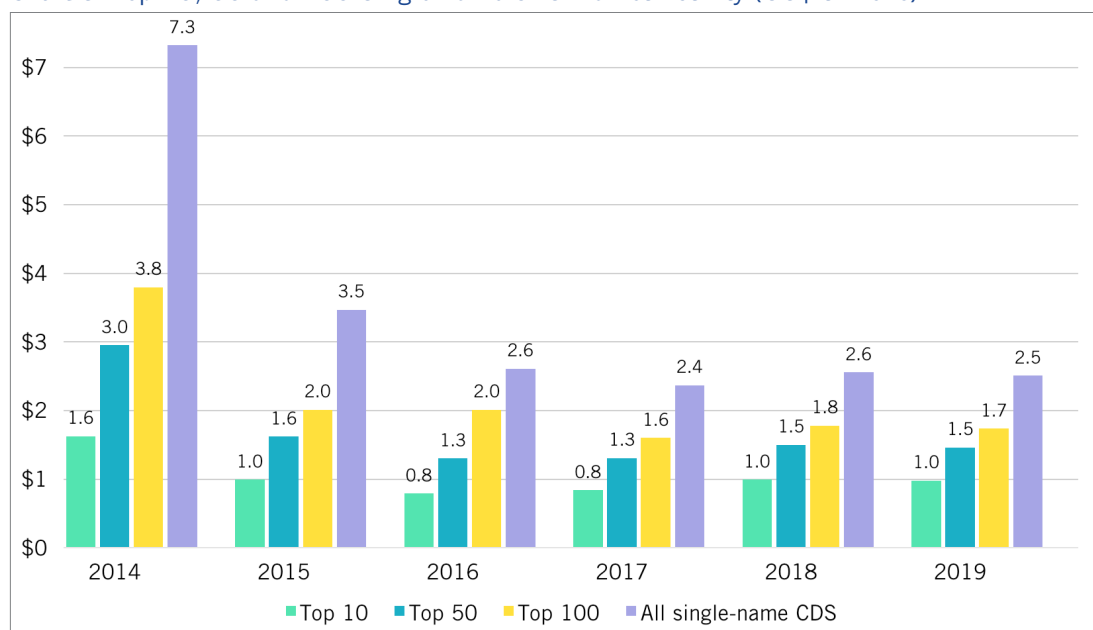
These top names, most of which were CDS on sovereign and financial reference entities, accounted for a significant share of market activity in single-name CDS, as demonstrated in Chart 6. Due to lower market activity in other names, the share of these top names relative to total single-name CDS market activity significantly increased between 2014 and 2019.

MRTA of the top 10 names has remained between \$0.8 trillion and \$1.0 trillion since 2016, and totaled \$1.0 trillion in the 12 months to June 30, 2019. The top 10 names accounted for 22.2% of total single-name CDS market activity in 2014, and that share increased to 38.9% in the 12 months to June 30, 2019.

MRTA of the top 50 names has hovered between \$1.3 trillion and \$1.5 trillion since 2016, and totaled \$1.5 trillion in the 12 months to June 30, 2019. The top 50 names accounted for 40.3% of total single-name CDS market activity in 2014. That share jumped to 58.2% in the 12 months to June 30, 2019.

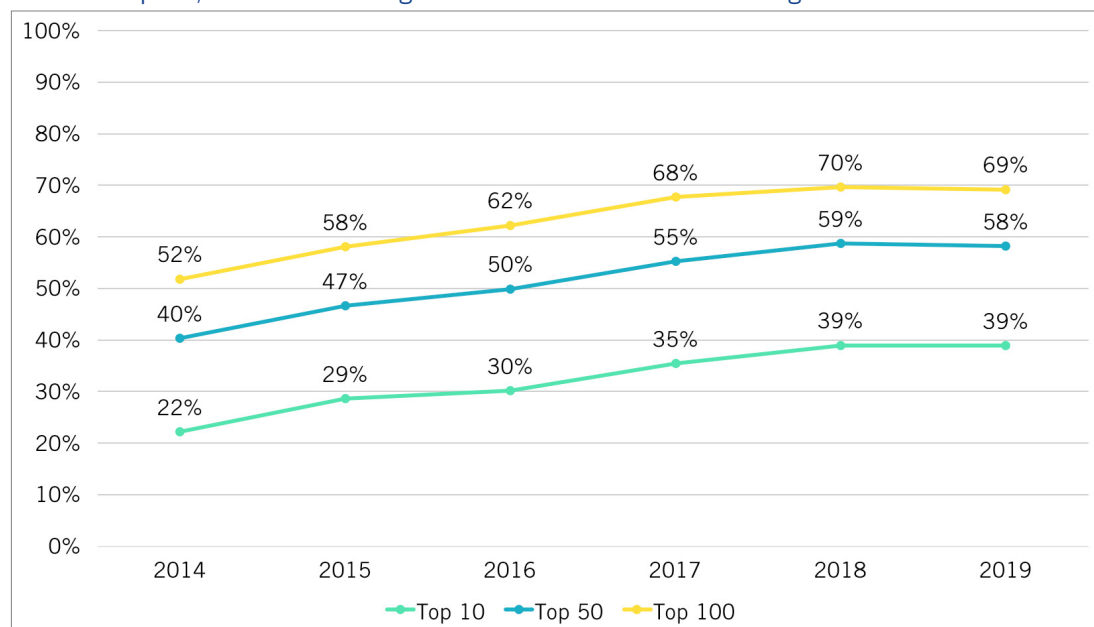
MRTA of the top 100 names has remained between \$1.6 trillion and \$1.8 trillion since 2016, and totaled \$1.7 trillion in the 12 months to June 30, 2019. The top 100 names accounted for 51.8% of total single-name CDS market activity in 2014, reaching 69.2% in the 12 months ended June 30, 2019.

