

The Big Bang: A Guide to the Standardized CDS Contract

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RESEARCH

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The Big Bang: A Guide to the Standardized CDS Contract

- On March 20 the CDS market will move to a standard CDS contract in an effort to both add transparency and prepare the product for clearing. Market participants have taken to calling the introduction of the standardized contract "The Big Bang". We provide a detailed explanation of the changes as well as our thoughts and recommendations for investors.

Take Part in the Protocol

- The protocol will amend past and future contracts to include cash settlement auction provisions, better date conventions around credit events and a committee to make important determinations in the CDS market. All changes should reduce risk for both buyers and sellers of protection.

Remain in Liquid Contracts

- Investors' primary concern should be around remaining in liquid contracts. All other risks will be outweighed by the lack of liquidity in non-standard contracts a few months after the Big Bang.

Roll out of Mod-R Contracts and into No-R Contracts

- Even for buyers of protection, the benefit derived from modified restructuring (Mod-R) is small relative to the lack of liquidity we expect in Mod-R in the U.S. a few months after the Big Bang.

Roll into Standard Coupon (100 bps or 500 bps) Contracts

- The dealer community will likely charge a higher premium to unwind or assign off-strike CDS contracts after the coupon standardization.

Collapse Unnecessary Trades

- Though there will likely be a premium to collapse offsetting trades, we expect that cost will increase going forward as dealers become less apt to take on annuity risk.

The Restructuring Credit Event

- We believe that the CDS community over values the restructuring credit event in CDS. As part of the Big Bang, the US CDS contract will start trading without restructuring as a credit event. We expect that, over time, the spread of legacy contracts that trade with Modified Restructuring (Mod-R) to converge with contracts that trade without restructuring (No-R). Perhaps more important, we expect that the bid/offer of Mod-R contracts will increase significantly as liquidity drops.

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Refer to important disclosures on page 17 to 18.

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On March 20th the CDS market will move to standardize CDS contracts.

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We strongly encourage all investors to take part in the protocol.

The CDS market will have a formal committee that will make determinations around events currently handled by informal dealer committees.

The Standardized CDS Contract

On March 20th the CDS market will move to a standard CDS contract in an effort to both add transparency and prepare the product for clearing. Market participants have taken to calling the introduction of the standardized CDS contract "The Big Bang".

Though there is a general agreement in terms of which standardizations will be included by March 20, we caution that it is somewhat subject to change. It is certain that the market will move in the direction of plans for the standard contract over the next couple of months.

Though these changes may be difficult in the short run, we expect them to have a very positive impact on liquidity and transparency in the longer term. Additionally, a standard contract is necessary to establish a clearinghouse that will be applicable to the majority of contracts. We provide an explanation of the changes as well as our thoughts and recommendations for investors.

What Will the Standardized Contract Look Like?

Chart 1 shows the current plan for what we view as the most important components of the Big Bang.¹ These plans are fluid and could change prior to March 20. Standard coupons and all contracts trading without restructuring as a credit event will simply be market conventions. The rolling effective date, determinations committee and hardwired auction process will be actual amendments to the CDS contract enacted through an ISDA protocol.

In the protocol both dealers and investors will have the opportunity to amend all past and future trades to reduce risks for both the buyers and sellers of protection. We strongly encourage all investors to take part. Standardizations that are simply trading conventions will not be part of the protocol and old contracts will not be amended to include them. Traders will simply start quoting contracts using these conventions.

Chart 1: The Implications of the Big Bang
Plans around Implementation are subject to change. Table as of Feb 23, 2008
LCDS will not be included in the Protocol

Standardizations of CDS Contracts	Trading Convention or Part of Protocol	Inclusion in March 20 Big Bang	
		North America	Europe
Rolling Effective Dates	Part of Protocol	Yes	Yes
Determinations Committee	Part of Protocol	Yes	Yes
Hardwiring of Cash Auction	Part of Protocol	Yes	Yes
No Restructuring Trigger	Trading Convention	Yes	No
Standard Coupons of 100 or 500 bps	Trading Convention	Yes	No

Source: ISDA; BAS-ML.

Determinations Committee

The CDS market will have a formal committee that will make determinations around credit events, succession events or other issues currently handled by informal dealer committees. The committee will consist of 10 dealers and 5 buy-side participants. The balance should ensure that the buy-side is better represented than in the current system which consists only of dealers.

¹ The protocol is very long and we summarize important points for the sake of brevity. For more information, please visit www.isda.org.

