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THE CDS BIG BANG

By Otis Casey

Otis Casey, VP credit products at Markit, explains the changes to the Global CDS contract and North American conventions.

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April 8 2009 saw a “Big Bang” in the market for credit default swap (CDS) contracts and the way in which they are traded. While the changes to the CDS contract were

global, there were also a few convention changes that only apply to North American CDS. However, Europe is expected to follow these moves as well.

Both contract and convention changes were implemented simultaneously. These changes were designed to make CDS more standardised to help support efforts for central clearing of CDS trades, make strides towards T+0 trade processing and facilitate operational efficiency.

Of all the reasons driving the changes, the most salient has been that of central clearing of CDS. How do these contract and convention changes support central clearing? The short answer is standardisation, specifically:

- 1) Event determination committee—a central decision point and trigger for credit and succession events prevents differing conclusions or triggers for different contracts on the same entity.
- 2) Hardwiring of auction—supports a binding and standard cash settlement price when there is a credit event.
- 3) Rolling event effective date—every open position has the same effective date regardless of when the original trade took place.
- 4) Fewer restructuring clauses—having fewer of these available helps reduce the complexity of centrally clearing many more contracts.

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“THE MOST SALIENT REASON DRIVING THE CHANGES HAS BEEN CENTRAL CLEARING.”

- 5) Fixed coupons—makes payment amounts standardised thereby making it easier to offset contracts.
- 6) Standardisation of accruals—makes the timing and amount (along with fixed coupons) of payments uniform in the first premium period (and throughout the duration of the contract) across all trades (same reference entity, seniority, currency, restructuring clause, and maturity), thereby making it easier to offset contracts.

The goals of reducing outstanding trades by trillions of notional dollars, restructuring the way trades are processed so that trades can be matched in the same day and the creation of a central counterparty mechanism are ambitious. The interaction of these changes and their interdependency makes these proposals stronger and more coherent than simple one-off changes.

GLOBAL CONTRACT CHANGES

There were three global changes to the CDS contract. First, the effective date for all CDS contracts was changed to the current day less 60 days for credit events and the current day less 90 days for succession events. Second, determination committees make binding determinations of whether credit and succession events have occurred as well as the terms of any auction. Third,

the contract hardwired the auction mechanism for CDS following a credit event.

EFFECTIVE DATE FOR CREDIT EVENT AND SUCCESSION EVENT PURPOSES

Under the old CDS contract, protection against a credit event began on the business day following the trade date. As such, two trades buying and selling CDS on the same reference entity for the same notional amount but on different days were not truly offsetting.

The new contract will split the effective date for accrual and coupon payment purposes from the protection effective date. Accruals and coupon payments are addressed later in this article. This change ensures fungibility as far as protection is concerned. A CDS trade with the same characteristics done under the new contract will have the same effective date as a trade done one week later. This allows for the trades to be netted easily and avoid residual stub risk between trades with the same entity/maturity/currency/restructuring done on different dates.

DETERMINATION COMMITTEES – CREDIT EVENTS AND SUCCESSION EVENTS

Credit derivatives determination committees (DC) were implemented through a supplement to the 2003 ISDA Credit Definitions. There is one DC per region with the regions defined as: the Americas, Asia ex-Japan, Australia-New Zealand, EMEA (Europe, Middle East and Africa) and Japan. Having a common and binding result is critical for standardisation.

