

**One in the Chamber: The  
New North American  
Bullet LCDS Contract  
and Its Impact on Markit  
LCDX Indices and  
Tranches**

**March 25th, 2010**

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## Executive Summary

Changes to the North American LCDS contract are scheduled to take place on April 5<sup>th</sup>, 2010 to coincide with the roll of the Markit LCDX North American Series 14 index. Tranches on the Markit LCDX index will roll the following week, on April 12<sup>th</sup>, 2010.

### Why is the North American LCDS Market Changing?

The simple answer is client feedback. Many investors have avoided getting more involved in the trading of LCDS due to valuation challenges around the early termination feature.

### Successor and Refinancing Provisions

The key to creating the new bullet LCDS contract was to alter the definitions of a Succession and Refinancing Event in order to cover typical situations around refinancing and succession in loans. The Continuity Procedures, revision of the Succession and Refinancing Event definitions and “percentage tests” are critical in minimizing the number of situations where contracts might otherwise be “orphaned” (live contract but with no eligible deliverable obligations).

### North American LCDS Convention Changes

Similar to the convention changes adopted in single name CDS last year and how some distressed LCDS credits already trade, the new bullet LCDS contract will feature fixed coupons and investors will need to exchange upfront payments in order to settle trades. Contracts that trade with a 100 fixed coupon will be quoted in dealer runs as a conventional spread and contracts that trade with a 500 fixed coupon will be quoted in dealer runs in points upfront. The 250 fixed coupon will see quotes in both conventional spreads and upfronts. The 250 strike will be the liquid strike with 100 and 500 strikes available for tight and wide credits, respectively. A “zero coupon” strike is also available in order to support trades done entirely in points upfront with no running coupon, but this is not expected to be very common.

The existing Markit CDS Converter, based on the ISDA CDS Standard Model and used for unsecured CDS, will support the translation of conventional spreads into the required upfront payments for LCDS trades. A standard recovery rate assumption of 70% will be used as an input for the conversion. The Markit CDS Converter is available for free at [www.markit.com/cds](http://www.markit.com/cds).

Additionally, the buyer will have to make a full coupon payment on the first payment date where the accrual period starts from IMM date that precedes trade settlement date. Payments will be paid quarterly. As such, the seller of LCDS protection will make any needed accrual rebate payment to the protection buyer at the time of the trade. Business day conventions will follow the currency of the trade. For trades in USD, the business day convention will be London and New York. For trades in Euros, the business day convention will be London, New York and Target.

### Impact on Markit LCDX Index and Tranches

Most of the impact on the Markit LCDX index and its tranches stem from the removal of early termination. This will result in less reversioning and refactoring of the index. For tranches, the elimination of refactoring means that there will be “no slices taken off the top” starting with Series 14. Prior series of the index will still see the super senior tranche get trimmed by one per cent for each early termination. The coupon for the Markit LCDX North American Series 14 Index has been set to 250 bps, in alignment with the coupon strike for single names in order to help liquidity in the product.

The index will also be affected by the succession provisions envisioned in the new bullet documentation. Trades on the index will be covered for succession events that are announced on or after the effective date of the index (prior to the first trading day). This will ensure that trades are covered for an event consistent with the current treatment for credit events. Also, keeping in line with the single name contract, accruals for index trades will begin on the 20<sup>th</sup> of the month

prior to the roll. Payments will occur quarterly. The recovery assumption for the index will also be 70%; the same as single names.

### **Discussion of CAMs and DIPs**

The working group for Bullet LCDS initially discussed proposals regarding Debtor in Possession (DIP) loans, particularly as they relate to DIP roll-up facilities. However, after extended debate and review, the working group could not reach consensus on a suitable solution. This decision was forced by the complexity surrounding the rights attached, possible stripping of such rights, consequences for the credit auction, and scenarios where a material portion of the rights might already have been exercised.

The new Bullet contract does include Collateral Allocation Mechanism (CAM) exchange obligations as deliverables for LCDS. Any CAM exchange obligation that stems from an exchange of a syndicated secured loan of the Reference Entity qualifies as a deliverable for Bullet LCDS. These CAM exchange obligations would not need to be direct obligations of the Reference Entity. This differs from the legacy contract where loans issued by a foreign subsidiary would not be deliverable.

### **How Will This Change Existing LCDS Positions?**

Existing LCDS contracts will continue to be supported. There will not be a “Bang” or industry-wide protocol to convert the terms of these contracts into the new bullet LCDS contract. However, as liquidity is expected to coalesce around the new product, investors in legacy LCDS positions may see a higher premium to offset or unwind these positions, especially over the long term. Dealers may quote levels to roll positions from old into new contracts if there is interest from their clients.

### **Conclusion**

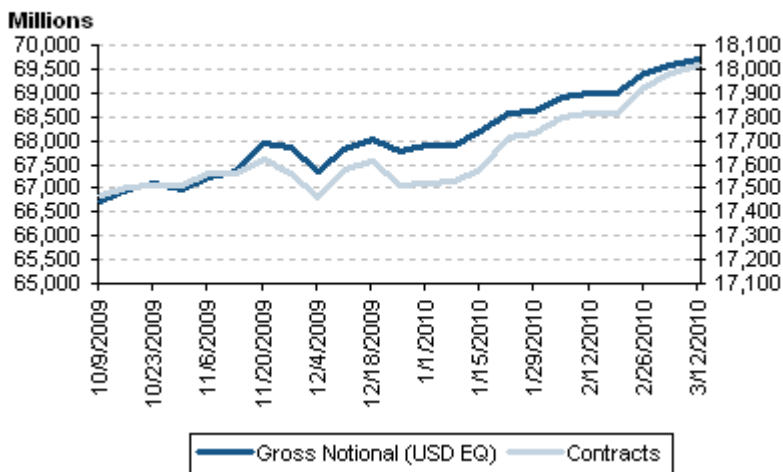
The changes made to the product, particularly the bullet maturity feature, represent ongoing efforts by the industry to improve the product and bring more liquidity.

## Why the Contract and Conventions Are Changing

### The Size of the LCDS Market

The North American LCDS market is still nascent, never really having had a chance to develop its full potential by many accounts. The Markit LCDX North American index launched in May 2007; helping liquidity form in single names. However by the end of July 2007, concerns about the global housing bubble started to hit asset prices and liquidity diminished. The early optional termination feature also made the product challenging to value. The industry tried to address the early termination issue as early as 2008 but market conditions shifted priorities.

**Gross Notional and Number of Contracts: Single Name LCDS**



Total gross notional outstanding and contract numbers have grown fairly steadily since Q4 2009 according to numbers from the Depository Trust and Clearing Corporation's (DTCC) Trade Information Warehouse. This is encouraging considering that the market has anticipated the new bullet LCDS contract in North America for some time. Observers of the cash loan market have noticed volumes increasing lately as well.