Auction Hardwiring

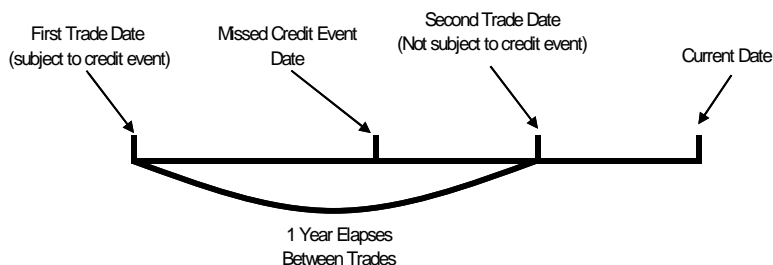
In order to standardize the cash settlement process used by the vast majority of the CDS community, the auction will be embedded into the CDS contract. This is an important step toward preparing the product for clearing and taking uncertainty out of settlement.

Investors will still be able to physically settle their trades as part of the auction settlement process. They will be agreeing to settle at the price determined by the auction.

Rolling Effective Date²

Currently, both the buyer and seller of protection have the right to trigger CDS contracts for any event that happens between the trade date and current day. This could leave the investor open to unwanted risk. See Chart 2. In the figure, the investor enters into two offsetting trades with a year elapsing between them. He may consider himself hedged but if he missed a credit event that happened between the two trade dates, he could be subject to triggering the first contract but not the second one.

Chart 2: Investor Subject to Risk of Missed Credit Events in "Offsetting" Trades



Source: ISDA; BAS-ML.

The concept of a missed credit event may be foreign to some investors. We simply mean a credit event occurs and no one notices. This would most often be the case for very illiquid names, modified restructuring, or for events that happened prior to, say, 2005 when CDS volumes increased significantly.³

The rolling effective date amendment states that investors will only be able to trigger CDS based on events 60 days prior to the current day.

The rolling effective date amendment states that investors will only be able to trigger CDS credit events based on the 60 days prior to the current day. If an investor enters into a trade today and finds that a credit event happened 61 days ago, he could not trigger; if it had happened 59 days ago, he could trigger (Figure 1).⁴

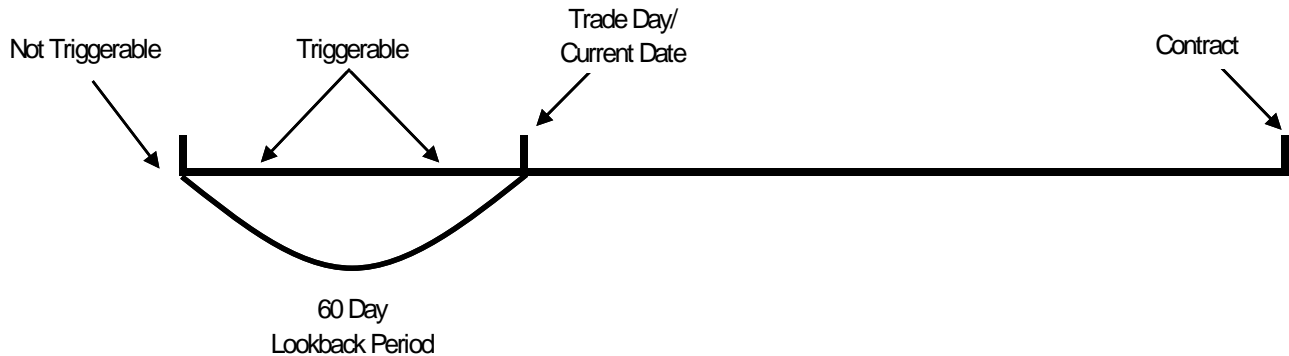
² In our view, timing around the introduction of the rolling effective date is the most likely of all the components in the Big Bang to change.

³ Missed events would also apply to succession events.

⁴ The same methodology will apply for succession events except the window will be 90, as opposed to 60 days.

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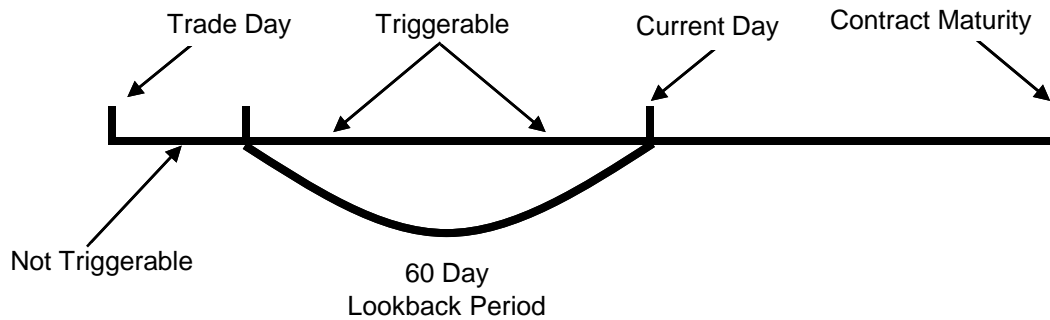
Figure 1: A Statute of Limitations for Triggering Credit Events
Investors can trigger based on credit events that have occurred 60 days prior to the current date



Source: Banc of America Securities-Merrill Lynch.