RESPONSIBILITIES

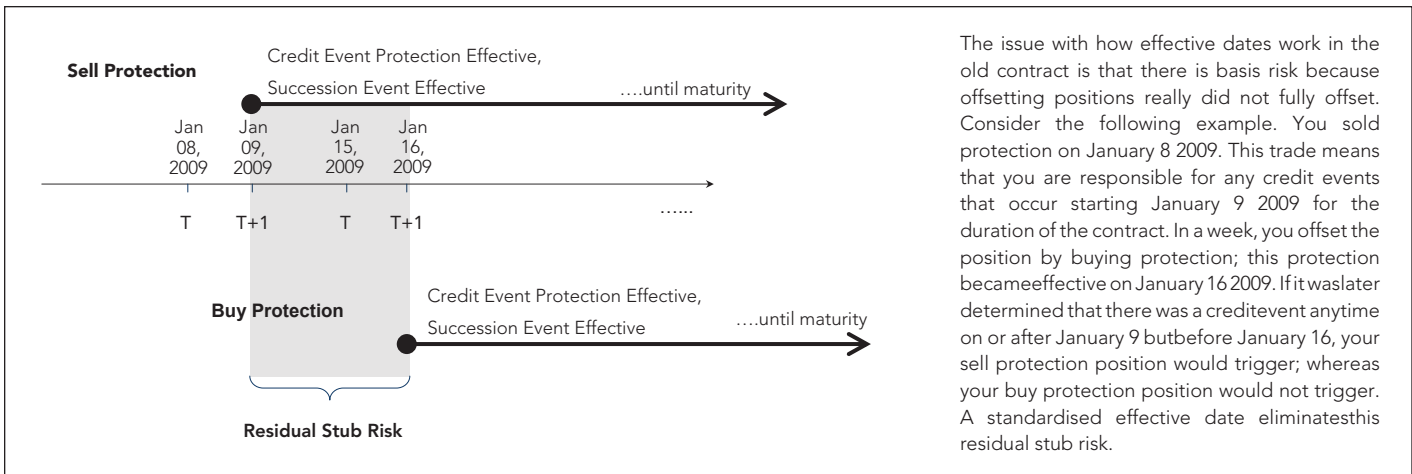
Each DC has several responsibilities for its region. First and foremost, the DC decides whether a credit event has occurred, its type and date. The DC then determines whether to hold an auction and the specific terms of the auction (we go into this in more detail under “Hardwiring of the Auction Mechanism”).

Standardisation goals

| | Goals | | | |
|-------------------------------|-------------------------------|----------------------|------------------|---|
| | Trade Compression | T+0 Trade Processing | Central Clearing | |
| Contract & Convention Changes | Event Determination Committee | | ✓ | |
| | Hardwiring of Auction | | ✓ | |
| | Rolling Event Effective Date | ✓ | | ✓ |
| | Fewer Restructuring Clauses | ✓ | ✓ | ✓ |
| | 100/500 Fixed Coupons | ✓ | ✓ | ✓ |
| | Full Coupon | ✓ | ✓ | ✓ |

Source: Markit

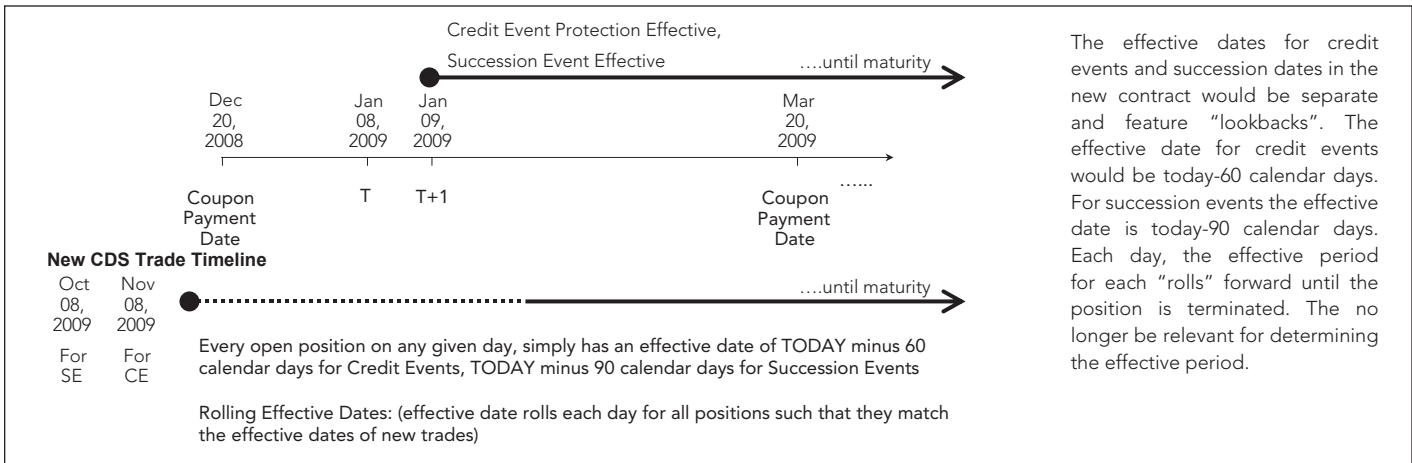
Current Contract: Offsetting Does Not Truly Offset!