Chart 5: Top 10, 50 and 100 Single-name CDS Market Activity (US\$ trillions)



Source: DTCC TIW data

⁴ The top 10, 50 and 100 single-name CDS for each quarter were selected based on their market activity in that quarter. While some of the names remained in the top 10, 50 and 100 in all quarters from the first quarter of 2014 to the second quarter of 2019, the majority of other names stayed in top 10, 50 and 100 for only some quarters

Chart 6: Top 10, 50 and 100 Single-name MRTA as % of Total Single-name CDS MRTA

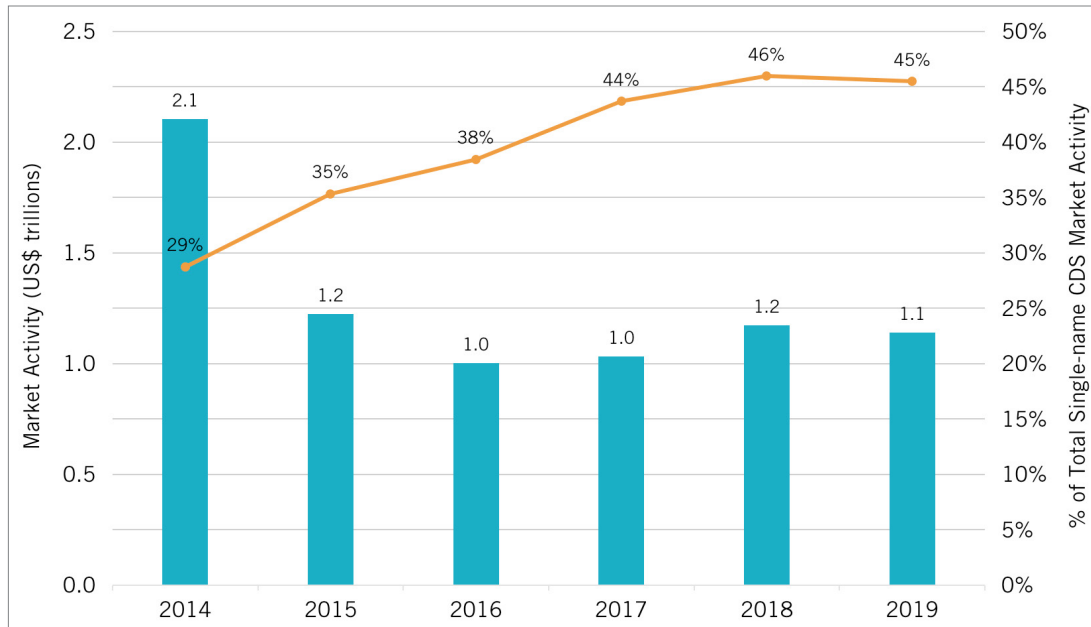
Source: DTCC TIW data

Of the 1,284 unique reference entities, 276 were included in the top 100 (ranked by MRTA) in at least one quarter between the first quarter of 2014 and the second quarter of 2019. Of this group, 27 single-name CDS were in the top 100 in each of the 22 quarters. These names are listed in Table 1.

Table 1: 27 Single-name CDS Reference Entities that Remained in the Top 100 Each Quarter

| | |
|----------------------------------|-------------------------------|
| ARCELORMITTAL | REPUBLIC OF INDONESIA |
| BANCO SANTANDER, S.A. | REPUBLIC OF ITALY |
| BANK OF AMERICA CORPORATION | REPUBLIC OF KOREA |
| BARCLAYS BANK PLC | REPUBLIC OF SOUTH AFRICA |
| DEUTSCHE BANK AKTIENGESELLSCHAFT | REPUBLIC OF THE PHILIPPINES |
| FEDERATIVE REPUBLIC OF BRAZIL | REPUBLIC OF TURKEY |
| FRENCH REPUBLIC | RUSSIAN FEDERATION |
| GLENCORE INTERNATIONAL AG | SOCIETE GENERALE |
| INTESA SANPAOLO SPA | TELECOM ITALIA SPA |
| JPMORGAN CHASE & CO. | TELEFONICA, S.A. |
| KINGDOM OF SPAIN | THE GOLDMAN SACHS GROUP, INC. |
| MORGAN STANLEY | UNICREDIT, SOCIETA PER AZIONI |
| PEOPLE'S REPUBLIC OF CHINA | UNITED MEXICAN STATES |
| REPUBLIC OF COLOMBIA | |

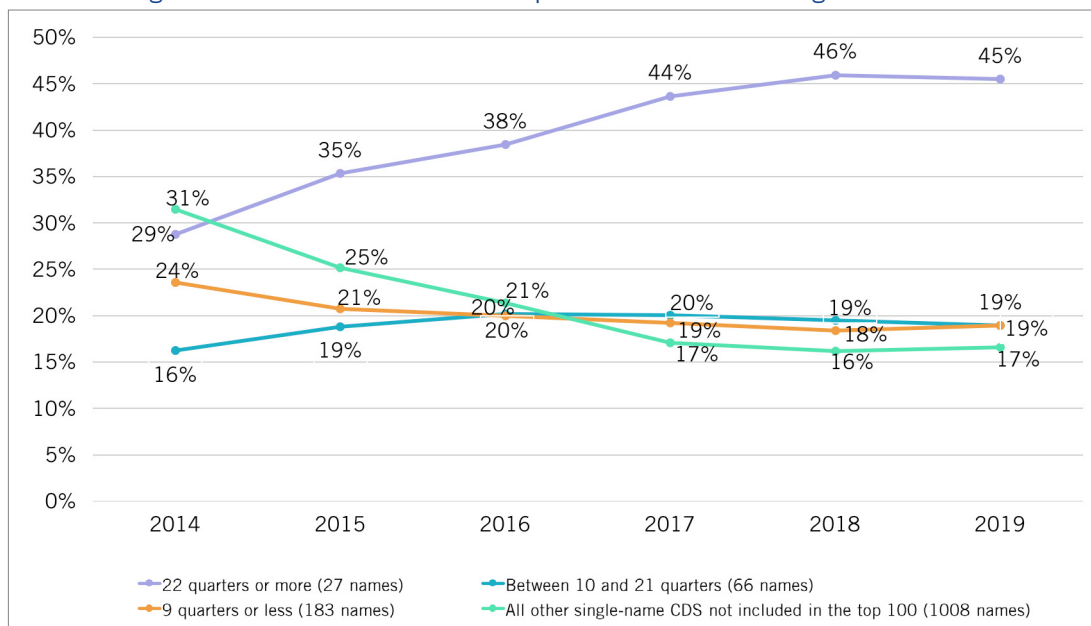
As demonstrated in Chart 7, MRTA in these names has been steady since 2016, ranging between \$1.1 trillion and \$1.2 trillion per year, and has consistently accounted for about 45% of total single-name CDS MRTA since 2017.