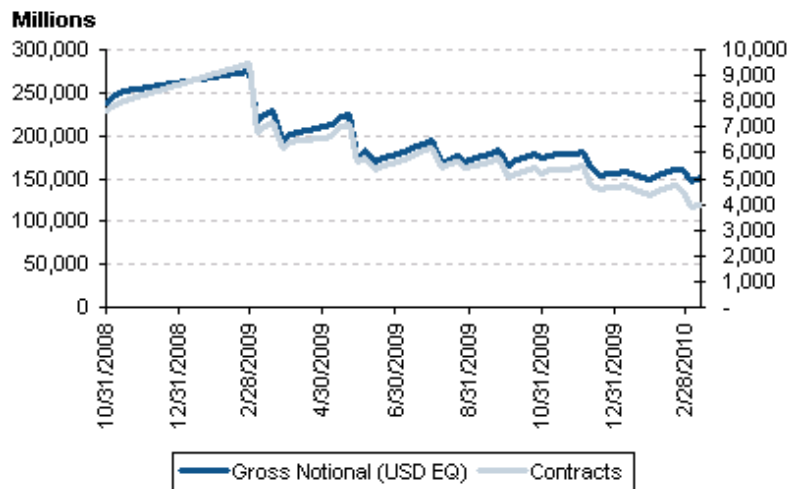
Additional historical information on total gross notional amounts is not available at this time but market participants broadly agree that activity in LCDS is lower than it was in the first half of 2007, months after the first LCDS products on standardized documents started trading in North America.

As of March 12<sup>th</sup>, 2010 the total gross notional amount outstanding for single name LCDS was close to \$70 billion.

Source: DTCC

The total gross notional amount outstanding in the Markit LCDX index across all series has been anywhere from roughly two to four times the size of the single name LCDS market over time. Activity in the index dropped significantly in the latter part of 2008 and early part of 2009. The trend has largely been flat since then. Market makers believe that activity will increase for both the index and single name LCDS with the new bullet contract.

**Gross Notional and Number of Contracts: Markit LCDX (All Series by Date)**



Source: DTCC

## Optional Early Termination and the Valuation Challenge

Under legacy LCDS, the contract could be terminated once no syndicated secured loan deliverables were available for the reference entity. The process initiated when Markit ran a poll to confirm that the obligations listed on the Syndicated Secured List no longer met the required criteria or were no longer outstanding. This could have been due to a full repayment of outstanding loans or the credit could have been upgraded to investment grade. Investment grade loans are usually unsecured. For example, the latter scenario occurred with Allegheny Energy Supply Company, LLC, where the listed loans were no longer secured due to a rating upgrade.

The day the poll results were announced confirming the removal of the loans was the 'Withdrawal Date.' A thirty business-day window commenced from this withdrawal date. If no suitable substitute obligations were found for the reference entity within those thirty business days, Optional Early Termination of the LCDS contract would occur.

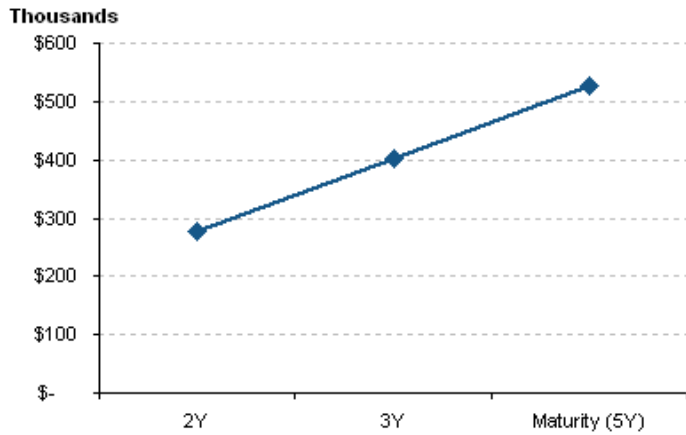
The Bullet LCDS contract does not include Optional Early Termination rights. Even if no syndicated and secured loan deliverables are available for the reference entity, the contract will remain valid. This introduces the concept of 'orphaned' contracts in the North American LCDS market, similar to the unsecured CDS market. Thus, barring a credit event, Bullet LCDS contracts will remain outstanding until maturity, regardless of the availability of loans. This will make them truly non-cancellable. However, many of the proposed changes to the contract embodied in the Continuity Procedures and definitions seek to minimize the likelihood of orphaned contracts while attempting to preserve the economics of the original trade.

**Optional Early Terminations Over Time**

Year	Reference Entity
2010	Affiliated Computer Services, Inc.
	Centennial Cellular Operating Co. LLC
2009	Apria Healthcare Group Inc.
	Northwest Airlines, Inc.
	American Airlines, Inc.
	Blockbuster Inc.
	The Mosaic Company
	Houghton Mifflin Company
	Cricket Communications, Inc.
	Allegheny Energy Supply Company, LLC
	WMG Acquisition Corp.
	Alltel Communications, LLC
2008	Hercules Incorporated
	Allied Waste North America, Inc.
	Reynolds American Inc.
	NRG Holdings, Inc.
	K&F Industries, Inc.
	Horizon Lines, LLC
	Pinnacle Foods Group Inc.

Source: Markit

### Uncertain Duration and P&L



Source: Markit

**The Valuation Challenge:** Some investors never quite got comfortable with valuing an LCDS contract where Optional Early Termination could come into play. Precise valuation would require knowing when the trade would terminate. In the chart to the left, one can see how the profit (or loss) would change based on the duration for a hypothetical trade.

*Hypothetical trade details:*

- Trade struck on January 7, 2010 at 250 bps
- Trade notional: \$10 mm
- Trade valuation date of March 24, 2010
- Notional amount: \$10 mm
- Recovery rate assumption: 70%
- Standard IMM maturity dates/conventions
- Flat curve of 400 bps

# Continuity Procedures & Succession and Refinancing Event Definitions

## Introduction

As mentioned earlier, the primary motivation for the new North American bullet LCDS contract is to reform the product to address the early termination issue. In order to make the contract a bullet and adequately address the characteristics of the cash loan market, rules and processes were required to handle Succession and Refinancing Events. The concern under the existing definitions for North American LCDS contracts was that it was not always clear that a new entity first assumes or becomes liable for the original loans prior to them being repaid. Without a modification, many LCDS transactions could be orphaned upon a refinancing and thus defeat the intent of a bullet contract. In order to avoid this, the definitions of Succession and Refinancing Events have been modified to include the following situations which are common for loans:

- Repayment of Relevant Obligations from the proceeds of new loans or bonds from a new entity
- Repayment of Relevant Obligations where the assets securing them have been acquired by proceeds of new loans or bonds from a new entity
- Repayment of Relevant Obligations where the assets securing them subsequently secure new loans or bonds of a new entity
- Amendment or Restructuring where the Relevant Obligations cease to be obligations of the original Reference Entity and another entity becomes a borrower or provides a qualifying affiliate guarantee
- Any other event that has substantially the same effect as the above.