The issue with how effective dates work in the old contract is that there is basis risk because offsetting positions really did not fully offset. Consider the following example. You sold protection on January 8 2009. This trade means that you are responsible for any credit events that occur starting January 9 2009 for the duration of the contract. In a week, you offset the position by buying protection; this protection became effective on January 16 2009. If it was later determined that there was a credit event anytime on or after January 9 but before January 16, your sell protection position would trigger; whereas your buy protection position would not trigger. A standardised effective date eliminates this residual stub risk.

Source:Markit

CDS Trading Timelines



The effective dates for credit events and succession dates in the new contract would be separate and feature "lookbacks". The effective date for credit events would be today-60 calendar days. For succession events the effective date is today-90 calendar days. Each day, the effective period for each "rolls" forward until the position is terminated. The no longer be relevant for determining the effective period.

Source:Markit

CONTINUED ON PAGE 6

The DC also makes determinations on the acceptable deliverable obligations and any substitute reference obligations, if applicable. Last, the DC makes determinations regarding succession events.

COMPOSITION

The structure and composition of each DC is consistent across regions and consists of the following: eight global dealers, two regional dealers for each region, five buy-side members, two non-voting dealers, one non-voting buy-side member and the International Swaps & Derivatives Association (ISDA) as a non-voting secretary. The composition includes sell-side and buy-side representations on the DC with 15 voting members and three non-voting members at any one time (the DC secretary is the fourth non-voting member).

MECHANICS

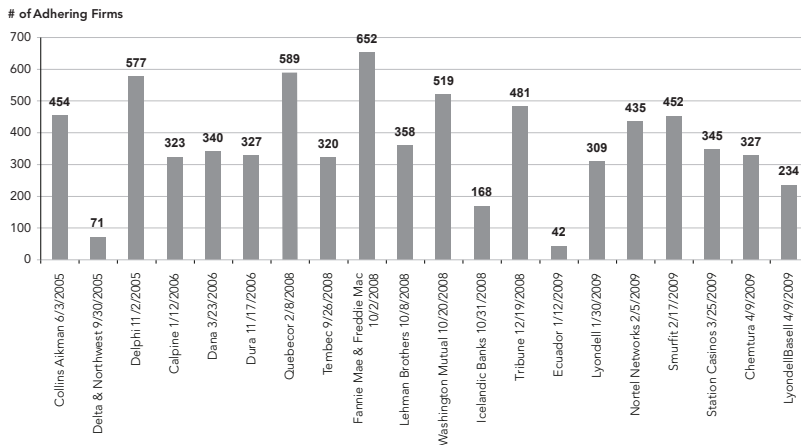
In order for a DC to consider whether or not a credit event or succession event has occurred, an ISDA member must bring

forth the issue for consideration with the sponsorship of a DC member. The issue must be raised when the “lookback” period (60 days for credit events, 90 days for succession events) is still applicable.

Note, once the issue is formally raised, the time taken for the committee to deliberate the necessary questions is not taken into consideration for purposes of the rolling effective date provisions. In other words, if an ISDA member (along with a DC sponsor) requests that a DC consider a credit event for a specific credit believed to have occurred 45 days ago, buyers of protection would not “lose” the credit event simply because a committee takes longer than 15 days to deliberate.

If an event is deemed to have occurred, deliverable obligations must be specified and a decision must be made as to whether an auction is necessary. If an auction is necessary, the auction terms must be determined. An 80 per cent super majority is required to determine a credit or succession event.

Historical CDS Auction Protocols: Adhering Parties & Protocol Dates¹



Source: Markit, ISDA¹

While adherence to an auction is voluntary and precise participation rates are not available, most investors with positions in the relevant reference entity have agreed to the auctions. High participation rates have been consistent. The low numbers of participants on the Ecuador auction, for example, is a function of the relatively few investors with open positions in Ecuador at the time of that credit event as opposed to a low participation rate in the protocol.

Historical participation rates by institutions are not known precisely but according to DTCC, the Quebecor auction (the first one they processed) saw institutional participation accounting for 85 per cent of the open positions in the DTCC Trade Information Warehouse.

Since then, this participation coverage figure has steadily increased and has been consistently over 90 per cent in recent auctions. Furthermore, all dealers have adhered to these protocols and significant buy-side institutions

// THE CREDIT EVENT AUCTION MECHANISM IS A TRANSPARENT AND EFFICIENT PROCESS. //

If an 80 per cent supermajority is not achieved on any question before the DC, the issue automatically goes before an external review panel. An external review panel starts with the presumption that the simple majority decision of the DC is correct. Depending on the strength of the original vote, two out of three or three out of three external reviewers may be required to overturn the original vote.