Chart 7: Market Activity for 27 Reference Entities that Remained in the Top 100 Each Quarter

Source: DTCC TIW data

Sixty six of the 276 names were in the top 100 between 10 and 21 quarters, and 183 reference entities were included in the top 100 in nine quarters or less. This indicates examples of episodic liquidity – spikes in MRTA related to specific news or developments concerning a reference entity. The remaining 1,008 names were not included in the top 100 in any of the quarters.

As shown in Chart 8, MRTA of the 66 names that were included in the top 100 between 10 and 21 quarters has contributed approximately 20% of total single-name CDS MRTA since 2017. That's also the case for MRTA of the 183 names that were included in the top 100 in nine quarters or less and MRTA of the 1,008 names that were not included in the top 100 in any of the quarters.

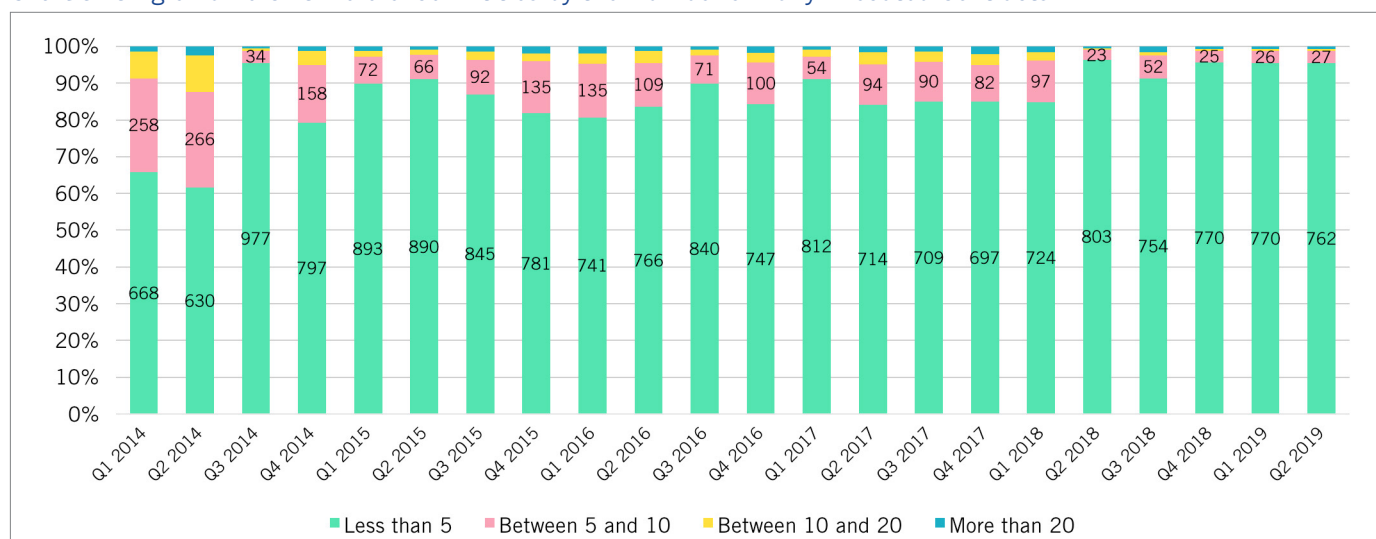
Chart 8: Single-name CDS Included in the Top 100 as % of Total Single-name CDS MRTA

Source: DTCC TIW data

Single-name CDS Daily Executed Contracts

Chart 9 demonstrates that most reference names were executed infrequently on a daily basis. For example, 762 out of the 799 names that were executed in the second quarter of 2019 had less than five transactions per day on average, and 27 names were executed between five and 10 times per day. Only six single-name CDS had more than 20 transactions per day on average, and four names were executed between 10 and 20 times per day.