A year from now, the investor would still only be able to look back 60 days. So if an event happened 6 months after the trade date, in a year he would not be able to trigger based on that event (Figure 2). We like to think of the rolling effective date as statute of limitations on credit events.

Figure 2: A Statute of Limitations for Triggering Credit Events
Investors can trigger based on credit events that have occurred 60 days prior to the current date



Source: ISDA; Banc of America Securities-Merrill Lynch.

The rolling effective date is particularly important for collapsing trades. If there is a difference between when events can trigger, it is very difficult to collapse a large book of trades.

CDS will trade without restructuring as a Credit Event (No-R)

CDS will Trade without Restructuring as a Credit Event (No-R)

On March 20, traders will begin quoting US CDS without restructuring as a credit event. *This will not be part of the protocol. More explicitly, if investors sign the protocol, they are NOT changing the restructuring provisions of current or future contracts.* Dealers will simply start quoting No-Restructuring (No-R) CDS instead of Modified Restructuring (Mod-R) CDS. Think of it as “phasing out” Mod-R CDS. Generally, this will most impact fallen angels and IG names as they tend to trade with Mod-R as opposed to HY names which generally trade No-R.

This standardization will only occur in North America on March 20. There is still some uncertainty as to whether the market convention will shift from Modified-Modified-Restructuring (Mod-Mod-R) to No-R in Europe where capital

requirements are more punitive for No-R versus Mod-Mod-R CDS hedges and companies tend to do more out of court restructurings.⁵

Standard 100 bps and 500 bps Coupon

Traders will begin quoting US CDS with fixed coupons of either 100 bps or 500 bps. *This will not be part of the protocol. More explicitly, if investors sign the protocol, they are NOT changing the coupons of current or future contracts.* Dealers will simply start quoting CDS with either a 100 or 500 bps coupon so that over time, non-100 or 500 bps CDS coupon will not be actively traded. Think of it as “phasing out” non-100 or 500 bps CDS coupon trades.

The coupon convention is similar to the CDX IG index which is quoted in spread but trades with a fixed coupon and upfront payment. This standardization will only occur in North America on March 20. This should reduce the annuity risk that can cause the spread at which a trader is willing to take on an assigned trade to differ dramatically from the quoted spread.

Our Primary Recommendations

- **Take part in the protocol.** The protocol will amend past and future contracts to include cash settlement auction provisions, better date conventions around credit events and a committee to make important determinations in the CDS market. All changes should reduce risk for both buyers and sellers of protection.
- **Remain in Liquid Contracts.** Investors' primary concern should be around remaining in liquid contracts. All other risks will be outweighed by the lack of liquidity in non-standard contracts a few months after the Big Bang.
- **Roll out of Mod-R Contracts and into No-R Contracts.** Even for buyers of protection, the benefit derived from modified restructuring (Mod-R) is small relative to the lack of liquidity we expect in Mod-R in the U.S. a few months after the Big Bang.
- **Roll into Standard Coupon (100 bps or 500 bps) Contracts.** The dealer community will likely charge a higher premium to unwind or assign off-strike CDS contracts after the coupon standardization.
- **Collapse Unnecessary Trades.** Though there will likely be a premium to collapse offsetting trades, we expect that cost will increase going forward as dealers become less apt to take on annuity risk.

Rolling a Single Trade into the New Contract

Below we highlight a simple example where an investor would like to roll a single trade into the standardized contract. For a more complex (and realistic) example where an investor rolls a portfolio of trades into the new contracts, please see the appendix. Chart 3 shows the initial position. The investor is a seller of Mod-R Southwest Airlines (LUV) protection at a coupon of 333 bps. We also assume that the market level of Mod-R LUV trades at 333 bps.

⁵ For details on European restructuring, please see “British Vita and European Corporate Restructuring” published in the February 19, 2009 edition of the Situation Room.

Chart 3: The Initial Trade

Credit	Notional (\$mm)	Buyer or Seller of Protection	MR/NR	Maturity	Coupon (bps)	Cashflow per Year (\$k)
Southwest Airlines	10.0	Seller	Mod-R	6/20/14	333.0	333.0

Source: BAS-ML

In Chart 4, the investor rolls out of the Mod-R position and into the No-R position. Effectively, he is unwinding the Mod-R trade and entering into a new, No-R trade. Notice that the coupon has fallen to 300 bps per year from 333 bps per year. This is because No-R LUV trades 10% cheap to Mod-R LUV (33 bps).