HARDWIRING OF THE AUCTION MECHANISM

The old CDS contract only addressed the physical settlement of trades. Since 2005, an auction process has been instituted and most market participants sign to protocols (a legal document amending all previous trades) for an auction to take place to determine the final recovery rate of a defaulted entity. The process initially began because there were concerns that the size of outstanding CDS notional amounts relative to the amount of deliverable bonds could set off a scramble by CDS investors to acquire bonds to deliver, artificially driving up the price.

The process has worked well. However, tracking down all CDS investors every time there is a credit event and determining whether or not they want to adhere to the protocol is inefficient. To date, there have been more than 50 auctions jointly administered by Markit and Creditex. The precedent for hardwiring the auction mechanism was set with the creation of leveraged loan CDS.

The credit event auction mechanism is a transparent and efficient process to determine a final price post credit event, and settle trades physically or with cash. All inputs into the auction process are made freely available at www.creditfixings.com. For a description of the credit event auction methodology, please see "Credit Event Auction Primer" jointly published by Markit and Creditex. This document can be found at www.markit.com/cds.

The auction settlement terms are attributes best left settled based on the specifics for each particular credit. It is conceivable that there may not be a credit event auction if the outstanding volume of trades is so small as not to merit one.

Auction-specific terms will be set by a majority vote of the determination committee and published prior to the auction. These terms include the following: 1) auction date; 2) initial bidding information publication time; 3) subsequent bidding information publication time; 4) inside market quotation amount; 5) maximum inside market bid-offer spread; and 6) minimum number of valid inside market submissions.

CONVENTION CHANGES TO NORTH AMERICAN CDS

The changes to the North American CDS market outlined in this section, including a move to trading with a fixed coupon, did not require a contract change. In many cases, these conventions were already being applied. For example, heavily distressed credits traded with points upfront and a fixed coupon of 500 basis points. North American high-yield credits typically traded with "no restructuring."

Perhaps more importantly, the timing of these changes or broader adoption of existing conventions were brought about to coincide with the new contract changes. As many of these proposals are interrelated in bringing about desired changes in standardising CDS contracts, increasing operational efficiencies, driving towards T+0 trade matching and supporting central clearing, it made sense to address these changes all at once.

Just as Markit CDS indices currently trade globally, single-name CDS in North America now trade with a fixed coupon. The coupon is either 100 or 500 basis points and upfront payments will be exchanged. Contracts that trade with a 100 fixed coupon will generally be quoted in dealer runs as a conventional spread and contracts that trade with a 500 fixed coupon will generally be quoted in dealer runs in points upfront.

There will be instances where participants will see 100 fixed coupons quoted in points upfront and 500 fixed coupons quoted in conventional spreads. The Markit CDS Converter translates the conventional spread into the required upfront payment and helps investors convert between quoting conventions. It is available for free at www.markit.com/cds.

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// ... THE NEW TRADING CONVENTION INCLUDES A FIXED COUPON OF EITHER 100 OR 500 BASIS POINTS. //

Regardless of when new trades are made, the buyer will have to make a full coupon payment on the first payment date. As such, the seller of CDS protection will make any needed accrual rebate payment to the protection buyer at the time of the trade.

FIXED COUPON

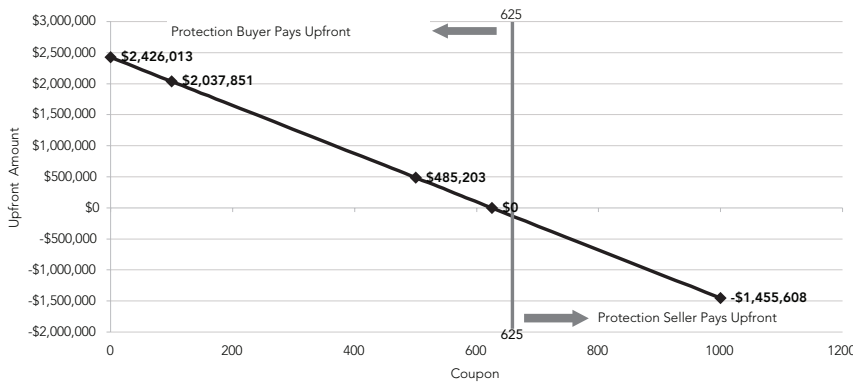
In the past, most single names were quoted using a par spread (the spread that would cause the present value of a CDS trade to be zero for both the buyer and seller at the outset of the trade). Historically, only the high-yield end of the single-name CDS market traded with a fixed coupon and upfront payment. However, the universe of names quoted upfront increased as more names became stressed. For North American CDS, the new trading convention includes a fixed coupon of either 100 or 500 basis points. It is expected that investment-grade entities will trade with a 100 basis points coupon while high-yield will use a 500 basis points coupon, but dealers may make markets for either strike for a given name.