Chart 9: Single-name CDS Reference Entities by the Number of Daily Executed Contracts

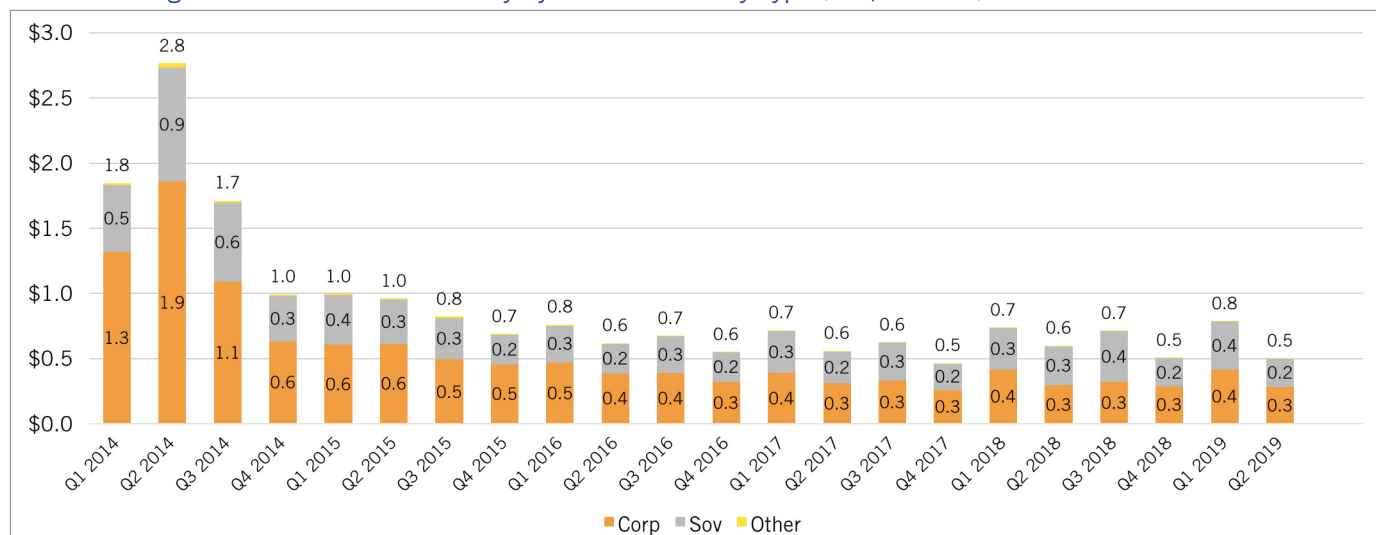


Source: DTCC TIW data

Single-name CDS Market Activity by Reference Entity Type and Sector

Chart 10 demonstrates the composition of single-name CDS market activity. Both corporate and sovereign single-name CDS market activity has remained relatively flat since 2016. MRTA of corporate single-name CDS was between \$0.3 trillion and \$0.4 trillion per quarter, while MRTA of sovereign single-name CDS was between \$0.2 trillion and \$0.4 trillion.

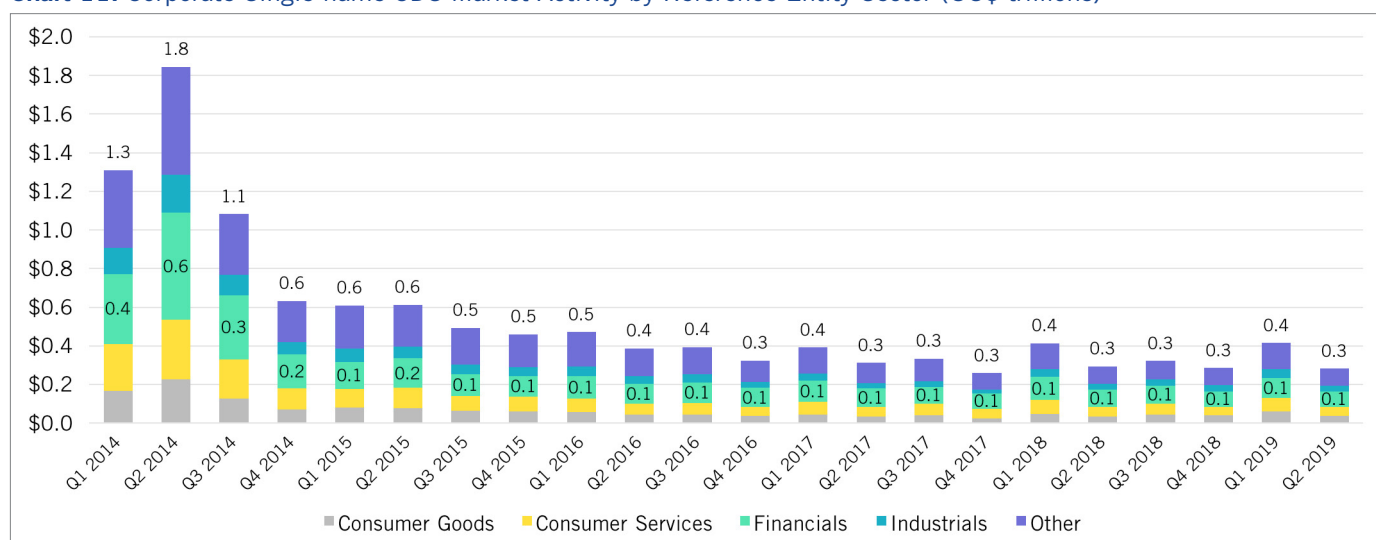
Chart 10: Single-name CDS Market Activity by Reference Entity Type (US\$ trillions)



Source: DTCC TIW data

Chart 11 illustrates the composition of corporate single-name CDS market activity by sector. Single-name CDS contracts written on financial reference entities were the most predominant, followed by consumer services and consumer goods. Market activity of financial CDS has stayed relatively flat since 2016.