“The Continuity Procedures for Bullet LCDS,” as published by ISDA, is central in making the new bullet LCDS contract work. It introduces succession provisions for the first time. Markit has been selected as the administrator of these succession processes and succession determinations will be made by a designated law firm. The primary designated law firm is Richards Kibbe & Orbe LLP. However, in the event the primary law firm has a conflict of interest or is unable to consider a determination for a specific event, the secondary designated law firm will conduct the review and determine succession. Allen & Overy LLP is the secondary designated law firm. Once one of the designated law firms makes a successor determination, the result is binding for all parties under the new LCDS contract. This serves to standardize contracts across the industry, avoiding variance of results that could arise from inconsistent determinations across calculation agents, for example.

## Process

The Continuity Procedures stipulate that Specified Dealers in possession of information about a succession event will notify Markit. Other bullet LCDS market participants with information that a Succession or Refinancing Event may have occurred can notify one of the Specified Dealers. As Administrator, Markit will notify the Specified Dealers and the Designated Law Firm that there has been a request for review of an event. Such a notice must occur on or prior to the 90<sup>th</sup> calendar day after the legally effective date of a Succession or Refinancing Event.

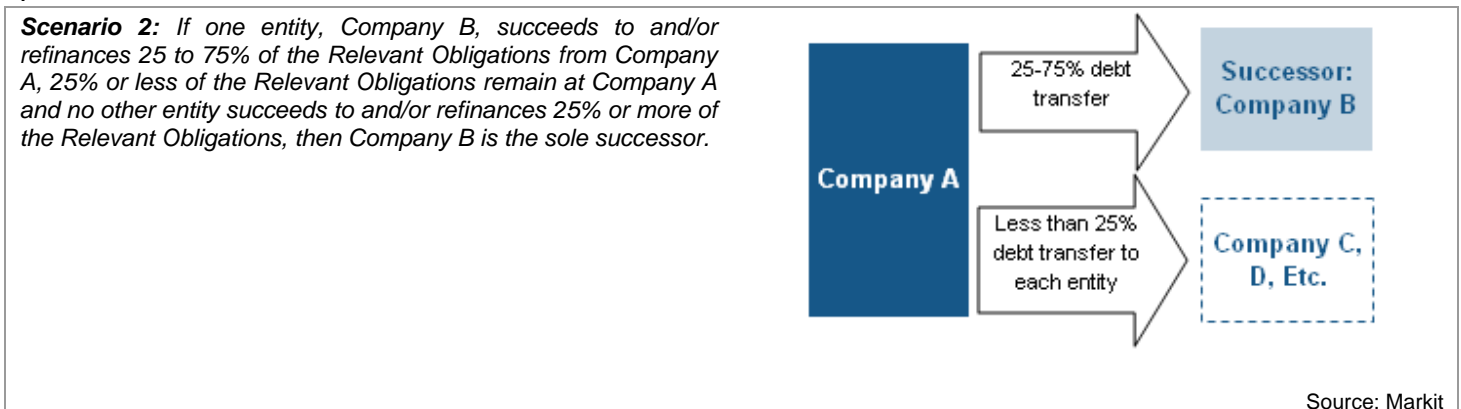
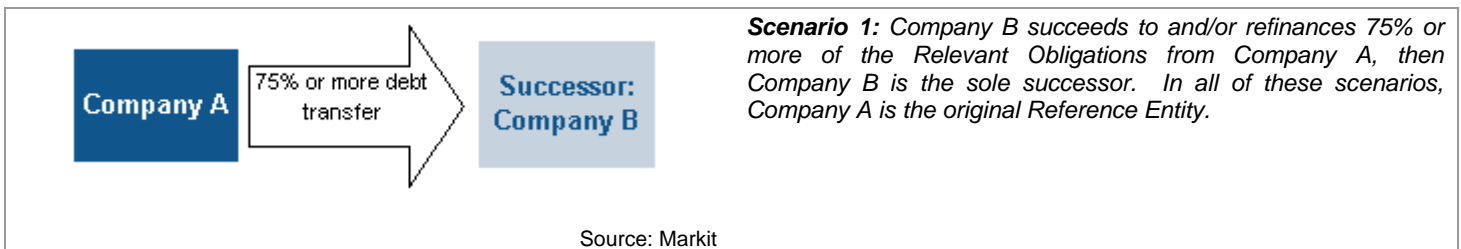
Dealers will then share relevant public information with Markit and the Designated Law Firms. Only the Designated Law Firms and Specified Dealers can receive private or syndicate information. The Designated Law Firm will provide an Interim Summary. As part of the process, the Designated Law Firm may request the Syndicated Secured List Publisher (currently Markit) to poll the relevant refinancing loans. This is to determine if the potential deliverable obligations held by one or more successor entities satisfy the trading standard of “syndicated and secured”, and if so, what lien attribute (i.e., first lien, second lien, etc.) each deliverable obligation has. Initially, Markit will make the Interim Summary of the law firm’s determination publicly available. Once any feedback has been addressed, a Final Summary of the determination will be made available by Markit. Again, the determination will be legally binding on the market. Full details about the process can be found in the Continuity Procedures for Bullet LCDS available at [www.isda.org](http://www.isda.org). The Bullet Polling Rules for the North American Syndicated Secured List can be found at: <http://www.markit.com/en/products/data/indices/credit-and-loan-indices/index-annexes/primers.page> starting April 5th.

