

KEY CHARACTERISTICS OF DELPHX'S PRIVATE PLACEMENT SECURITIES -- HOW THEY COMPARE TO AND IMPROVE UPON CREDIT DEFAULT SWAPS

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Overview

Investor utilization of credit default swaps (CDS) has markedly decreased over the last 15 years due to a combination of increased (and expensive) regulations implemented in the aftermath of the 2007-2009 financial crisis and little perceived investor need for the protections afforded by CDS since that time. Of course, since the spring of 2022, economic clouds have appeared on the horizon in the form of uncomfortably high inflation and the imposition of the U.S. Federal Reserve's first interest rate hikes since late 2018. Even more important, many more hikes are likely to be implemented even in the face of a slowing economy.

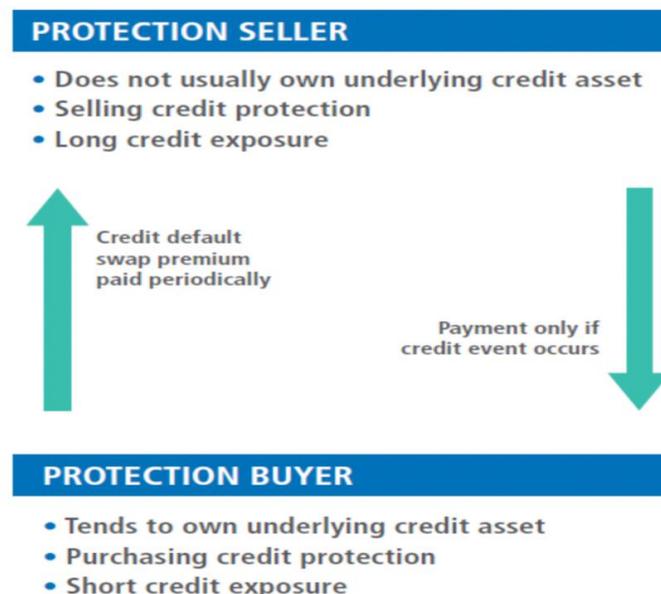
This economic backdrop suggests that investors may again seek the protection of vehicles like CDS to guard against possible bond defaults in their portfolios. DelphX Capital Markets Inc. (DelphX) has created a class of securities which contain the constructive features of CDS but are free of some of their most notable drawbacks. The securities, which carry straightforward terms and contain no counterparty risks, require full levels of collateral to be posted by both buyer and seller and may be created for an unlimited number of reference securities. Phrased differently, the DelphX structured products represent a de-risked, next generation of CDS.

In addition, Delphx's structured products eliminate delays and uncertainties associated with ISDA rules in the event of default. (The International Swaps and Derivatives Association, or ISDA, is a private trade organization with a membership consisting mostly of banks.) On the other hand, CDS have counterparty risks, have been created for only about 230 entities, and, by their nature, are only available to a narrow group of investors.

1. Credit Default Swaps

The most common type of credit derivative, a CDS is simply a contract where a buyer of credit protection agrees to make periodic payments over a predetermined number of years to a seller of credit protection. Most importantly, the seller agrees to make a specified payment to the buyer in the event of default by a “reference entity,” such as a corporation or governmental body. See Figure 1. A CDS buyer purchases insurance against a default by the underlying entity, not a default on a bond-by-bond basis. (DelphX’s Collateralized Put Option and Collateralized Reference Note products, on the other hand, are tied to a specific bond of an issuer. See pages 6-7.)