Chart 11: Corporate Single-name CDS Market Activity by Reference Entity Sector (US\$ trillions)



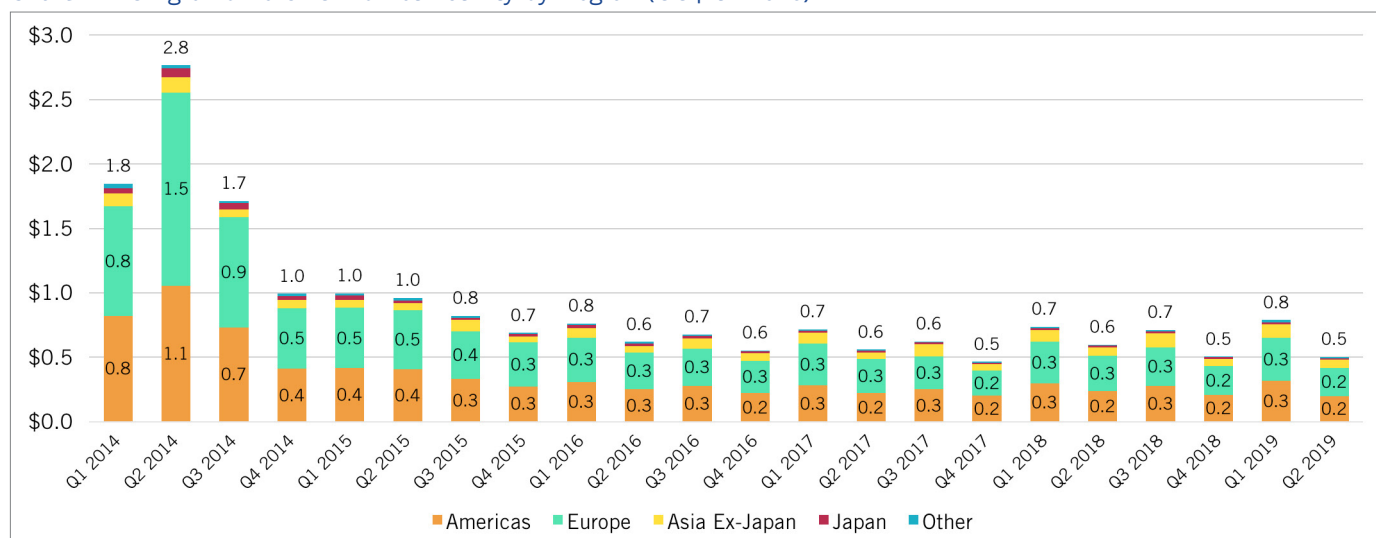
Source: DTCC TIW data

Single-name CDS Market Activity by Region

Chart 12 shows the regional split of single-name CDS market activity⁵. In the Americas, including the US and Latin America, market activity has stabilized at between \$0.2 trillion and \$0.3 trillion per quarter.

In Europe, single-name CDS market activity has also steadied at between \$0.2 trillion and \$0.3 trillion per quarter.

Chart 12: Single-name CDS Market Activity by Region (US\$ trillions)



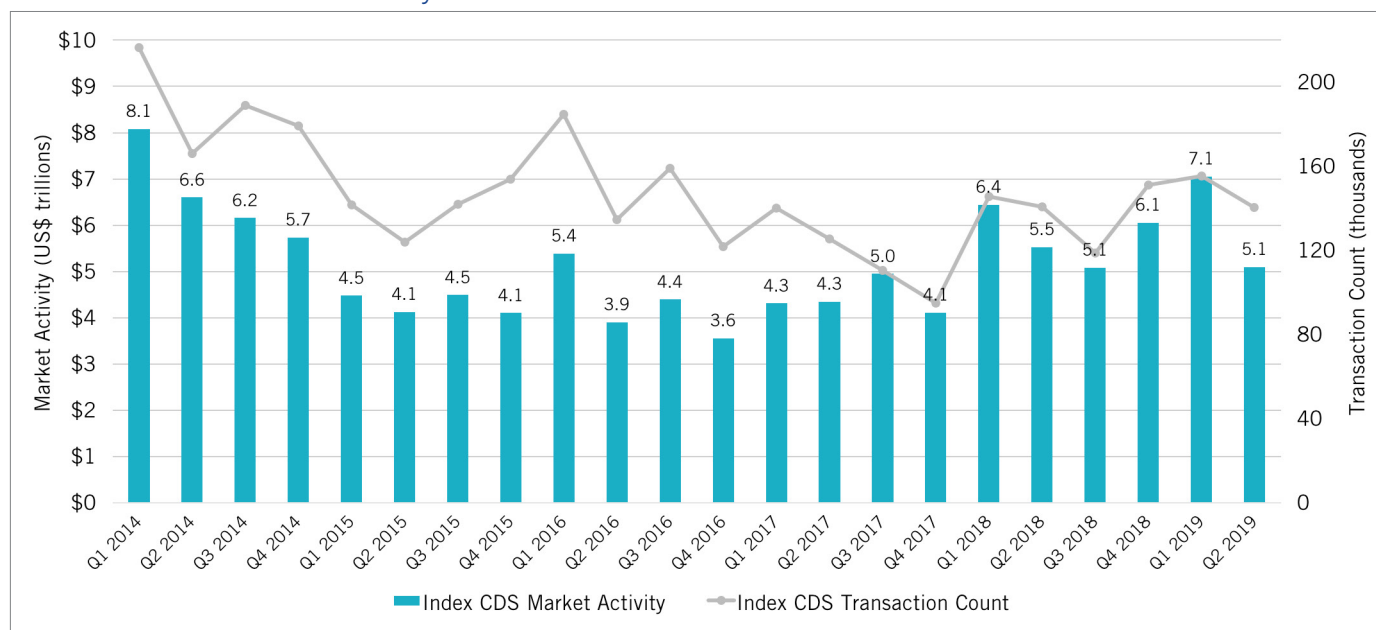
Source: DTCC TIW data

⁵ The regions are associated with the predominant trading style of each reference entity name, based on the documentation type of the underlying transactions, and are consistent with regional determination committees (DCs). The DCs currently exist in each of the following regions: Americas, Asia excluding Japan, Australia-New Zealand, EMEA (Europe) and Japan

INDEX CDS MARKET ACTIVITY

As shown in Chart 13, index CDS market activity leveled off in 2016, but noticeably increased during 2018 and the first half of 2019.