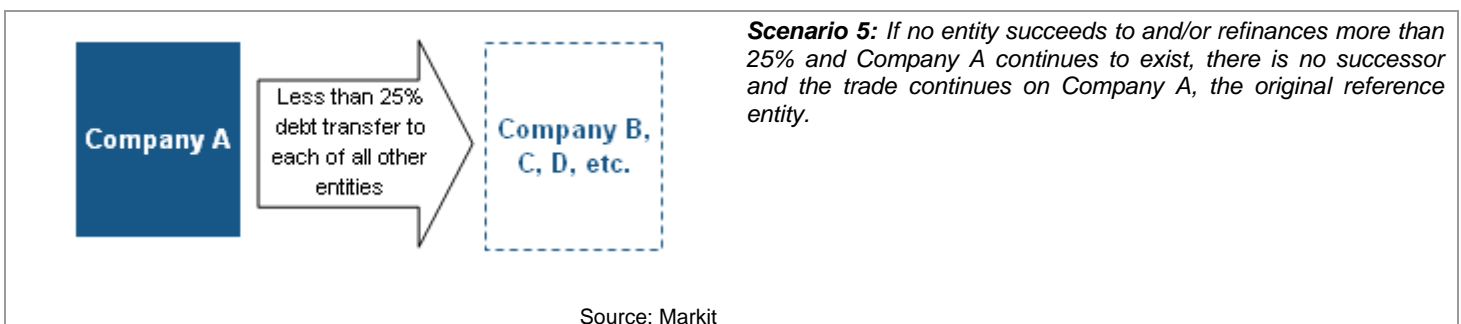
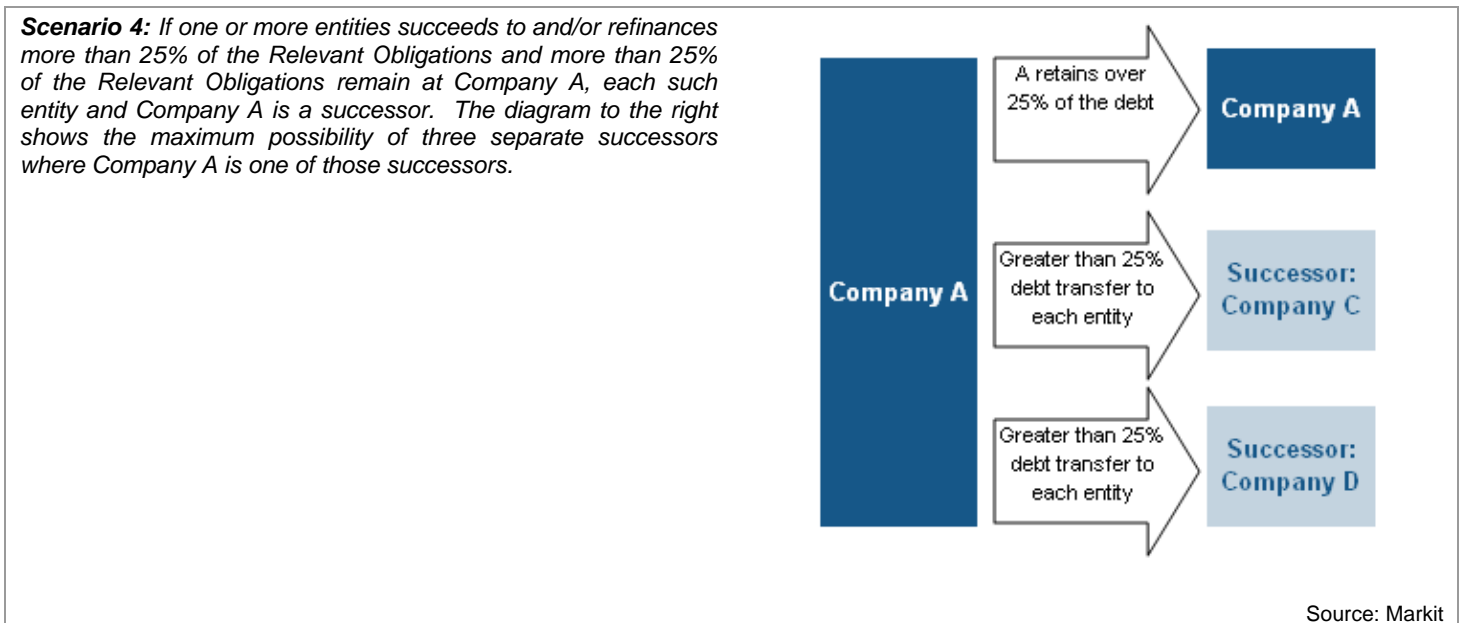
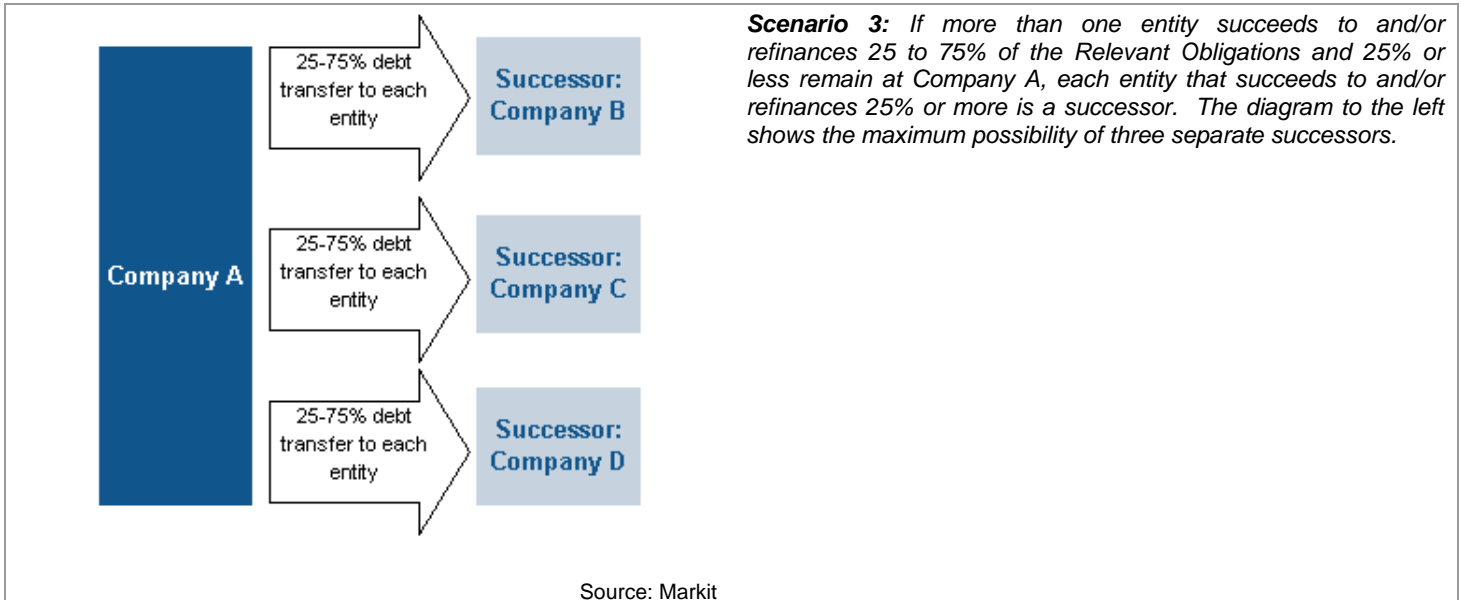
It should be noted that a simple refinancing, with no change in corporate structure and a new issuance replacing old obligations, will continue to be handled outside of these Continuity Procedures through the SSL polling procedures.