Chart 4: Rolling From Mod-R to No-R

Credit	Notional (\$mm)	Buyer or Seller of Protection	MR/NR	Maturity	Coupon (bps)	Cashflow per Year (\$k)
Southwest Airlines	10.0	Seller	No-R	6/20/14	300.0	300.0

Source: BAS-ML

Lastly, the investor will have to change the 300 bps coupon to a combination of 2 contracts with the standard 100 and 500 bps coupons. Chart 5 shows the new portfolio. Notice that the total annual cash flow and net notional exposure of the trades with the 100 and 500 bps coupon is the same as the single trade with the 300 bps coupon in Chart 4. Since these two factors remain constant, the DV01 and jump risk of the portfolio will be the same.

Chart 5: Re-couponing

Credit	Notional (\$mm)	Buyer or Seller of Protection	MR/NR	Maturity	Coupon (bps)	Cashflow per Year (\$k)
Southwest Airlines	5.0	Seller	No-R	6/20/14	500.0	500.0
Southwest Airlines	5.0	Seller	No-R	6/20/14	100.0	100.0
Net Notional = 10.0			Total Annual Cashflow (\$k) = 300.0			
			Weighted Average Coupon = 300.0 bps			

Source: BAS-ML

It takes a bit of algebra to arrive at the notionals for the 100 and 500 bps coupon contracts. We would like to keep the notional and cashflow of the two contracts the same as the notional of the No-R trade in Chart 4. This means that:

1. Total Notional of initial position =
500 bps Coupon Notional +
100 bps Coupon Notional
2. Total annual cash flow of initial position =
500 bps Coupon Notional * 500 bps +
100 bps Coupon Notional * 100 bps

Now we have 2 equations and are solving for two variables. This allows us to find that:

$$\begin{aligned} \text{Total annual cash flow of initial position} = \\ (\text{Total Notional of initial position} - 100 \text{ bps Coupon Notional}) * 500 \text{ bps} + \\ 100 \text{ bps Coupon Notional} * 100 \text{ bps} \end{aligned}$$

So, with a little rearranging:

$$\begin{aligned} \text{Notional of 100 bps Coupon} = \\ (\text{Total Notional of Initial Position} * 500 \text{ bps Coupon} - \text{Total Annual Cashflow} \\ \text{of Initial Position}) / (500 \text{ bps Coupon} - 100 \text{ bps Coupon}) \end{aligned}$$

And we can use the **Notional of the 100 bps Coupon** to find:

$$\begin{aligned} \text{Notional of 500 bps Coupon} &= \\ &\text{Total Notional of Initial Positions} - \\ &\text{Notional of 100 bps Coupon} \end{aligned}$$

The Restructuring Credit Event

From an economic perspective, the switch from Mod-R to No-R will likely have an economic impact on investors. Accordingly, this facet of the standardization has received the most attention.

We believe that the CDS community over values the restructuring credit event in CDS

We believe that the CDS community over values the restructuring credit event in CDS. Anecdotally, in the very illiquid Mod-R/ No-R switch market for CDX IG11, Mod-R has traded as much as 20 bps cheap to No-R when CDX IG was trading around 200 bps.

We expect that, over time, the spread of legacy contracts that trade with modified restructuring to converge with contracts that trade without restructuring. Perhaps more important, we expect that the bid/offer of Mod-R contracts will increase significantly over time as liquidity drops. This liquidity drop will probably coincide with clearing as Mod-R CDS will not be clearable under the current plan.

Structured Credit Desks and the Mod-R/No-R Switch

Technical factors associated with dealer correlation or structured credit desks should push Mod-R spreads to converge with No-R spreads.

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The large bid for investment grade CDS risk from structured credit desks during the boom in synthetic CDO issuance between 2005 and 2007 was generally executed in Mod-R contracts as most IG names trade Mod-R. Correlation desks were hedging long protection synthetic CDO positions (long tranche protection, short single-name protection). Synthetic CDOs are generally hold-to-maturity investments. It is unlikely (nor do we recommend) that hold-to-maturity CDO investors roll into new No-R tranches.

Correlation desks will need to match their Mod-R tranche trades with Mod-R hedges suggesting that the primary seller of single-name protection in the CDS market will not be looking to roll existing trades into the standard contract. We do expect that they will start using the standard contracts to adjust their hedges as there will be more liquidity in the new contracts.

Hedge fund investors, basis players and loan hedgers who actively trade their long protection positions will need to roll their Mod-R trades into No-R trades to maintain liquidity. If there is more demand from buyers of Mod-R protection to roll into No-R protection, the spread between the two should converge (since rolling means selling Mod-R protection and buying No-R protection).

Fundamentally, we think that the restructuring credit event does not do a good job capturing the typical corporate restructuring.