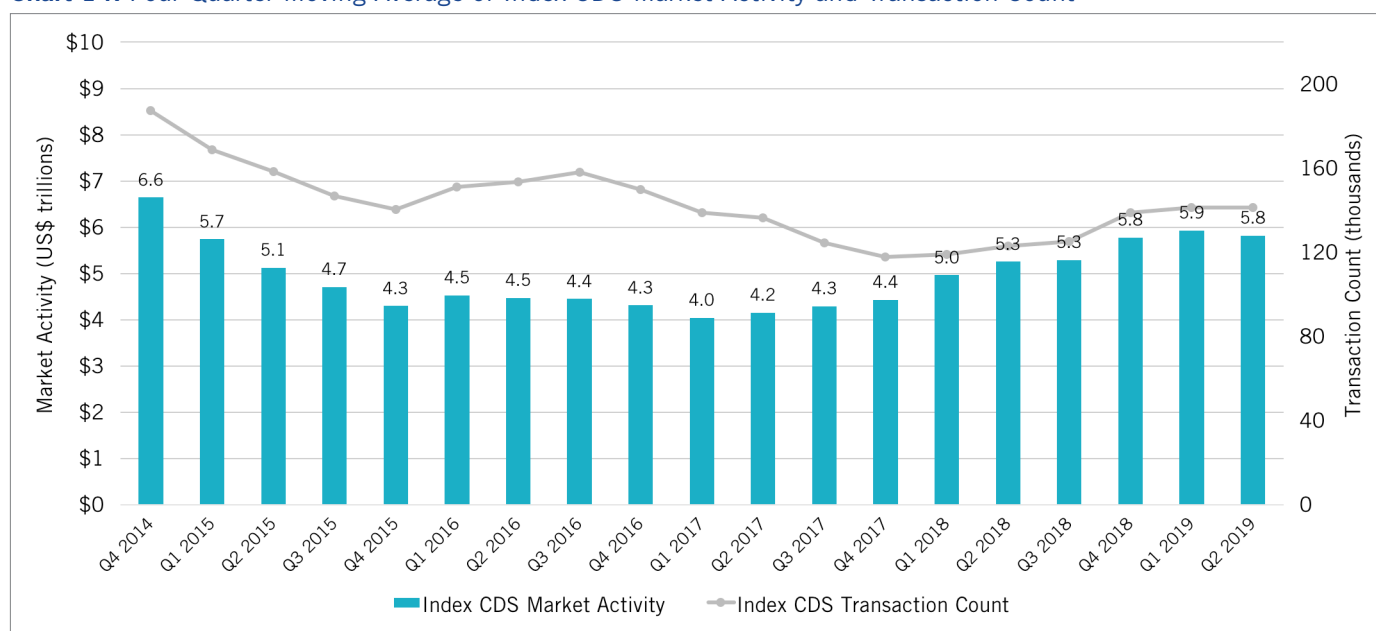
Chart 13: Index CDS Market Activity and Transaction Count



Source: DTCC TIW data

Chart 14 shows the four-quarter moving average for index CDS market activity and transaction count. As can be seen, market activity has been gradually increasing since the beginning of 2017.

Chart 14: Four-Quarter Moving Average of Index CDS Market Activity and Transaction Count

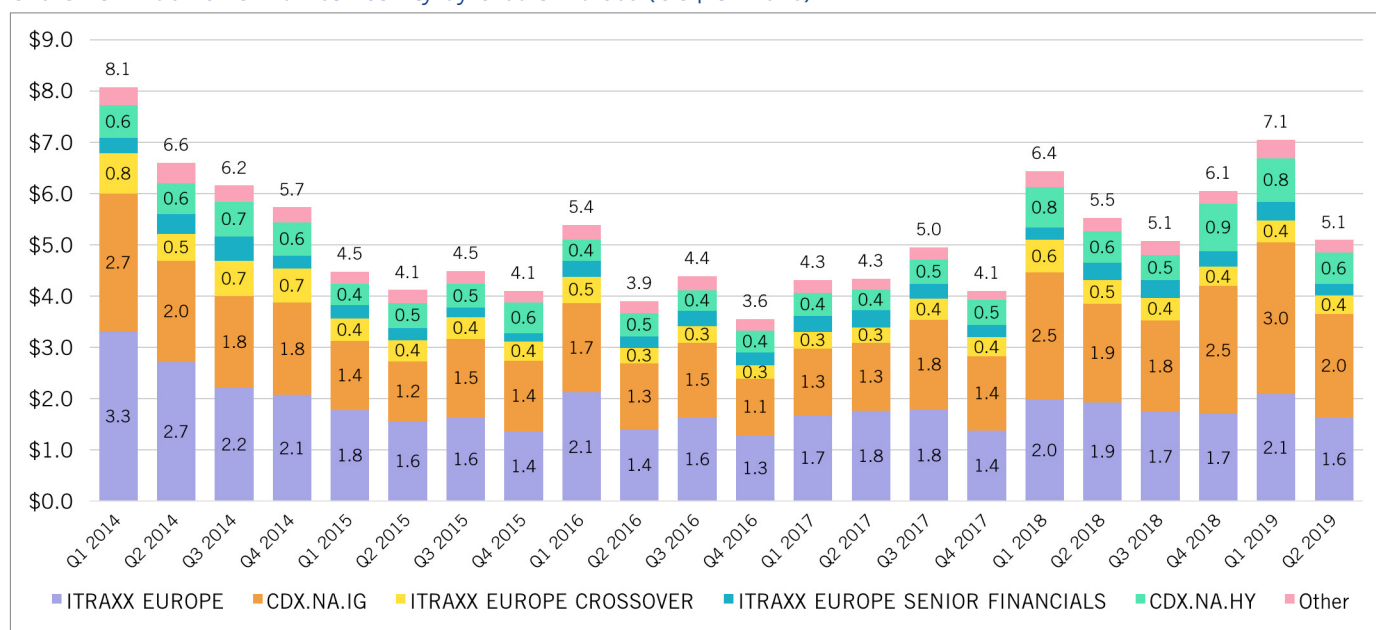


Source: DTCC TIW data

Index CDS Market Activity by Credit Indices

Five major CDS indices – iTraxx Europe, iTraxx Europe Crossover, iTraxx Europe Senior Financials, CDX IG and CDS HY – consistently made up more than 90% of CDS market activity from the first quarter of 2014 to the second quarter of 2019. As shown in Chart 15, iTraxx Europe and CDX IG were the mostly actively traded CDS indices.