## Succession and Refinancing Scenarios

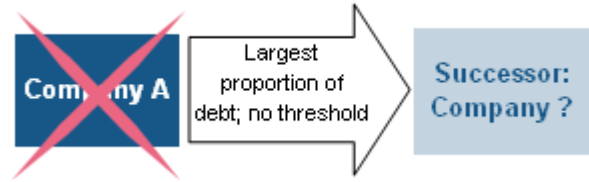
In general the process of identifying a successor based on a succession and refinancing event will follow these broad steps and will apply percentage tests based on several scenarios (see diagrams below):

- Identify the occurrence of a Refinancing Event
- Identify the Relevant Obligations of the original reference entity (all Syndicated Secured loans of the designated priority outstanding immediately prior to the Refinancing Event)
- Identify the Syndicated Secured Refinancing Loans (all Syndicated Secured Loans used to refinance the original relevant obligations)
- Identify the Primary Obligor on each Syndicated Secured Refinancing Loan
- Calculate the percentage of Relevant Obligations that were refinanced by each Primary Obligor
- Run the scenarios below for each Primary Obligor

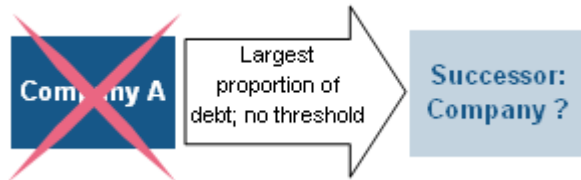




**Scenario 6:** If no entity succeeds to and/or refinances more than 25% of the Relevant Obligations and Company A ceases to exist, then the entity which succeeds to and/or refinances the greatest percentage of the Relevant Obligations, or if two entities succeeds to and/or refinance equal amounts, the entity that succeeds to and/or refinances the greatest percentage of obligations, is the sole successor.



Source: Markit



**Scenario 7:** If there are no Syndicated Secured Refinancing Loans and Company A ceases to exist, then the entity that is the Primary Obligor of the largest amount of the Refinancing Bonds and Refinancing Loans will be the Successor.

Source: Markit

**Scenario 8:** If there are no Relevant Obligations and Company A ceases to exist, then the Successor will be determined with reference to the CDS definitions.



Source: Markit



**Scenario 9:** If there are no Syndicated Secured Refinancing Loans and Company A continues to exist or if no other scenarios fit, there is no successor and the trade continues on Company A, the original reference entity.

Source: Markit

Any queries regarding the Bullet LCDS Database and the Continuity Procedures should be sent to [lcds@markit.com](mailto:lcds@markit.com).

## Expected Convention Changes to North American LCDS

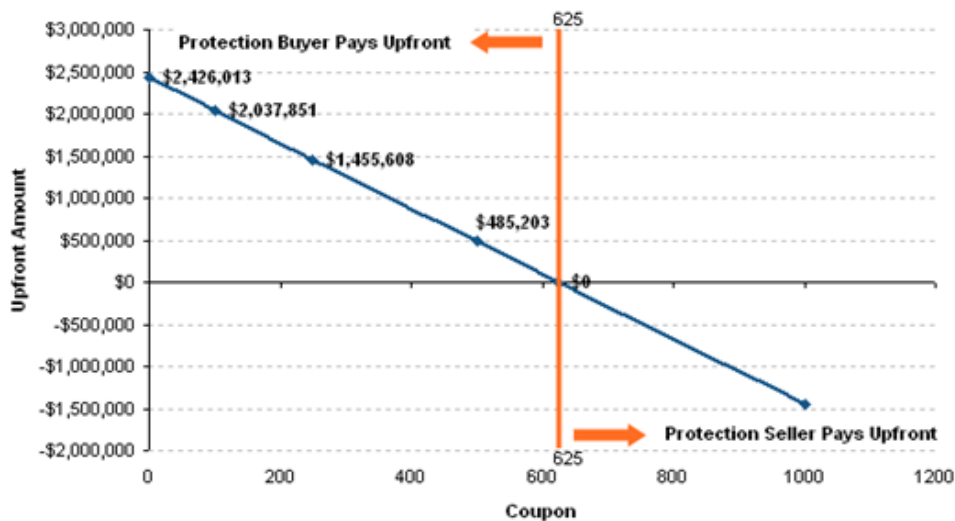
### Introduction

Many of the convention changes to North American LCDS correspond to similar changes seen last year in CDS. Fixed coupon strikes and payment of full coupons in particular should be familiar to those who follow the CDS market. While the key benefit to the forthcoming changes in the product is to introduce a bullet maturity, these convention changes serve to standardize LCDS contracts in the U.S. To the extent that contracts are more fungible, this should serve to help liquidity as well.

### Fixed Coupon

Most single name LCDS contracts in North America are currently quoted using a par spread (the spread that would cause the present value of a LCDS 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 LCDS market has traded with a fixed coupon and upfront payment. Recently, the universe of names quoted upfront has increased as more names have become distressed. Typically LCDS on an entity would start to be quoted on an “upfront” basis once the spread crossed a certain threshold. In this scenario, the buyer of protection pays an immediate upfront fee then a fixed periodic payment. For North American LCDS, the new standard coupon will be 250 basis points. For credits that are particularly tight or wide, 100 and 500 basis points strikes are available, respectively. A “zero strike” is also an option in those cases where counterparties want to do a trade entirely on upfront.

The Widget Corporation 5Y LCDS: Present Value Indifference Curve



Source: Markit

While participants in the LCDS market often prefer to minimize upfront payments, it is important to note that from a present value perspective investors should be indifferent. Assessing a theoretical trade on The Widget Corporation<sup>1</sup>, an investor should be indifferent between buying protection with:

- 625 basis points annual coupon and no upfront payment
- 100 basis points annual coupon and a \$2 MM upfront payment
- 250 basis points annual coupon and \$1.5M upfront payment
- 500 basis points annual coupon and a \$485K upfront payment
- No annual coupon and paying a \$2.4 MM upfront payment

<sup>1</sup> 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.

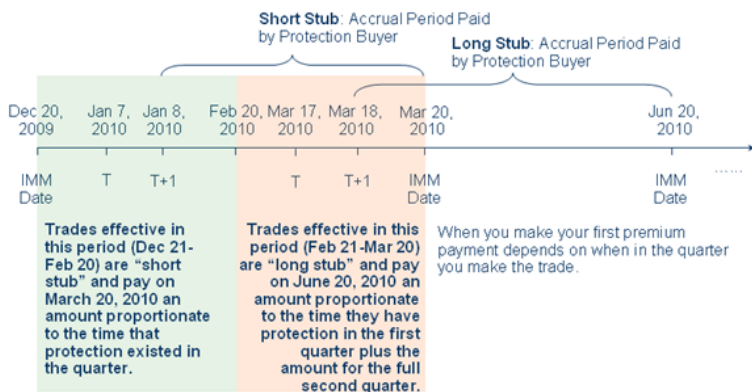
Although the standardization of coupons is irrelevant from a present value perspective, the benefits to the LCDS market from an operational perspective are significant. Specifically, when combined with other changes in the LCDS market outlined in this report, the standardization of coupons allows for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

## Trading with a Full Coupon

Under the current convention, whether a protection buyer pays a coupon on the first coupon or IMM<sup>2</sup> date depends on when the trade occurred. IMM dates are the chosen termination dates for LCDS contracts: March 20th, June 20th, September 20th, and December 20th for any given year.