The Trouble with Restructuring⁶

Fundamentally, we think that the restructuring credit event does not do a good job capturing the typical corporate restructuring. As the CDS community educates itself as to what would actually need to happen to trigger a Mod-R credit event, we believe the spread differential between Mod-R and No-R contracts will converge. Additionally, even if a modified restructuring event were to happen, settling the contracts may be so messy that it is unlikely that either the buyer or seller of protection will actually try to settle it. Buyers' of protection inability to "cash-in" on their protection further decreases the value of Mod-R relative to No-R.

Triggering Modified Restructuring

A company would need to amend its credit facility to do one or a combination of 5 things in order to trigger a credit event:

- Reduction in principal
- Reduction in coupon
- Maturity extension
- A change in subordination (only subordination in terms of senior versus subordinated, not security or structural subordination)
- A change to a non-G7 currency

In addition to the amendments mentioned above, the restructuring event must result from the deterioration in the creditworthiness or financial condition of the company in question. Lastly, 4 unaffiliated holders must own the restructured security.

If a company did an exchange offer that accomplished the exact same restructuring as the amendments listed above, it would NOT trigger a modified restructuring credit event even if it were due to deterioration in credit quality.

Note that only the amendments listed above would trigger a Mod-R credit event. If, for example, a company changed a leverage or liens covenant, it would not trigger a Mod-R credit event.

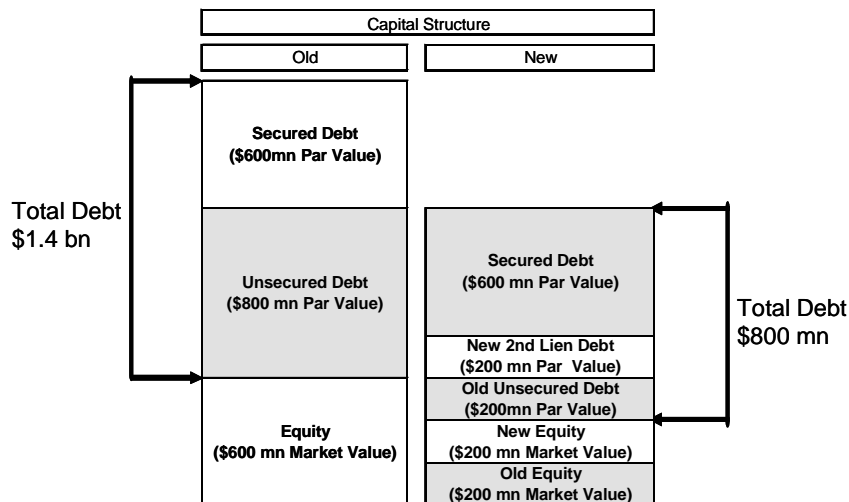
Amendment versus exchange offer

In general, out-of-court restructurings are performed via debt exchanges. Chart 6 shows a capital structure before and after a distressed exchange. In this example, the company reduces the par amount of its outstanding unsecured debt by roughly 50% (or \$400mm).

In general, out-of-court restructurings are performed via debt exchanges

⁶ In the following section we highlight Mod-R as opposed to Mod-Mod-R which trades in Europe. European contracts will continue to trade with Mod-Mod-R after the Big Bang.

Chart 6: An Example Distressed Debt Exchange



Source: BAS-ML.

In this example, 75% of unsecured bond holders exchange their debt for more secured paper (2nd lien) with a lower notional and an equity position.⁷ The CDS would continue to reference the old unsecured debt that was not exchanged. It is highly unlikely that this type of restructuring would trigger a credit event. Since most restructurings are distressed exchanges and they do not trigger Mod-R CDS, the Mod-R restructuring provision does not seem particularly valuable.

Whether an exchange is voluntary is irrelevant to conversations around Mod-R.

Some investors have suggested that involuntary exchanges would trigger modified restructuring while voluntary exchanges would not. An involuntary exchange is illegal as it violates the contractual agreement between the company and bondholders defined by the indenture. The only place an involuntary exchange could occur would be in bankruptcy court. Naturally, CDS would have already triggered following a Chapter 11 filing. Whether an exchange is voluntary is irrelevant to conversations around Mod-R.

In addition, some have suggested that a coercive exchange could trigger a credit event. Here, investors are *effectively* forced into an exchange due to poor pay out if they were not to accept. We believe that this would not trigger a modified restructuring credit event.

Settling a Mod-R Credit Event

Settling a Mod-R credit event is not straightforward.

Settling a Mod-R credit event is not straightforward. Limitations around deliverability can lead to protection buyers having to deliver an “expensive” security or not having a deliverable at all. In both cases, it may not make sense for the buyer to trigger the contact even if an event as occurred. This further reduces the value of Mod-R.