Chart 15: Index CDS Market Activity by Credit Indices (US\$ trillions)



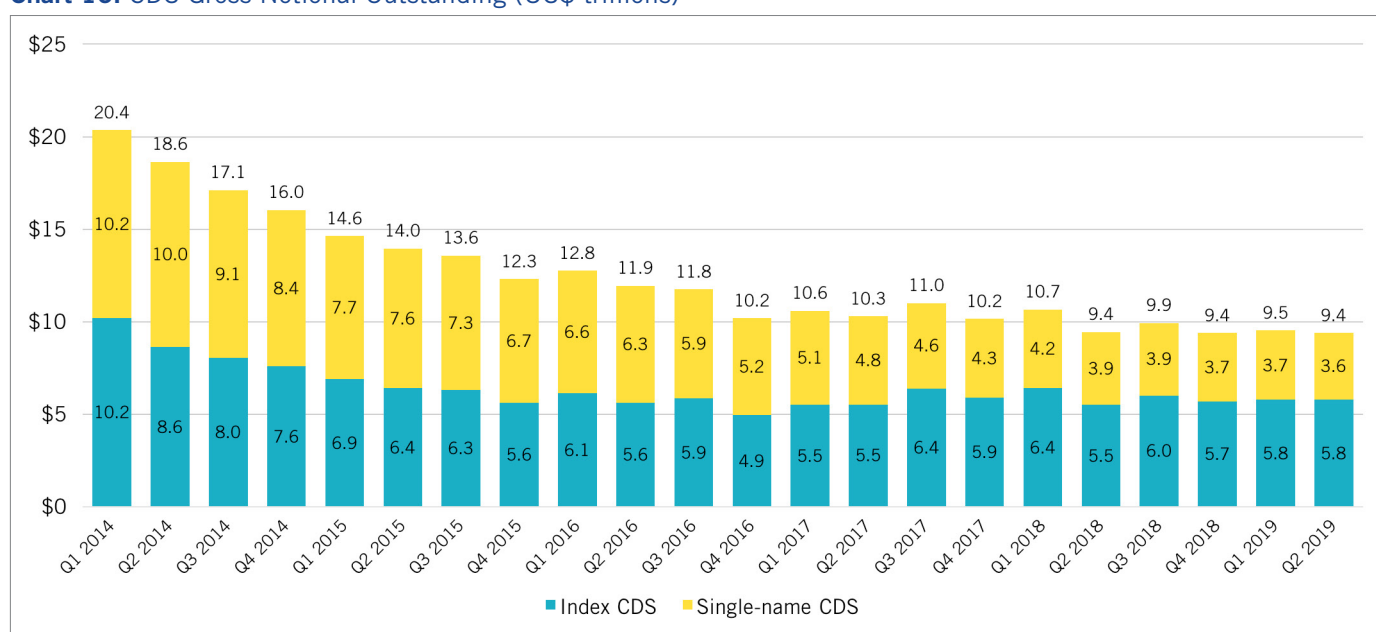
Source: DTCC TIW data

SINGLE-NAME AND INDEX CDS NOTIONAL OUTSTANDING

Single-name and index CDS notional outstanding has been relatively stable from 2016, consistent with the trend in CDS market activity data.

As shown in Chart 16, total CDS gross notional outstanding (including single-name and index CDS) has remained flat at around \$10 trillion since 2016, and totaled \$9.4 trillion at the end of the second quarter of 2019⁶. Single-name CDS gross notional outstanding totaled \$3.6 trillion, while index CDS gross notional outstanding was \$5.8 trillion at the end of the second quarter of 2019.

Chart 16: CDS Gross Notional Outstanding (US\$ trillions)