Figure 1: Depiction of a Credit Default Swap Transaction



Source: *Credit Derivatives and Synthetic Structures*, John Wiley & Sons, 2001

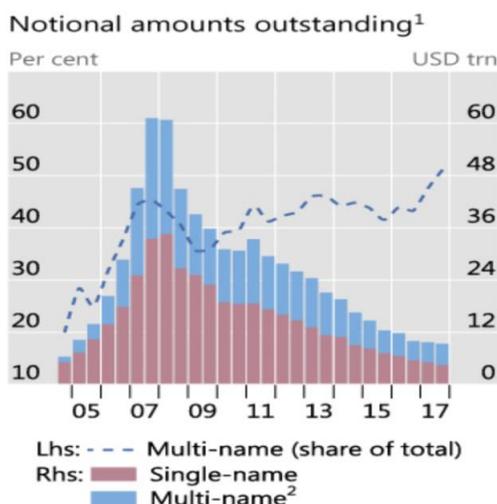
While much smaller than it was during the financial crisis fifteen years ago, the CDS market is the third biggest OTC derivatives market in the world (to interest rate and foreign exchange derivatives), according to the Bank for International Settlements (BIS). The notional value of CDS outstanding was around \$8 trillion as of mid-2018 according to the Federal Reserve Bank of New York.

CDS contracts trade over the counter. As such, dealers trade with investing clients as well as other dealers. The Depository Trust & Clearing Corporation tallies and records the amount of outstanding CDS in which dealers are counterparties.

1.1 Historical Evolution of the CDS Market

The global CDS market exploded in size beginning around 2004, and peaked at just over \$61 trillion in notional amount outstanding at the end of 2007. See Figure 2. The reason for the boom: historically, bond issuers of almost any type rarely default, and during the first two-thirds of the 2000-2009 decade, economic optimism was very high in all sectors of the economy. With this mindset, a number of financial entities began to sell CDS on a variety of individual companies. Writing such protection and pocketing the premiums was increasingly considered a way to generate “free” money. Indeed, in many cases, no or almost no collateral was required to be posted, so the theoretical return on invested capital was a very high figure.

Figure 2: Notional Amount of Credit Default Swaps Outstanding



Source: *Bank of International Settlements*

Prior to the enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act), CDS contracts were generally bilateral agreements in which dealers posted little collateral. The

2007-2009 financial crisis exposed the danger (and recklessness) of these contracts as many CDS sellers could not satisfy the terms of the accords when defaults occurred.

The CDS market's inability to function during a time of maximum stress prompted major regulatory changes (see below). Also, participants understandably and consistently began to decrease their reliance on the market for both hedging and speculation purposes. In addition, worldwide economies enjoyed an almost unprecedented period of moderate economic growth over the period 2009 through March 2022 (interrupted only briefly by intense COVID-19 concerns in early 2020). As a consequence, many investors came to believe that CDS protection was not needed to protect against the possible default of the bonds they owned.

1.2 Regulations on CDS Became More Strict Post the 2007-2009 Financial Crisis

Prior to 2005, CDS contracts were settled simply on a physical basis when a default occurred. A CDS protection buyer would deliver, or hand over, the cheapest-to-deliver bond of the reference entity to the protection seller, and the seller would in turn pay the buyer the principal value of the bond. As the CDS market soared in value and popularity, and the size of the CDS market for many issuers exceeded the volume of deliverable bonds, a cash settlement methodology was established in the event of a default. An auction determines the market midpoint for CDS contract settlement, and the CDS protection seller is required to pay the difference between par value and this market midpoint. This process can take months to complete.

Title VII of the Dodd-Frank Act requires that CDS trades clear through a regulated central counterparty. This clearinghouse is capitalized by its member dealers and the format spreads risk among all members. Parenthetically, the additional costs of the Title VII provisions which apply not just to CDS, but to all derivatives including heavily utilized interest swaps, could prompt U.S. life insurance companies to consider investing in DelphX's structured products (see pages 6-7). More specifically, interest rate swaps must trade and clear according to the clearinghouse format described just above. This mechanism requires life insurance companies to post much higher levels of collateral to trade those swaps. Indeed, a

Moody's Investor Service study estimates that the top 20 U.S. life insurers will have to post an additional \$10-\$30 billion of collateral over time because of the Dodd-Frank Act required changes.

The DelphX structured products are securities and are not characterized as swaps or derivatives. As such, if insurance companies or other registered investment companies invest in the products, the collateral requirements promise to be considerably lower.