If the protection Buyer declares a Restructuring, then Modified Restructuring attempts to limit the cheapest-to-deliver obligation to the portion of the credit curve that was restructured. The Limitations include:

⁷ The market value of \$400mm is may be unlikely in this example. We show it as such for illustrative purposes.

1. The maximum maturity of a Deliverable Obligation is the later of:
 - a. CDS contract Maturity Date
 - b. and the shorter of
 - i. 30 months following the Restructuring Date and
 - ii. the latest maturity date of any restructured bond or loan.
2. Obligation must be fully transferable to an eligible assignee effectively limiting Deliverable Obligations to bonds (not loans).

If the protection Seller declares a Restructuring, these limitations do not apply. The protection Buyer may deliver the same obligations as for a Bankruptcy or Failure to pay, usually up to a maximum maturity of 30 years. The logic is that, because the protection Seller forces the Buyer to settle, the protection Buyer should have the option to deliver obligations across the credit curve.

An example in Liz Claiborne Inc

The January 2009 Liz Claiborne amendment to its revolver seemed likely to satisfy the requirements for a CDS Modified Restructuring Credit Event. Liz Claiborne extended the maturity to May 2011 from October 2009. The revolver was partially drawn with at least four unaffiliated lenders, JP Morgan, Bank of America, SunTrust, and Wachovia, holding the loan. Since the facility was amended, it appeared that least two-thirds of holders must have consented to the amended terms.

In regards to deterioration in the creditworthiness, Moody's downgraded the company to Ba2 from Baa3 in October 2008, and S&P to BB- from BB+ in December 2008. Plus the CDS was trading around 27 pts upfront +500 bps running around the time the company filed their amendment.

The CDS community convened via ISDA and concluded that there was not a credit event. It was not clear that the maturity extension was due to, or simply in coincident with, a deterioration in credit quality. This seemingly perfect example of a Mod-R credit event highlights the difficulty differentiating between restructuring and refinancing an obligation.

Had there been a Mod-R credit event in LIZ, settlement may have been problematic for several reasons. For example:

- For June 2013 CDS and earlier, there was no Deliverable Obligation. There would be no incentive for the buyer to trigger.
- For September 2013 CDS and later, the Liz Claiborne July 2013 bond (the company's only bond) would have been deliverable.
- The restructured loan would not have been deliverable as it is not a fully transferable obligation.
- There would not have been a deliverable for banks that hedged their loan positions with matched maturity CDS (2011 maturity). In addition, they would be left with a hedge (the CDS) that matured on a different date than the restructured loan.

The Liz Claiborne amendment to its revolver seemed likely to satisfy the requirements for a CDS Modified Restructuring Credit Event.

Had there been a Mod-R credit event in LIZ, settlement may have been problematic for several reasons.

An example in Bradford & Bingley

In September of 2008, the UK government nationalized Bradford & Bingley, sold a substantial part of the bank's deposits to Santander but maintained its commitment to senior and subordinated debt holders.

However, on February 20, 2009 the UK Treasury announced a unilateral revision of the language on Bradford's Lower Tier 2 bonds – essentially converting the instruments into an Upper Tier 2 structure. Under the new rules, the issuer can defer interest payments (although missed coupons accumulate), there is no longer a final call date and the bonds will rank pari-passu with preference shares.

Investors speculated a Mod-Mod-R credit event had occurred. A group of dealers convened via ISDA and believes that there was no credit event. The reasoning behind the decision:

- Deferral of Interest – Though new structure, it has not exercised that option. If the company does decide to defer a coupon payment, a credit event could be triggered assuming the triggering party can prove that the deferral is due to a deterioration has the Bradford & Bingley has the option to defer interest under the in credit quality.
- Decrease in Subordination – Although the Lower Tier 2 bonds are being transferred to Upper Tier 2 status, they are not subordinated to any debt that they were not subordinated to before (no new debt is coming ahead of the bonds).

We highlight Bradford & Bingley for to show how difficult it is to even potentially trigger a restructuring credit event. In order for this potential event to occur, the government had to take possession of the company and unilaterally change the terms of the contract between the investor and the B&B. This event would certainly not have been possible outside of nationalization as no entity would have the legal right to change those terms.

Appendix: Rolling a Portfolio into the Standard Contract

An example for an investors who would like to roll their Southwest Airlines (LUV) CDS portfolio from an assortment of non-standard contracts into the new, standardized contract.

In reality, many investors will not simply be rolling single trades into the new contract. Instead, they will have to roll their entire portfolios into the standardized contract often collapsing them. This brings into account new variables including multiple counterparties, varying coupons, and trades with different restructuring provisions (some Mod-R while others are No-R) which all need to be accounted for while keeping the DV01, coupon and jump risk of the portfolio constant.