Why 100 and 500 basis point fixed strikes? Why not 200 and 600 or all at a single strike of 500? First, a 500 strike is already used with many high-yield names and thus is a logical starting place for at least one fixed strike. To the extent that investors prefer trading CDS with a small upfront payment, it was beneficial to allow for an additional fixed coupon strike.

However, an excessive number of coupon options would detract from the standardisation that the market seeks. The expectation is that a 100 basis points strike is properly parameterised for high-grade and non-stressed names.

Although the standardisation of coupons is irrelevant from a present value perspective, the benefits to the CDS market from an operational perspective are significant. Specifically, when combined with other changes in the CDS market outlined in this report, the standardisation of coupons allows for more simplified processing of trades as well as the netting of offsetting CDS positions.

The Widget Corporation %Y CDS: Present Value Indifference Curve



Source: Markit

While participants in the CDS market often prefer to minimise upfront payments, it is important to note that from a present value perspective investors should be indifferent. Assessing a theoretical trade on The Widget Corporation², an investor should be indifferent between buying protection with:

- 625 basis points annual coupon and no upfront payment
- 500 basis points annual coupon and a \$485K upfront payment
- 100 basis points annual coupon and a \$2m upfront payment
- No annual coupon and paying a \$2.4m upfront payment
- 1,000 basis points annual coupon and receiving a \$1.4m upfront payment.

LIQUIDITY IN 100 OR 500

Now that credits can trade with either a 100 or 500 basis points fixed coupon convention, it is expected that liquidity will tend toward one or another on a name by name basis and could move from one convention to another depending on the view of their creditworthiness. Names are generally expected to trade with the same convention across all tenors but this is not explicitly required.

TRADING WITH A FULL COUPON THE OLD CONVENTION:

Under the old convention, whether a protection buyer pays a coupon on the first coupon or International Monetary Market (IMM) date depends on when the trade occurred. IMM dates are the chosen termination dates for CDS contracts: March 20, June 20, September 20 and December 20 for any given year. (These dates loosely correspond to the IMM dates used in the euro money market—the third Wednesday of March, June, September and December.)

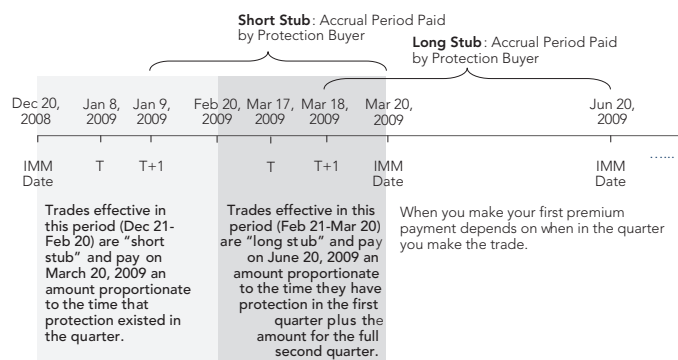
If the trade date fell before 30 days before the first coupon date, the accrual was due on the first coupon date for the number of days of effective protection during the period. This was called a “short stub” period. If the trade date was within 30 days before the first coupon date, there was a “long stub period.”

No accrual of premium was paid on this first IMM coupon date, rather the long stub was paid on the following coupon date. That payment would include the portion of premium owed for protection in the first period plus the full premium for the second period.

This added a level of complexity in setting up coupon payments. About 5 per cent of the trades in the Trade Information Warehouse had not made a “first period” coupon. These trades were “long stub” (see diagram above). As such, these positions could not be initially included in trade compression, the process used to net single-name CDS positions to reduce gross notional outstanding.

