

DTCC's Trade Information Warehouse Streamlines Payouts on Multiple Credit Events

by Frank De Maria III and Marisol Collazo

The ongoing global economic swoon has claimed a number of casualties. A lengthening roster of corporate entities, plus one sovereign, have declared bankruptcy, been nationalized or otherwise defaulted on their debt.

For buyers and sellers of the credit protection – counterparties to over-the-counter (OTC) credit derivatives – written on these entities, the defaults have precipitated the busiest period ever of credit event activity for the market. However, innovative procedures and electronic functionality developed by the industry, including The Depository Trust & Clearing Corporation's (DTCC's) Trade Information Warehouse (Warehouse) mean today's credit event processing is much less labor-intensive and error-prone than several years ago.

In 2005 and 2006 the industry struggled to process the seven credit events that transpired over that period. By contrast, since early September 2008 there have been more than 20 – and still rising – credit events triggering payouts on credit derivatives contracts. The manual, bilateral procedures available in 2006 necessitated a 10-day wait between recovery auction and cash settlement, but today that interval has been cut in half, to five business days. The advances for the credit derivatives market in terms of efficiency improve-

ments and risk reduction have been dramatic.

Building the Warehouse

DTCC launched Deriv/SERV's Trade Information Warehouse, the market's only global repository and lifecycle post-trade processing platform for OTC credit derivatives, in November 2006. Initially the Warehouse's contract database was populated with new OTC credit derivative transactions, matched and confirmed through Deriv/SERV, but dealers soon began back-loading their legacy trades. Today the vast majority of outstanding credit derivatives contracts are registered in the Warehouse.

The Warehouse's credit-event processing capability went live in 3Q 2007 and in November 2007 its central settlement service, offered in collaboration with CLS Bank International, was launched with a pilot group of major dealers.

In light of the ongoing credit crisis and its continuing fallout, the Warehouse with its unique capabilities – central contract registry, electronic processing functions and ability to calculate and net payments – is proving to be an essential infrastructure for reducing operational risk for market participants.

The netting procedures have dramatically consolidated counterparties'

exposures and the Warehouse has also helped dispel fears in the market that the ongoing string of bankruptcies would destabilize the finances of those trading in credit default swap (CDS) instruments. The values paid out in credit events have been fractions of the total value of contracts written on the entities in default. The eight credit events (including Lehman Brothers) processed by the Warehouse in October and November 2008 covered contracts with an aggregate gross notional value of \$196 billion, yet the net funds transfers on these eight events came to only \$12 billion.

Credit events timeline

Not until the bankruptcy of Canadian printer Quebecor World Inc. in early 2008 was DTCC's credit event processing functionality deployed in a real-world scenario. Once the date of the credit event had been determined and the auction held to determine the recovery rate on Quebecor's outstanding debt, the Warehouse began calculating and netting payments in preparation for final cash settlement on the affected CDS contracts. (See next page for details on the industry's credit event protocols.) Dealers and buy-side firms representing nearly 90% of the eligible Warehouse-registered single-name and index contracts referencing Quebecor participated in the processing of this event.

Quebecor provided a good trial run for the Warehouse system and led to enhancements to its original design. Now, rather than designating each registered contract they want to include in the settlement process, affected counterparties have the option to flag only those contracts to be excluded from processing, greatly simplifying the management of the larger and more frequent

credit events that have followed.

Since early October, the Warehouse has been firing on all cylinders. On October 15, DTCC processed the credit events for Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac) and Tembec Industries Inc. (Tembec). The three events set a record with over 200,000 trade sides calculated. Fannie

Mae and Freddie Mac were reference entities in the investment-grade indices, and Tembec a reference entity in the high-yield indices.

Six days later, DTCC completed processing of the Lehman credit event, the largest to date in dollar terms processed through the Warehouse with approximately \$5.2 billion in net funds transferred from net sellers of protection to

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CDS/CDX/CDT Events

Reference Entity	Affected Transactions	Settlement Date	Gross Notional* (USD Equiv) (*represents Single-Name CDS Notional only)	Net Funds Transfers (USD Equiv)
Fannie Mae, Freddie Mac, Tembec	Single Name and Index	15-Oct-08	\$99b	\$429m
Lehman Bros. Inc.	Single Name Only	21-Oct-08	\$72b	\$5.2b
Washington Mutual	Single Name Only	7-Nov-08	\$41b	\$1.4b
Landsbanki, Glitnir, Kaupping	Single Name Only	20-Nov-08	\$71b	\$4.65b
Tribune Company	Single Name, Index	16-Jan-09	\$24.9b	\$2.65b
Republic of Ecuador	Single Name, Index	23-Jan-09	\$2.6b	\$300m
Lyondell Chemical, Millennium America, Equistar Chemicals	Single Name, Index	10-Feb-09	\$7.8b	\$448m
Nortel Networks	Single Name, Index	18-Feb-09	\$5.6b	\$518m