From an even broader investor perspective, many financial entities like banks and pension funds face restrictions on permitted exposure to swaps or derivatives. DelphX's alternative products to CDS, called Collateralized Put Options (CPO) and Collateralized Reference Notes (CRN), are securities, not swaps or derivatives.

2. DelphX's Solution

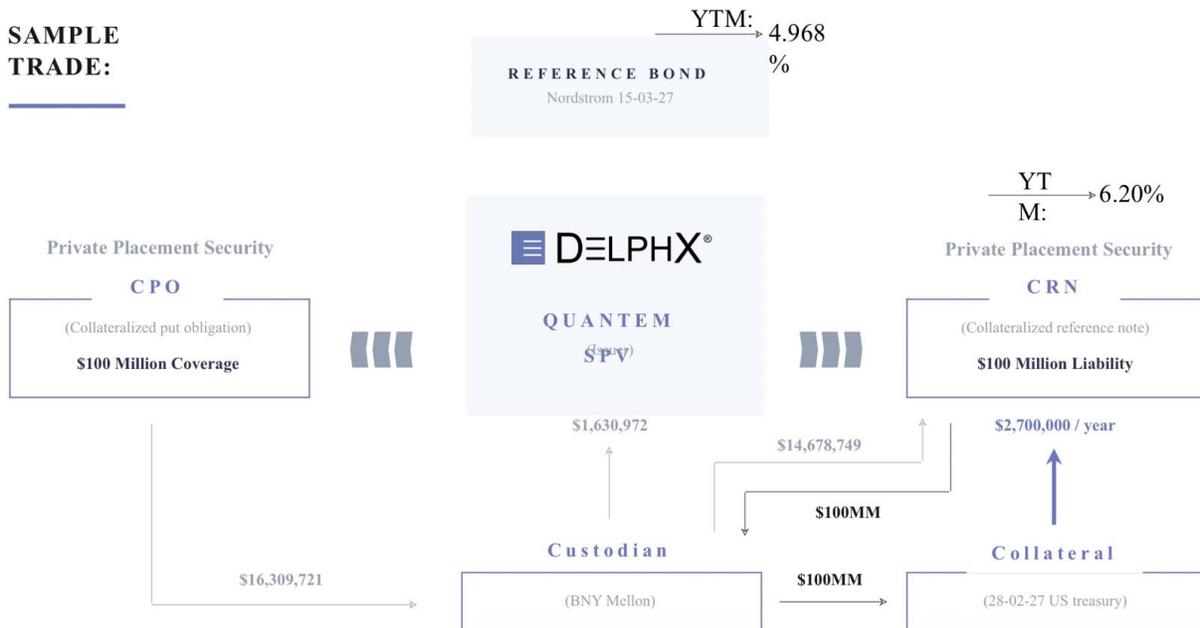
DelphX has created a linked set of proprietary private placement securities which include the most constructive aspects of CDS -- an effective hedge against default by the reference entity for the protection buyer, and a material yield pick-up for the protection seller. Like CDS, investors need not be invested in the reference entity to take a position in DelphX's contemplated classes of securities. Furthermore, DelphX's products eliminate ISDA rules in the event of as default.

Most importantly, the DelphX innovation eliminates the less desirable elements of a CDS transaction. Specifically, the new securities have no counterparty risk and are fully collateralized. Furthermore, the securities are linked to individual bonds of an entity, not to the overall entity as CDS are, allowing investors a more precise way to hedge or speculate. Finally, if a default occurs on a reference bond, owners of protection on that bond should receive full payment within five business days, a much speedier time frame than a process that can last a few months under ISDA rules for a similar CDS transaction.

2.1 Sample Transaction Involving DelphX's Products

DelphX's financial innovation is best understood and depicted by a sample trade involving one qualified investor (see page 9) who wants to buy protection against the potential default of a specific bond issued by a reference company, a municipal or a sovereign entity and another qualified investor interested in underwriting that protection in exchange for a marked yield premium over the underlying reference bond. See Figure 3. The investors need not own the underlying bond to engage in this transaction. In other words, both speculators and investors seeking an effective hedge may invest in DelphX's structured securities.