Source: DTCC TIW data

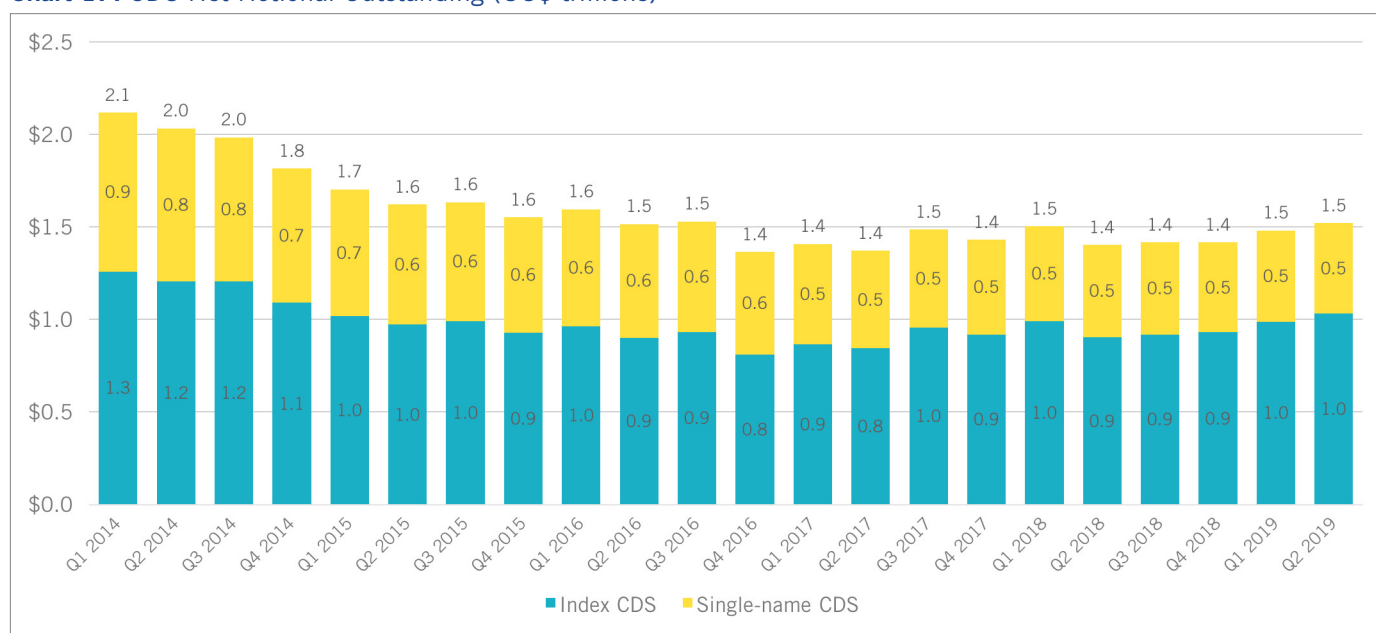
The significant reduction in CDS notional outstanding can be partially attributed to portfolio compression, which is widely used to reduce the number of transactions and gross notional while retaining the same economic exposure⁷.

⁶ Gross notional represents the sum of the nominal values of CDS contracts bought (or equivalently sold) for all DTCC TIW contracts in aggregate

⁷ According to the Bank for International Settlements (BIS), portfolio compression “is a process that enables early termination of economically redundant derivatives transactions without changing the net position of each participant”. It does so by terminating existing transactions (including on single-name reference entities and indices in the CDS market) and replacing them with a smaller number of new transactions with a substantially smaller notional, which carry the same risk profile and cashflows as the initial portfolio. In so doing, portfolio compression reduces the overall notional size and number of outstanding contracts in derivatives portfolios, thereby improving derivatives risk management

Chart 17 shows that CDS net notional outstanding (including single-name and index CDS) has hovered between \$1.4 trillion and \$1.5 trillion since 2016. Single-name CDS net notional outstanding totaled \$0.5 trillion at the end of the second quarter of 2019, while index CDS net notional outstanding was \$1.0 trillion.

Chart 17: CDS Net Notional Outstanding (US\$ trillions)

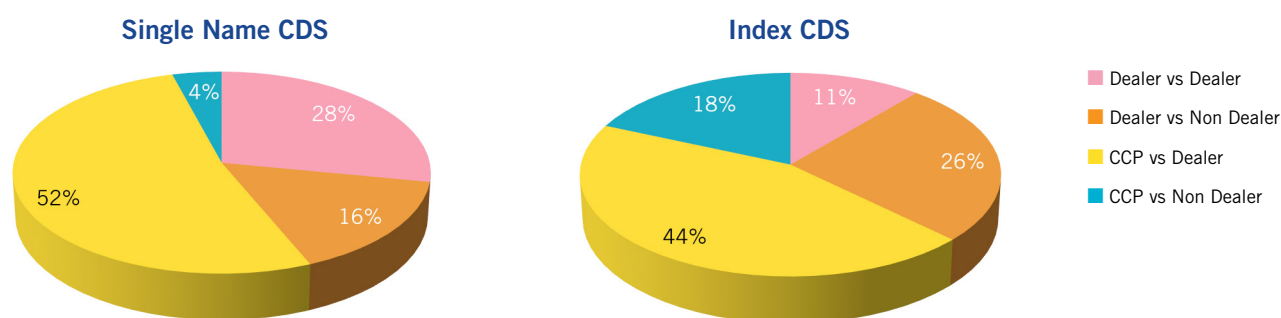


Source: DTCC TIW data

Single-name and Index CDS Notional Outstanding by Counterparty Type

As shown in Chart 18, 51.9% of single-name CDS gross notional outstanding was between central counterparties (CCPs) and dealers, 4.2% was between CCPs and non-dealers, 28.0% was between two dealers and 15.7% was between dealers and non-dealers at the end of the second quarter of 2019. This differed for index CDS gross notional outstanding. At the end of the second quarter of 2019, 44.2% of gross notional outstanding was between CCPs and dealers, 18.5% was between CCPs and non-dealers, 26.0% was between dealers and non-dealers and 11.2% was between two dealers.

Chart 18: CDS Gross Notional Outstanding by Counterparty Type



Source: DTCC TIW data



ISDA has published other recent research papers:

- ***Interest Rate Benchmarks Review: Second Quarter of 2019 and First Half of 2019, July 2019***

<https://www.isda.org/a/J2qME/Interest-Rate-Benchmarks-Review-Q2-2019-and-1H-2019.pdf>

- ***SwapsInfo First Half of 2019 and Second Quarter of 2019 Review, July 2019***

<https://www.isda.org/a/ssqME/SwapsInfo-1H-and-Q2-of-2019-Review-Full.pdf>

- ***Key Trends in the Size and Composition of OTC Derivatives Markets, May 2019***

<https://www.isda.org/a/9atME/Key-Trends-in-Size-and-Composition-of-OTC-Derivatives-Markets.pdf>

For questions on ISDA Research, please contact:

Olga Roman

Director of Research

International Swaps and Derivatives Association, Inc. (ISDA)

Office: 212-901-6017

oroman@isda.org

ABOUT ISDA

Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has more than 900 member institutions from 71 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and

regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's web site: www.isda.org. Follow us on Twitter @ISDA.