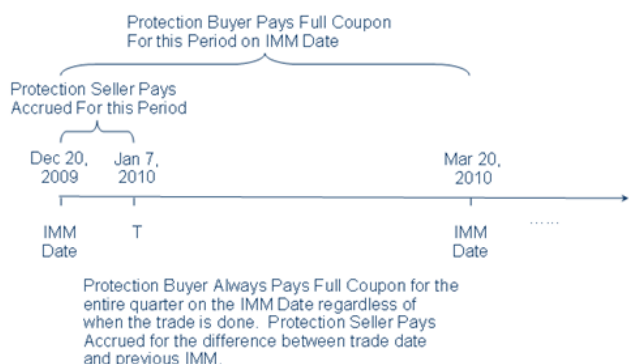
If the trade date falls before 30 days prior to the first coupon date, the accrual is due on the first coupon date for the number of days of effective protection during the period. This is called a “short stub” period. If the trade date is within 30 days before the first coupon date, there is a “long stub period”. No accrual of premium is paid on this first IMM coupon date; rather the long stub is 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 adds an extra level of complexity to operations departments in setting up coupon payments.

Current LCDS Accrual Timeline



*The current process for accrual payments places a burden on operations. 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.*

Proposed LCDS Accrual Timeline



*This practice makes the LCDS a bit more like a bond in the way it treats 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 as a LCDS premium payment and a bond accrued interest payment are not alike.*

Source: Markit

Business day conventions will follow the currency of the trade. For trades in USD, the business day convention will be London and New York. For trades in Euros, the business day convention will London, New York and Target.

<sup>2</sup> IMM dates are the chosen termination and payment dates for LCDS contracts: March 20th, June 20th, September 20th, and December 20th for any given year. They loosely correspond to the International Monetary Market (IMM) dates used in the Euromoney market, the third Wednesday of March, June, September, and December.

Going forward, the contract will mimic the way the single name CDS in North America operates in this respect. 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 up to trade date to the protection buyer. Standardizing to a full coupon will make LCDS contracts more fungible.

For the Markit LCDX index and tranches, accruals begin from the previous IMM date from trade settlement date. At launch, accruals begin from the previous IMM date as well (March 20, 2010).

## Quoting Convention

Those that actively trade LCDS receive dealer runs. 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. Currently runs for the LCDS market look something like the below:

TL:	L+200	8/2013	~6.25%
LCDS :	3yr	275-325	
	5yr	415-465	

*This is an example of a dealer run quoting a par spread for three year and five year LCDS. Here a recovery rate is not provided nor is it particularly relevant for the quotation. A protection buyer is paying 465 basis points annual premium (on the five year) regardless of the dealer's opinion on recovery.*

While not displayed here, this run did provide the credit that was being quoted. Like many LCDS runs, it also contains a quote for the loan. As one can see it displays the bid/offer for the spread. Change from the prior day is optional. In this example it is not included. Unless otherwise stated or a full curve is provided, the quotes are for 5 year protection, the most liquid tenor. In this run, it would cost 465 basis points or (465 bps \* 10 mm notional) \$465,000 per year to buy protection from a credit event on \$10 million worth of loans. The spreads contained in this dealer run are known as par spreads. A par spread is the spread that would cause the present value of a LCDS trade to be zero for both the buyer and seller at the outset of the trade.

Although all new fixed coupon trades will settle with an upfront payment, it is expected that dealer pricing runs will have a mix of conventional spreads and points upfront for quotations. "Conventional spreads" are expected for 100 strikes. Credits that are now quoted in points upfront with 500 basis points running are likely to continue to be quoted that way. Ford LCDS would be a primary example. Quotes for 250 strikes will likely see a mix between conventional spreads and points upfront. Credits with implied spreads at 250 bps or less will feature convention spreads. As implied spreads get significantly wider than 250 bps, expect to see points upfront particularly if the credit does not have unsecured CDS trading on it or if the unsecured CDS is quoted in points upfront as well. For credits that have high jump-to-default risk, it is possible that a dealer may quote the name entirely in points upfront with no running coupon. As such, par spreads are expected to ultimately be excluded from dealer runs going forward. Note that conventions are merely rules of thumb or guidelines. Dealers are free to quote levels as they choose, most likely in the manner preferred by their clients. Simply put, there could be exceptions.

## Conventional Spreads

As the LCDS market in North America transitions to using conventional spreads (also known as quoted spreads) in dealer runs (for 100 and some 250 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 important to note that the conventional spreads that will be in dealer runs 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 a particular 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 dealers have agreed to use is the ISDA CDS Standard Model which is administered by Markit Group. The model was originally created for use in the CDS market. With the creation of the new bullet LCDS market, market participants have extended its use for that contract as well.

### ISDA CDS (and now LCDS too) Standard Model

On February 26<sup>th</sup>, 2009 ISDA and Markit announced the availability of the ISDA CDS Standard Model Code with Markit as the Administrator of the code. In its role as Administrator, 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 license at [www.cdsmodel.com](http://www.cdsmodel.com). Additionally,

the standardized 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

One of the largest causes 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 LCDS changes to a fixed coupon with an upfront payment, it is critical that trades do not break due to disagreements on the upfront payment that is due. This is a particular concern for entities quoted in a conventional spread format in dealer runs (and not in upfronts).

At the urging of participants, Markit has created the Markit CDS Converter. This is a free tool available at [www.markit.com/cds](http://www.markit.com/cds) and was created to drive agreement on the upfront payment due for specific CDS trades. The Markit CDS Converter was designed with the input of key CDS dealers and utilizes the ISDA CDS Standard Model code as well as the standardized inputs for the code. The converter allows for easy translation between the conventional spread that will be found in dealer runs to the required upfront payment. To reiterate, this converter is capable of handling the conversion from conventional spreads to upfronts for LCDS as well.

### Using the Converter

#### An Example

To the right is a hypothetical calculation of a trade being initiated on March 23, 2010 for five year standard maturity. The trade is quoted at a conventional spread of 475 basis points at a fixed coupon strike of 250 basis points. In order to know the amount of upfront payment that the protection buyer would pay to protection seller (in this case), you need to translate the conventional spread of 475 basis points to the upfront payment.

The free Markit CDS Converter found at [www.markit.com/cds](http://www.markit.com/cds) was built for this purpose. In this example, the protection buyer would pay a \$77,343 upfront payment to the protection seller on \$1 million notional protection and a 250 basis points running coupon.

For purposes of determining the upfront, the standardized assumptions for the new bullet LCDS contract are:

- 70% recovery rate assumption
- Flat hazard curve
- Standard interest rate assumptions (see [www.cdsmodel.com](http://www.cdsmodel.com) for more information)

Source: Markit

If you have any questions about how to use the Converter, there are forums set up at [www.cdsmodel.com](http://www.cdsmodel.com) or alternately you can contact us at [support@markit.com](mailto:support@markit.com).