Figure 3: Sample Trade Involving DelphX's Proprietary Structured Products



Note: Quantem is a special purpose vehicle owned by DelphX.

Source: DelphX

In this hypothetical example, a protection buyer seeks \$100 million notional coverage for approximately five years in the event of default on a bond issued by Nordstrom with a March 15, 2027 maturity date. DelphX, through its special purpose vehicle, Quantem LLC, would create for this buyer a CPO related to this bond that would pay the investor the difference between par value and the recovery amount in the event of default at any point between security creation and March 15, 2027. (Quantem is a wholly-owned subsidiary of DelphX.). In this way, a CPO buyer receives true secured credit default protection.

In this illustrative trade, the buyer pays approximately \$16.3 million for the customized CPO to a third-party, financially strong custodian, BNY Mellon. (This \$16.3 million payment, or \$0.16 on the dollar of notional coverage, is a rough guess of the market value of the CPO. The actual cost will depend on such elements as the level of volatility in credit markets, the default risk of the reference entity, and the configuration of the U.S. Treasury yield curve.)

In turn, Quantem captures 10% of the \$16.3 million, or \$1.63 million, as a fee for its services and pays the remaining 90%, or \$14.7 million, to the other party in this transaction. In return for this premium, this second party holds a linked CRN, whereby it pledges to pay the CPO holder the difference between the par and recovery value of the bond in the event of default.

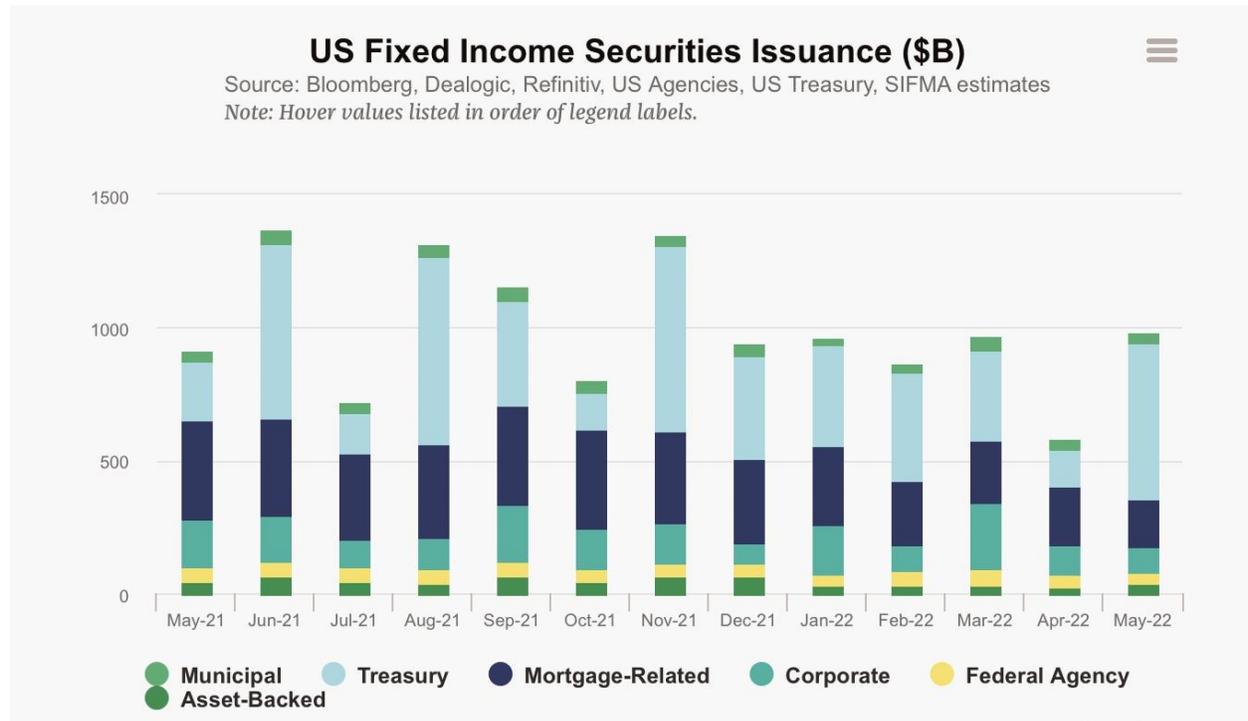
To ensure such a default payment is made (if needed) and to remove any counterparty risk, the holder of the CRN liability transfers \$100 million of cash collateral to BNY Mellon, which the custodian in turn invests in U.S. Treasury securities with a term matching the maturity of the reference bond, in this case mid-March 2027. Any payment due to the CPO holder under default scenarios would be the value of the Treasury bond at that point in time. By the same token, if no default occurs on the bond through the maturity date, the full \$100 million of Treasury securities collateral is returned to the holder of the CRN.