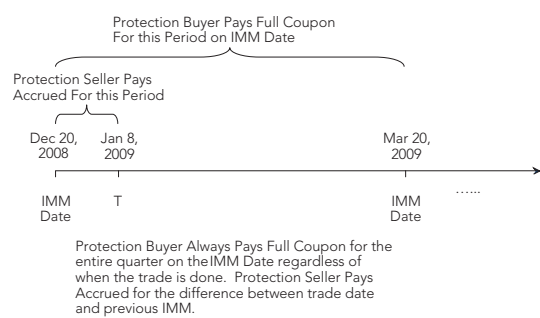
Accruals: Current vs Proposed

Current CDS Accrual Timeline



For the same credit and same maturity, the timing of the first premium payment depends on when in the quarter the trade is done. Under the new standard, full premium payments would always occur on the IMM payment date. Any “overpayment” by the protection buyer for the time in the period for which they did not hold the position would be paid by the protection seller at the time of the trade.

This practice makes the CDS a bit more like a bond in the sense of how bonds treat accrued interest. That is, payments are dealt within the same period instead of shifting to the next period and the payment amounts are adjusted for the time in which the position is held during the first payment period. The comparison ends there though, as a CDS premium payment and a bond accrued interest payment are not alike.



NEW CONVENTION:

The new contract will mimic the way the Markit CDS indices operate. Regardless of when the trade was executed during the coupon period, the protection buyer will pay the full quarterly coupon on the coupon payment date. This means that as the trade is executed, the protection seller has to rebate the accrued

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up to the trade date to the protection buyer. Standardising to a full coupon regardless of when the trade was initiated would thus recapture approximately 5 per cent of the trades in the DTCC Trade Information Warehouse and make them immediately available for inclusion in trade compression.

RESTRUCTURING CLAUSE CONVENTION

In addition to bankruptcy and failure to pay, restructuring of the reference entity is a defined credit event in the 2003 Credit Derivatives Definitions. CDS can trade with or without restructuring and if the trade is made with restructuring, the restructuring provisions define what characteristics deliverable obligations can have.

Under the 2003 ISDA Credit Definitions, there are four types of restructuring clauses: Old Restructuring (Old R), Modified Restructuring (Mod R), Modified-Modified Restructuring (Mod-Mod R), and No Restructuring (No R). The differences between them (at least for those including restructuring) largely focus on the maturity of the deliverable obligations and transferability of deliverable obligations.

Over time, certain credits have come to trade on a market-defined convention. For example, Europe’s CDS contracts typically trade with a Mod-Mod R convention, North American

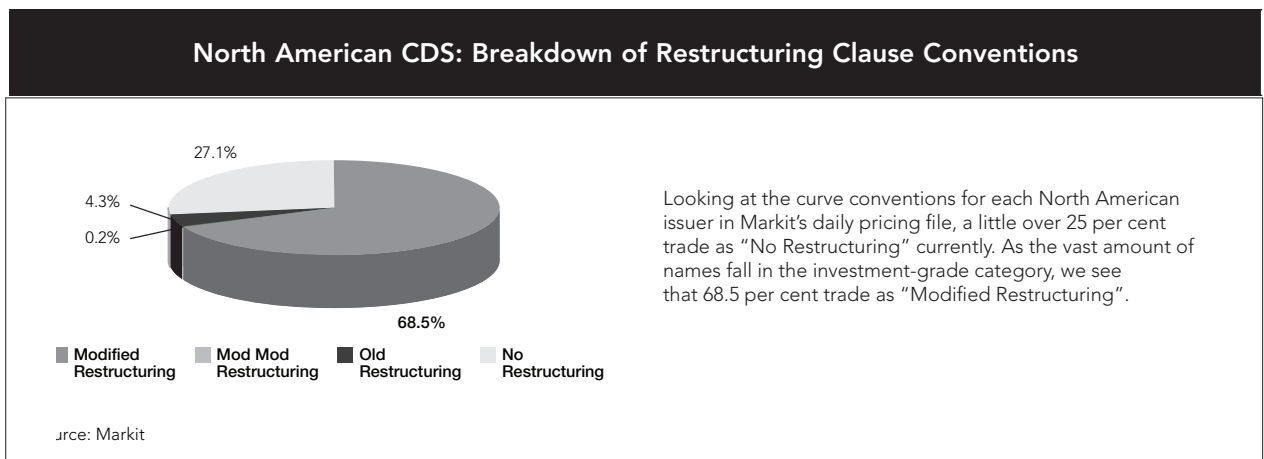
investment-grade names trade with a “Modified” restructuring convention, and North American high-yield names trade without restructuring. In Europe, “Modified-Modified” restructuring is common because the bankruptcy laws make it difficult for borrowers to file in many jurisdictions. For North American investment-grade credits, “Modified” restructuring addressed the needs historically of hedgers of bank loan portfolios.