## Impact on Markit LCDX and Tranches

Under the current LCDS contract in the U.S., protection survives in the event of a typical loan refinancing. However, protection can be terminated by either party if the underlying deliverables are paid down and there is no substitute reference obligation. This typically happens when a company elects to replace its loan financing in full with a bond issuance or gets its debt rating upgraded to investment grade and refinances its loans at a cheaper cost as unsecured facilities. To understand the impact on the Markit LCDX and its tranches, it is best to illustrate with an example.

On June 5, 2009 Cricket Communications, Inc. (Cricket) completed the closing of the sale of \$1.1 billion aggregate principal amount of 7.75% senior secured notes due 2016. The net proceeds were used to repay all outstanding loans under the June 16, 2006 credit agreement: 1) revolving credit – USD 200 million, maturing June 16, 2011 and 2) term B1 loan – USD 895.5 million, maturing June 16, 2013. As these were the only loans outstanding for this borrower, a vote was held to remove these obligations from the Syndicated Secured List. Their removal triggered a search process to determine if there were any substitute reference obligations. Without a substitute reference obligation, single name LCDS trades terminate under the current contract. As Cricket was also a constituent of the Markit LCDX, the lack of a substitute reference obligation required its removal from the index. This meant that:

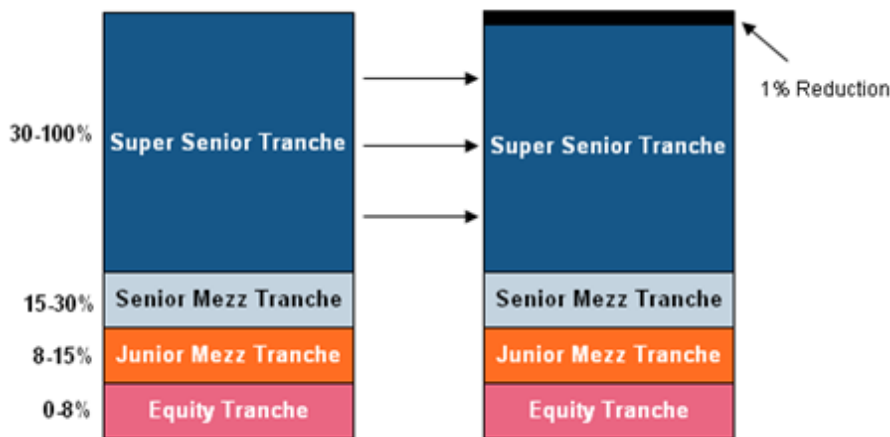
- The index notional for Series 12 trades outstanding at close of August 7, 2009 was factored down by one percent. The coupon beyond this date was reduced in line and based on the new reduced notional.
- To facilitate future trading, LCDX members voted to remove Cricket from Series 12 of LCDX. Markit published a new version of the index, with the weighting of Cricket set to zero, and an annex date of August 7, 2009. All trades conducted on the new version, from August 8, 2009 onwards (or until the next version), traded with a reduced factor, notional and coupon.

### Optional Early Terminations in Markit LCDX Indices

Reference Entity	Series 8	Series 9	Series 10	Series 12	Series 13
ADVANCED MICRO DEVICES, INC.	<input checked="" type="checkbox"/>				
Mueller Group, LLC	<input checked="" type="checkbox"/>				
ALTVITY PACKAGING, LLC	<input checked="" type="checkbox"/>				
Reynolds American Inc.	<input checked="" type="checkbox"/>				
Allied Waste North America, Inc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Alltel Communications, LLC			<input checked="" type="checkbox"/>		
Cricket Communications, Inc.				<input checked="" type="checkbox"/>	
Blockbuster Inc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
AMERICAN AIRLINES, INC.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
CENTENNIAL CELLULAR OPERATING CO. LLC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

Source: Markit

In the event of cancellation (i.e., early termination), LCDX tranches are affected by simply reducing the size of the Super Senior Tranche (30-100%); junior tranches remain unaffected (unless there are a lot of subsequent cancellations). Thus for the cancellation of Cricket, the Super Senior Tranche of the LCDX Series 12 reduces in size by 1%. This corresponds with the reduced notional on the index itself. As Cricket was not a constituent of prior LCDX series, tranche trades there were not impacted.



**The Impact on Tranches from Optional Early Termination (Cricket Communications Case):** The super senior tranche reduces in size by one percent for the first cancellation of a constituent. Subsequent cancellations continue to slice the super senior tranche by one percent. If there are enough cancellations, the super senior tranche could be “consumed” by cancellations in which case the slice hit the next most senior tranche. Note that the attachment and detachment points presented here are the ones that were relevant for the Cricket termination for Markit LCDX Series 12 tranches.

Source: Markit

Reductions in futures series of the index will concentrate in the junior tranches, caused by credit events such as bankruptcies and defaults. There were 6 credit events in the LCDX Series 12 index prior to the removal of Cricket. For simplicity, we ignore the impact on attachment/detachment points from those events in this example.

With the removal of Optional Early Termination in the new bullet LCDS contract, these treatments of the Markit LCDX indices and tranches will only apply to Markit LCDX indices prior to, but not including, Series 14 and only when a constituent of one or more of those index series has an early termination. The index will also be affected by the succession provisions envisioned in the new Bullet documents. Trades on Series 14 and subsequent series of the Markit LCDX Index will be covered for succession events that are announced on or after the effective date of the index. This will ensure that trades are covered for an event even if a new version of the index is not issued. If a new version of the index is issued to reflect a credit event, then trades going forward from that date should reference the new version.

Keeping in line with the single name contract, accruals for index trades will begin on the 20<sup>th</sup> of the month prior to the roll. Coupon payments will occur quarterly and take place on the same date.

For Series 14 of Markit LCDX, launching on April 5, 2010, the coupon has been set at 250 bps. The recovery assumption will be 70%.

In order to keep tranches in synchronization with the new Markit LCDX index, tranches will roll a week later on April 12<sup>th</sup>. Previously, tranches would only roll annually in October for odd numbered series. This will create a short stub of six months as the tranches are set to roll again in October for series 15 of the index. After that, the rolling of tranches will revert back to an annual event.

The attachment/detachment points for the Series 14 tranches were set at 0-8%, 8-15%, 15-30% and 30-100%. The coupon will be 250 bps, same as the untranching index. To keep tranching Markit LCDX consistent with single names and untranching index, it will also have a full first coupon, accruing from the previous quarterly roll date (Mar/Jun/Sep/Dec 20) immediately prior to the trade settlement date.