During the period that the CPO and CRN remain outstanding, the holder of the CRN receives the coupon interest on the \$100 million collateral invested in U.S. Treasuries, or about \$2.7 million per year in this example. If no default occurs over the hypothetical remaining five-year period of the Nordstrom bond, the investor which agreed to take on the CRN liability

would receive a total of about \$28.2 million in income over the five-year period (\$14.7 million plus \$2.7 million per year times five years). This is an equivalent annual yield of about 6.2%, well above the approximate 4.97% yield afforded an investor who simply buys the Nordstrom bonds and holds to maturity.

This yield advantage inherent to CRN securities could prompt many types of fixed income investors to allocate capital to DelphX structured products. Even a slight allocation in CRN’s could represent an enormous investment in dollars. According to SIFMA, outstanding U.S. fixed income instruments in 4Q 2021 totaled nearly \$53 trillion. Moreover, about \$2.6 trillion of U.S. corporate and municipal debt was issued over the twelve months ended May 31, 2022. About \$14 trillion of such debt was outstanding as of March 31, 2022. See Figure 4 and Table 1.

Figure 4: U.S. Fixed Income Securities Issuance (in billions of dollars)



Source: Securities Industry and Financial Markets Association (SIFMA)

Table 1: U.S. Fixed Income Securities Outstanding (in billions of dollars)

	Municipal	Treasury	Mortgage- Related	Corporate Debt	Federal Agency Securities	Asset- Backed	Money Markets	Total
2021	4,064.3	22,584.0	12,201.6	9,944.9	1,433.3	1,585.3	1,014.2	52,827.6
1Q20	3,910.7	17,154.0	10,296.0	9,162.6	2,049.1	1,555.1	1,088.8	45,216.2
2Q20	3,931.0	19,898.7	10,698.3	9,629.9	1,834.2	1,599.8	1,006.6	48,598.6
3Q20	3,965.8	20,367.7	10,906.8	9,631.3	1,747.9	1,572.4	956.9	49,148.8
4Q20	3,988.2	20,973.1	11,214.4	9,684.6	1,688.6	1,535.5	986.9	50,071.3
1Q21	4,014.7	21,380.8	11,452.1	9,772.5	1,603.9	1,509.1	1,105.2	50,838.3
2Q21	4,037.9	21,733.0	11,671.0	9,914.5	1,521.3	1,514.7	1,085.4	51,477.8
3Q21	4,055.0	21,872.6	11,905.5	9,934.6	1,446.8	1,475.6	1,071.4	51,761.4
4Q21	4,064.3	22,584.0	12,201.6	9,944.9	1,433.3	1,585.3	1,014.2	52,827.6
1Q22	4,041.3	23,280.1	n/a	10,020.4	1,463.5	n/a	1,102.0	n/a

Source: Securities Industry and Financial Markets Association (SIFMA)

DelphX can offer unlimited amounts of the CPO and CRN structured product securities to Qualified Institutional Buyers (QIBs) under Section 4a(2) of the Securities Act of 1933, as amended. Accordingly, the securities will be exempt from the SEC's S-1 Registration Statement requirements for new offerings.

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