With the growth of the CDS market, hedgers of bank loan portfolios have become a smaller percentage of the overall CDS market. As such, the industry has considered dropping restructuring as a North American convention for some years. Some dealers even took this step unilaterally.

There is an economic difference between contracts that trade with and without restructuring. Trades with restructuring demand more premium for protection as they give the protection buyer coverage for more possibilities of different types of credit events than trades without restructuring.

QUOTING CONVENTION

Dealer runs are simply electronic messages containing a dealer’s bid/offer markets on the credits in which they make a market or desire to provide a price indication. Par spread runs for the CDS market look something like that below:



Looking at the curve conventions for each North American issuer in Markit’s daily pricing file, a little over 25 per cent trade as “No Restructuring” currently. As the vast amount of names fall in the investment-grade category, we see that 68.5 per cent trade as “Modified Restructuring”.

| | | |
|---------------------|--|---------------------|
| -TECHNOLOGY- | | -TECHNOLOGY- |
| ARW 210-220 +12 | | CSCO 140-150 |
| AVT 285-295 +20 | | ORCL 145-155 |
| CSC 135-145 +10 | | DELL 225-235 |

This is an example of a dealer run quoting a par spread. A par spread is the spread that would cause the present value of a CDS trade to be zero for both the buyer and seller at the outset of the trade. Here a recovery rate is not provided nor is it particularly relevant for the quotation. For CSCO, a protection buyer is paying 150 basis points annual premium regardless of the dealer's opinion on recovery.

This run contains the ticker (or some other indication of the credit that is being quoted) along with the bid/offer for the spread. Change from the prior day is also included in this example. Unless otherwise stated or a full curve is provided, the quotes are for five-year protection, the most liquid tenor. In this example, it would cost 150 basis points or \$150,000 per year to buy protection from a credit event on \$10m worth of bonds for Cisco Systems (CSCO). Par spreads are expected to ultimately be excluded from dealer runs.

CONVENTIONAL SPREADS

As the CDS market in North America transitions to using conventional spreads (also known as quoted spreads) in dealer runs (for 100 fixed coupon quotes), it is important that investors can adequately compare spreads provided by different dealers and that the change in quoting convention does not cause trades to break.

It is also important to note that the conventional spread that will be in dealer runs for investment-grade names do not represent either the annual coupon that would be paid for protection or the amount of upfront payment made at the time of the trade. The conventional spread represents a translation of the 100 fixed coupon and upfront payment into a single number that can be used to compare across dealers. In order to make an

accurate comparison across dealers as well as to assure there is no confusion about size of the upfront payment that will be made, it is critical that industry participants use a standard model with standard inputs. The standard model that major CDS dealers have agreed to use is the ISDA CDS Standard Model which is administered by Markit.

ISDA CDS STANDARD MODEL

On January 29 2009 JPMorgan announced that it had transferred its CDS analytical engine to ISDA as part of an initiative to make the code for valuing CDS positions open source. Under the direction of ISDA, Markit has been hosting, since autumn 2008, a working group focused on creating and releasing an industry standard code for valuing CDS.

On February 26 2009 ISDA and Markit announced the availability of the ISDA CDS Standard Model Code with Markit as the administrator of the code. In this role, Markit provides support for the maintenance and further development of the code following open source principles.

To be clear, Markit does not provide support for the implementation of the code. The code is available through an open source licence at www.cdsmodel.com. Additionally, the standardised inputs to be used with the code including a daily yield curve as well as recovery assumptions for different seniorities of debt can be found on the same website.

MARKIT CDS CONVERTER

Currently the most standardised products in the CDS market are the Markit CDS indices. As mentioned earlier, the CDS contract and convention changes described in this report will make single-name CDS more similar to the Markit CDS indices. The single largest cause of trade breaks with Markit CDS indices is a disagreement surrounding the upfront payment due from one counterparty to another.