Let's walk through an example for an investors who would like to roll their Southwest Airlines (LUV) CDS portfolio from an assortment of non-standard contracts into the new, standardized contract. *The goal this exercise will be to roll the non-standard contracts into the new contracts without changing the net notional or annual cashflow.*

The Initial Portfolio

Figure 3 shows the investor's initial portfolio. The investor has a variety of trades with different restructuring triggers and coupons but the same reference entity, maturity and counterparty.⁸ Note the net notional of the position as well as the total annual cashflow that the portfolio generates.

⁸ In most cases, all trades will not face a single counterparty. It may make sense for clients to collapse trades with the same reference entity and maturity to a single counterparty before re-couponing in order to collapse as many positions as possible.

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Figure 3: The Initial Portfolio

The Investor will roll the non-standard contracts into standardized contracts without changing the net notional or annual cashflow.

Credit	Buyer or Seller of Protection	Notional (\$mm)	Counterparty	MR/NR	Maturity	Coupon (bps)
Southwest Airlines	Seller	10.0	Counterparty 1	Mod-R	6/20/14	75.0
Southwest Airlines	Buyer	5.0	Counterparty 1	Mod-R	6/20/14	160.0
Southwest Airlines	Seller	15.0	Counterparty 1	Mod-R	6/20/14	350.0
Southwest Airlines	Seller	25.0	Counterparty 1	No-R	6/20/14	250.0
Southwest Airlines	Buyer	20.0	Counterparty 1	No-R	6/20/14	247.5

Net Notional = 25.0	Total Annual Cashflow of Current Positions (\$k) = 650
	Annual Coupon of Combined MR/NR Book = 260.0 bps

Note Initial Portfolio Net Notional and Cashflow

Source: Banc of America Securities-Merrill Lynch.

Unwinding Mod-R portion of the book

Figure 4 highlights the Mod-R positions in the investor's portfolio. We recommend unwinding the Modified-Restructuring (Mod-R) contracts and switching into what will be the standard, liquid, No-Restructuring (No-R) contract. We will not interrupt this example with our reasoning for recommending the Mod-R/ No-R switch, but please find our analysis *The Restructuring Credit Event* portion of this publication.

Figure 4: The Modified Restructuring Positions in the Investor's Portfolio

These trades will need to be rolled from Mod-R to No-R

Credit	Buyer or Seller of Protection	Notional (\$mm)	Counterparty	MR/NR	Maturity	Coupon (bps)
Southwest Airlines	Seller	10.0	Counterparty 1	Mod-R	6/20/14	75.0
Southwest Airlines	Buyer	5.0	Counterparty 1	Mod-R	6/20/14	160.0
Southwest Airlines	Seller	15.0	Counterparty 1	Mod-R	6/20/14	350.0

Net Notional = 20.0	Total Annual Cashflow of Current Positions (\$k) = 520
	Annual Coupon of MR Trades = 260.0 bps

Net Notional and Cashflow Different than Initial Portfolio Because Only MR Trades

Source: Banc of America Securities-Merrill Lynch.

To roll their position, the investor will need to unwind their net short Mod-R protection (long risk) position and roll into a short No-R protection (long risk) position *while keeping the coupon constant*. The coupon must remain constant so that the cashflow and net notional of the initial portfolio will equally that of the two, standardized trades at the end.

Chart 7 below illustrates the cashflows associated with the switch. First, the investor unwinds his short Mod-R protection position. Since the market spread equals the coupon, there is no fee associated with the unwind. The investor must execute a new No-R trade with a coupon of 260 bps. Since LUV currently trades

Mod-R, there is no observable level for the No-R. In Chart 7, we assume that Mod-R LUV trades at a 10% premium to No-R LUV suggesting No-R trades at 234 bps. Since the investor is selling protection with a coupon of 260 bps and the market level we assume for No-R LUV is 234 bps, he will pay about 1.2 pts (because he is receiving more in coupon than the market spread).

The total fee for the Mod-R/ No-R switch will be 1.2 pts paid to the counterparty for executing the switch. If the investor had been a net buyer of Mod-R protection, he would be receiving cash as opposed to paying it out. Also, a tighter spread differential between Mod-R and No-R would lead the investor to pay a smaller fee. The notional of the unwound Mod-R trades and the new No-R trade equals the net notional of the Mod-R portfolio (\$20mm) from Figure 4.

Chart 7: The Mechanics Behind a Mod-R/No-R Switch
Southwest Airlines currently trading at a mid-spread of 260 bps

	Client Unwinding Short Protection, MR position	Client's New Short Protection, NR position
LUV Market Level	260.0 bps	234.0 bps
Coupon	260.0 bps	260.0 bps
Duration	4.38	4.42
Fee	0.0 pts	-1.2 pts
Total Fee (pts)	-1.2 pts	
Net Notional	\$20.0mm << Net Notional of MR Trades	
Total Fee (\$)	-\$230.0k << Client Pays	

Source: BAS-ML

The All No-R Portfolio

Figure 5 highlights the new, all No-R portfolio. Note that the coupon (260 bps) and notional (\$20mm) of the new No-R contract equals the annual coupon and the net notional of the Mod-R portfolio in Figure 4. This must be the case for the total portfolio net notional and annual cashflow to remain the same after the Mod-R contracts are switched to one No-R contract.