## Refinements of “Syndicated Secured”

### Trading Standard

The characteristic of “Syndicated Secured” under the North American LCDS is determined by dealer polls conducted by Markit or, if not in the Markit RED LCDS™ database, the Calculation Agent. The standard for the determination is known as a “trading standard”, in that it requires a loan to “trade as” a loan of the relevant lien priority under the then-current trading practices in the primary or secondary loan market. If the loan does not trade in the primary or secondary loan market, it may be disqualified even if it is both “syndicated” and “secured” in the common sense of the words.

The Bullet LCDS addresses this issue by refining the “trades as” requirement to also include “would be expected to trade as” if the loan does not trade on the relevant day. This is important in the context of identifying Syndicated Secured Refinancing Loans as the relevant day for the determination of the Syndicated Secured characteristic is the day when the loan is identified in accordance with the Continuity Procedures, which may be fairly early on in the life of the loan.

### First Loss Tranches

The legacy LCDS requires that the Syndicated Secured characteristic be determined without regard to the subordination provisions on the theory that subordination provisions deal with payment priority whereas Syndicated Secured address lien priority. In the case of a “first loss” tranche (*i.e.*, a loan which is subordinated to other loans of the same lien priority by priority of payment with respect to the collateral), this definition has given rise to some debate.

The Bullet LCDS clarifies the definition by taking into account the subordination of the loan to other loans of the same lien priority, thus disqualifying first loss tranches from being loans of the relevant priority.

## CAMs and DIPs

### CAMs Will Be Deliverable

Collateral Allocation Mechanism (CAM) exchange provisions are intended to protect lenders who lend in multiple currencies and across legal jurisdictions by equalizing the recovery for creditors when a borrower files for bankruptcy or defaults. A CAM exchange usually does this by exchanging the original loans for a proportionate share in the total pooled debt after converting all non-US dollar denominated loans into US dollar denominated ones. Note that while the intention is to equalize the recovery across like creditors, these exchanges do not increase the recovery amount from the borrower.

CAM exchange provisions are usually found in loan agreements with foreign lenders or lenders with foreign subsidiaries, multiple loan tranches and collateral or guarantee agreements that vary between tranches.

Under the existing North American LCDS contract, CAMs raise challenges. Currently, loans issued by European borrowers or other entities that are not the reference entity (unless there is a qualifying affiliate guarantee) cannot serve as a deliverable for North American LCDS contracts even if they are US dollar denominated and the recovery is the same. As loan holders receive a pro rata strip of all loan debt in a CAM exchange, the exchange can “break” a hedge. For example, a holder of \$1 million loans in a company may elect to hedge the cash position by buying \$1 million in protection through the LCDS. If a credit event occurs later and the CAM exchange is triggered, the loan holder would have their \$1 million loan position converted into a pro rata share of all loan debt by the borrower. If some portion of those loans were not deliverable into the LCDS contract because some tranches were issued by a European borrower, the loan holder would not be perfectly hedged, only partially hedged. This obviously raises a challenge in physical settlement of the LCDS contract.

This is precisely what happened with Lyondell Chemical Company. Lyondell's loan included debt issued by German and Dutch borrowers. Protection buyers were faced with the prospect of needing to deliver a piece of the strip that was roughly 125% of their LCDS position to deliver a sufficient amount of debt to fully settle their notional in the LCDS.

Loan	Initial Amount	Maturity	Initial Spread	MLID
Primary Revolving Credit Loan	\$800 mm	20-Dec-13	LIBOR + 350	ML0002810
U.S. Tranche A Dollar Term Loan	\$1,500 mm	20-Dec-13	LIBOR + 350	ML0002812
U.S. Tranche B-1 Dollar Term Loan	\$2,516.67 mm	20-Dec-14	LIBOR + 375	ML0002814
U.S. Tranche B-2 Dollar Term Loan	\$2,516.67 mm	20-Dec-14	LIBOR + 375	ML0002815
U.S. Tranche B-3 Dollar Term Loan	\$2,516.67 mm	20-Dec-14	LIBOR + 375	ML0002816

Source: ISDA, Markit

*The table to the left shows the list of deliverable obligations into the LCDS credit event auction for Lyondell Chemical Company. While Lyondell loan debt included pieces issued by German and Dutch borrowers. Per the rules, these were not deliverable for the LCDS auction held on Lyondell. Because they were part of the CAM strip, protection buyers were faced with the prospect of needing to "over deliver" in order to physically settle trades for the full notional amount. In the new bullet contract, CAM obligations will be deliverable.*

As part of the changes brought about in the new bullet LCDS contract, CAM obligations will be deliverable.

## No Solution for DIPs

The industry working group spent a lot of time trying to come to a solution regarding DIPs but could not reach a consensus. The issues are challenging and in the final analysis, possible solutions may be more cumbersome than the problems. This decision was forced by the complexity surrounding the rights attached, possible stripping of such rights, consequences for the credit auction and scenarios where a material portion of the rights might already have been exercised.

The issue revolves around DIP structures with a roll-up facility. In a DIP roll-up facility, pre-petition lenders can roll their existing positions on a dollar-for-dollar basis for the amount they are allocated of the post-petition, roll-up tranche. Thus some prepetition paper trade "with rights" to the roll-up and others trade "without rights". Obviously the paper that trades with rights is more valuable and thus trades with a higher recovery value in comparison to those without rights. As protection buyers have the option to choose which deliverable obligations to deliver, settlement levels on LCDS tend to the cheapest-to-deliver price.

## Migration of Old Contracts to New Contracts/Conventions

Unlike some of the changes that occurred last year for CDS, none of the changes to bring about the launch of the new bullet LCDS contract in North America will result in the use of an industry-wide protocol to modify existing contracts. Due to the interest of some market participants, particularly hedgers of bank loan portfolios, existing single name LCDS contracts will be supported. As liquidity is expected to migrate to the new contract, however, investors in legacy contracts may want to consider rolling their positions into the new contract. It is possible that if liquidity dries up in legacy contracts, it may cost more to offset or unwind positions than investors were previously accustomed.

Optional early termination is still possible for legacy contracts. It is also possible for the Markit LCDX indices and tranches prior to, but not including, Series 14.

## Conclusion

After much time and effort, the new bullet LCDS contract for North America will launch on April 5<sup>th</sup>. A true bullet contract will give investors more certainty around valuation and should bring new entrants to trade the instrument, thereby adding much needed liquidity.

Most market participants believe that LCDS has significant growth potential. LCDS is also poised to take advantage of any significant growth in the cash loan markets, which have already seen some recovery in secondary loan activity this year (albeit not back to pre-crisis levels in 2007). Relative to the size of the underlying cash loan markets, the volume in LCDS is quite small. The cash loans and LCDS markets have their own peculiarities that occasionally make them difficult to compare to the bonds and CDS markets. However, if the LCDS market approaches anywhere near the same proportions to the cash loans market as the CDS market is to bonds, LCDS would be poised for significant growth.

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