As the trading convention for North American CDS changes to a fixed coupon with an upfront payment, it is critical that trades

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Historical CDS Auction Protocols: Adhering Parties & Protocol Dates¹

| | |
|------|-----------|
| AET | 188 - 198 |
| DD | 142 - 150 |
| RCCC | 237 - 249 |
| TE | 262 - 272 |

This is a hypothetical example of a dealer run that contains conventional spreads. Were this a traditional dealer run with par spreads, the dealer would be communicating a willingness to sell protection on AET for 198 basis points. In this hypothetical dealer run with conventional spreads, the dealer is communicating a willingness to sell protection on AET for a 100 basis point fixed coupon and an upfront payment. In order to know the amount of upfront payment that the dealer would expect, you need to translate the conventional spread of 198 basis points to the optional payment. The Markit CDS Converter available free at www.markit.com/cds was built for this purpose. In this example, the dealer that was quoting a 198 basis point conventional spread offer would be expecting a \$414,212.79 upfront payment for \$10m notional protection with a 100 basis points running coupon.

Markit CDS Converter

For:

Maturity: 2014

Tier (Recovery):

Standard Coupon: bps

Notional: MM USD

Convert:

Upfront %

Conventional Spread bps

Results

Conventional Spread: bps

Clean Price: %

Cash Settlement Amount: USD

Trade / Settle Dates:

The calculations above are from the Seller's perspective
This application is based on the ISDA CDS Standard Model (version 1.7),
developed and supported in collaboration with Markit

| | |
|------|------------------|
| F | 45 - 47 |
| GM | 84 - 86 |
| IP | 211 1/4 - 12 1/4 |
| SLMA | 33 1/2 - 35 1/2 |

Source: Markit

Points upfront convention:

This is a hypothetical example of a run using a points upfront convention (convention for 500 basis points fixed coupon). The particular dealer determines where it wants to make a market based on its assessment of the credit's probability of default, recovery and other factors. Based on this, the dealer then determines the appropriate all-running spread. This all-running spread is then divided into two portions: the fixed coupon of 500 basis points and the points upfront.

do not break because of disagreements on the upfront payment that is due. This is a particular concern for entities that trade with a 100 basis points fixed coupon as dealer runs for these credits will display a conventional spread and not the upfront payment. At the urging of CDS participants, Markit has created the Markit CDS Converter. This is a free tool available at www.markit.com/cds and was created to drive agreement on the upfront payment due for specific CDS trades. The converter allows for easy translation between the conventional spread that will be found in dealer runs for investment-grade reference entities to the required upfront payment.

While this article outlines the expected quoting conventions, these are merely conventions. Dealers are not restricted in how they quote credits in their runs.

CONCLUSION


The CDS Big Bang entailed fundamental changes to the operational, trading and legal frameworks of the CDS market. However, in many ways, these changes were not dramatic. For the North American convention changes, one can see instances where these practices already occurred in the market. High-yield credits and indices already trade with a fixed coupon and settle on upfronts.

The new quoting convention has similarities to the quoting conventions for the Markit CDX IG and HY indices. The

treatment of accruals and the payment of full coupons on IMM payment dates are standard for the indices. In terms of restructuring provisions, North American high-yield credits typically trade with “no restructuring” by convention. The Markit CDX indices for the most part also trade “no restructuring.”

For the global contract changes, many of these practices were already in place. Hardwiring of the auction mechanism was implemented in loan CDS and simply streamlined a process that had already received broad acceptance. Rather than requesting participants subscribe to protocols as each credit event occurs, hardwiring will have the process applicable for all trades.

Determination committees replicate much of the work already done by industry committees. Standardisation of event-effective dates already exists for the Markit CDS indices. In total, the proposed changes provide a means to guarantee greater unanimity of results across positions and add more openness and transparency to the process.

Please note that opinions, estimates and projections in this article constitute the current judgement of the author at the time of writing. They do not necessarily reflect the opinions of Markit. 

¹ Note, the chart excludes auctions for LCDS and some auctions are included under the same protocol (e.g., Icelandic Banks Protocol had three separate reference entities/auctions).

² Assuming that the par spread of The Widget Corporation is 625 basis points, the present value of all five options would be zero. At the initiation of the trade, the value of the cash flows paid by the protection buyer would equal the value of the cash flows made by the protection seller following a potential credit event.



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