Figure 5: The Investors Portfolio After Mod-R Trades are Rolled into No-R Trades

Credit	Buyer or Seller of Protection	Notional (\$mm)	Counterparty	MR/NR	Maturity	Coupon (bps)
Southwest Airlines	Seller	20.0	Counterparty 1	No-R	6/20/14	260.0
Southwest Airlines	Seller	25.0	Counterparty 1	No-R	6/20/14	250.0
Southwest Airlines	Buyer	20.0	Counterparty 1	No-R	6/20/14	247.5

New NR Contract

Net Notional = 25.0 Total Annual Cashflow of Current Positions (\$k) = 650

Annual Coupon of NR Trades = 260.0 bps

Same Net Notional and Cashflow as Initial Portfolio

Source: Banc of America Securities-Merrill Lynch.

The New, Standardized Portfolio

There's one more step before the investor will have rolled his portfolio of LUV trades into the new contracts: he must re-coupon to the standard 100 bps and 500 bps levels. Figure 6 shows the re-couped positions with the same net notional and cashflows as the initial portfolio in Figure 3. Since the notional and total cashflows remain the same, the DV01 will be the same as the initial position.

Figure 6: The New, Standardized Portfolio

The net notional, total cashflow and DV01 of the new, standardized portfolio equals that of the initial portfolio

Credit	Buyer or Seller of Protection	Notional (\$mm)	Counterparty	MR/NR	Maturity	Coupon (bps)
Southwest Airlines	Seller	15.0	BAS-ML	No-R	6/20/14	100
Southwest Airlines	Seller	10.0	BAS-ML	No-R	6/20/14	500

Net Notional = 25.0

Total Annual Cashflow of Current Positions = 650

Annual Coupon of Standardized Trades = 260 bps

Same Net Notional and Cashflow as Initial Portfolio

Source: Banc of America Securities-Merrill Lynch.

Figure 7 shows how to arrive at the notionals of both the 100 and 500 bps contracts. In our example, the notionals come out to nice, round numbers. Often, this will not be the case. We recommend that investors accept a very slight change in risk and round the positions of each contract to the nearest \$500k increment. The change in risk will generally be minimal and rounding avoids taking on odd-lot positions.

Figure 7: Determining the Notionals of the 100 and 500 bps Coupon

Net Notional (\$mm)	Total Annual Cashflow (\$k)	Notional of 100 Coupon (\$mm)	Notional of 500 Coupon (\$mm)
25	650	15.0	10.0
Notional of New 100 bps Coupon Contract = $\frac{(\text{Net Notional of Initial Positions} * 500 \text{ bps Coupon} - \text{Total Annual Cashflow of Current Positions})}{(500 \text{ bps Coupon} - 100 \text{ bps Coupon})}$			
Notional of 500 bps Coupon = $(\text{Net Notional of Initial Positions} - \text{Notional on 100 bps Coupon})$			

Source: Banc of America Securities-Merrill Lynch.

It takes a bit of algebra to arrive at the notionals for the 100 and 500 bps coupon contracts. We would like to keep the notional and cashflow of the two contracts the same as that of the portfolio in Figure 3. This means that:

1. Net Notional of initial position =
500 bps Coupon Notional +
100 bps Coupon Notional
2. Total annual cash flow of initial position =
500 bps Coupon Notional * 500 bps +
100 bps Coupon Notional * 100 bps

Now we have 2 equations and are solving for two variables. This allows us to find that:

$$\begin{aligned} \text{Total annual cash flow of initial position} = \\ (\text{Net Notional of initial position} - 100 \text{ bps Coupon Notional}) * 500 \text{ bps} + \\ 100 \text{ bps Coupon Notional} * 100 \text{ bps} \end{aligned}$$

So, with a little rearranging:

$$\begin{aligned} \text{Notional of 100 bps Coupon} = \\ (\text{Net Notional of Initial Position} * 500 \text{ bps Coupon} - \text{Total Annual Cashflow of} \\ \text{Initial Position}) / (500 \text{ bps Coupon} - 100 \text{ bps Coupon}) \end{aligned}$$

And we can use the **Notional of the 100 bps Coupon** to find:

$$\begin{aligned} \text{Notional of 500 bps Coupon} = \\ \text{Total Notional of Initial Positions} - \\ \text{Notional of 100 bps Coupon} \end{aligned}$$

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