LCDS/LCDX Events

Reference Entity	Affected Transactions	Settlement Date	Gross Payment Amounts	Net Funds Transfers (USD Equiv)
Masonite	LCDX Indices Only	16-Dec-08	\$673m	\$50.4m
Hawaiian Telcom	LCDX Indices Only	29-Dec-08	\$888m	\$56.1m
Allied Waste	Secured List Early Term	10-Feb-09	\$5.7m	\$0.56m
Sanitec	ELCDS (ITRAXX LEVX only)	16-Feb-09	\$81m	\$9m
British Vita	ELCDS (ITRAXX LEVX only)	20-Feb-09	\$108.6m	\$10.5m

net buyers of protection.

In the Washington Mutual Inc. (WaMu) credit event, which settled on November 7, the net funds transfers covered outstanding WaMu single-name CDS as well as CDS index (CDX) contracts and CDS index tranches in which WaMu was a component. It marked the first time index tranches were processed in a credit event. WaMu was a component in approximately 35 indices serviced by the Warehouse, with component percentages ranging from 0.80% to 4.17%.

November 20 marked the credit event processing for outstanding single-name contracts on Icelandic banks Landsbanki Islands hf, Glitnir Banki hf and Kaupping Banki hf, nationalized in early October. Cash settlement of contracts written on Masonite and on

Hawaiian Telcom occurred December 16 and December 29, respectively.

The January 2009 processing schedule included the Tribune Company on January 16 and the Republic of Ecuador on January 23. February saw payouts on Lyondell Chemical, Millennium America, Equistar Chemicals, Allied Waste, Sanitec, Nortel Networks, British Vita, and Smurfit-Stone.

The chart below shows the events completed from October 2008 through February 20, 2009, along with the gross notional value of contracts affected by each event and the net transfers of funds from sellers of protection to buyers of protection for each.

Beyond credit events, the Trade Information Warehouse is now processing successor events, for example acquisi-

tions and mergers, for contracts registered in its repository. For instance, contracts referencing mortgage lender Countrywide were renamed to reference Bank of America in a successor event completed February 10.

Through the recent and ongoing turmoil in global credit markets, the credit event processing infrastructure has proved its efficiency and resiliency to the benefit of all participants in the OTC credit derivatives industry.

The Trade Information Warehouse is a service offering of DTCC Deriv/SERV LLC, a subsidiary of DTCC.

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The Mechanics of Credit Event Processing

The over-the-counter derivatives industry has established a process for valuing the outstanding bonds of corporate and sovereign entities that default on their debt and for settling net payments owed from net sellers of the related outstanding credit protection contracts to the net buyers of those contracts.

First, an event determination date is agreed by the market. Next, a Uniform Settlement Agreement published by the International Swaps and Derivatives Association (ISDA®) is signed by counterparties holding affected contracts, eliminating the need for all counterparties to send notices to one another.

ISDA then publishes a protocol, to which counterparties wishing to settle their contracts by its standards adhere. ISDA's protocol allows for a cash-settled auction procedure to determine a final settlement price.

Participating bidders submit bids and offers for commitments to enter as seller, or buyer, into representative auction-settled transactions. From these, Markit Group and Creditex, who jointly administer the auction, determine the post-credit event value expressed in cents on the dollar of outstanding bonds issued by the reference entity. High values, like the

99.9 cents on the dollar recovery value for Fannie Mae subordinated notes translate into low payouts from sellers of credit default swaps to buyers of these contracts, while low auction-derived values such as the 1.5 cents on the dollar for Tribune Company CDS result in high payouts.

Based on the auction-established recovery rate, the Warehouse calculates both the recovery amount as well as applicable coupon adjustments for relevant contracts.

Calculated amounts are netted on a bilateral basis, and then for firms electing to use the settlement service, transmitted to DTCC's settlement partner, CLS Bank International, where they are settled on a multi-lateral net basis. Currently all major global credit default swap dealers use CLS Bank to settle obligations under credit default swaps. Buy-side firms are now coming on board and it is expected that all major institutional players in the credit default swap market will use the same process for settlement by the end of 2009.



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