

Taxation of Credit Derivatives

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Introduction

Until the U.S. government's rescue of American International Group, Inc. (AIG) in September of 2008, few people outside the world of finance had heard about credit derivatives or their most common form, credit default swaps. Credit derivatives are bilateral contracts that shift credit risk from one contracting party to the other. Under a credit default swap, the two parties are known as credit protection buyer and credit protection seller. The buyer pays a periodic fee to the seller, and the seller usually agrees to make a payment to the buyer in the event of a default by a third person (reference entity) on debt that it has issued (reference obligation). For example, *B* and *S* might make a swap contract with reference to bonds issued by IBM Corp., under which *B* must make quarterly payments to *S* throughout the contract term, and *S* must, in the event of IBM's default on the bonds during the contract's term, pay to *B* an amount equal to the excess of \$10 million over the post-default value of \$10 million of IBM bonds.

AIG made a large business selling credit protection.¹ Its credibility as a protection seller depended importantly on its own credit rating, which, among other things, measured its ability to perform its obligations under swap contracts. The contracts required AIG to post additional collateral if the credit rating on its debt fell below AAA. When the major rating agencies lowered this rating,² AIG was contractually obligated to supply approximately \$100 billion of additional collateral, which it did not have. U.S. officials concluded that because AIG had made these contracts with financial institutions and investors throughout the world, the possibility of default by AIG under these contracts posed an unacceptable risk to the global financial system,³ The U.S.

¹ David Paul (2008).

² AIG's creditworthiness came into question because of its obligations under credit default swaps it had sold on debt of Lehman Brothers Holdings, which declared bankruptcy a few days before the crisis at AIG.

³ Much of this systemic risk arose from the fact that banks had purchased credit protection from AIG. If AIG defaulted on its swaps, risks that the purchasing banks had offloaded to AIG would return to them, the banks would have to have capital to backup this risk, and this use of capital would reduce the banks' ability to lend. Adam Davidson (2008).

government therefore supplied the needed collateral in exchange for a major equity stake in AIG.⁴

AIG was not the only seller of credit protection. Many banks and hedge funds also made swap contracts as protection sellers.⁵ By one estimate, the notional amounts of the credit default swaps outstanding at the end of 2007 were \$60 trillion.⁶

Quite amazingly, given the size of the credit default swap market, the U.S. tax treatment of the parties to a swap contract is unclear. No provisions of the Code or regulations squarely address the relevant issues. The only IRS pronouncement on the issues is a request for public comments.⁷ No court has decided a case involving the taxation of income or expense from credit default swaps. According to the IRS' request for public comments,

A large international market for CDSs has developed. Market participants include commercial banks, broker-dealers, insurance companies, hedge funds, and special-purpose securitization vehicles such as synthetic collateralized debt obligations. Commercial banks may buy protection in order to manage credit risk associated with a particular loan and may sell protection in order to acquire synthetic exposure to other loans. Broker-dealers may buy and sell protection in the course of providing market liquidity. Insurance companies may buy and sell protection both in the conduct of their investment activities and in the conduct of their insurance activities. Hedge funds may buy and sell protection in order to manage risk, speculate, or acquire synthetic exposure. Securitization vehicles may sell protection in order to acquire synthetic exposure.⁸

The primary object of this paper is to address the U.S. taxation of credit default swaps. However, because the tax treatment of these transactions should reflect their financial and economic substance, a large part of the paper is a description of credit

⁴ For a summary of the government's bailout assistance, see http://www.aigcorporate.com/GInAIG/owedtoUS_gov_new.html (visited 22 Oct. 2009).

⁵ AIG was unique in one sense. While most banks and hedge funds in the credit default swap market both bought and sold credit protection, AIG only sold credit protection. Adam Davidson (2008).

⁶ David Paul (2008).

⁷ Notice 2004-52, 2004-32 IRB 168.

⁸ Notice 2004-52, 2004-32 IRB 168. An entity might obtain "synthetic exposure" by, for example, holding Treasury securities and being a seller under a credit default swap on a reference obligation in the same notional amount. The net result of holding these two positions is roughly the same as holding the reference security. The entity's return is the sum of interest on the Treasury securities and premiums received under the swap, and if a credit event occurs, the entity suffers the same loss as if it had held the reference obligation, rather than the Treasury securities. See the discussion below, "How are credit default swaps priced?"

default swaps and the ways in which swaps are used in financial and investment transactions.

What is a credit default swap?

According to the International Swaps and Derivatives Association (ISDA),⁹ a credit derivative is “a privately negotiated agreement that explicitly shifts credit risk from one party to the other,” and a credit default swap is “a credit derivative contract in which one party (*protection buyer*) pays an periodic fee to another party (*protection seller*) in return for compensation for default (or similar *credit event*) by a *reference entity*.”¹⁰ The reference entity is an issuer of debt and is not a party to the swap contract. Swap agreements typically refer to a particular obligation issued by the reference entity (the reference obligation). For example, *X*, as protection buyer, and *Y*, as protection seller, could make a contract with respect to a particular bond issue of *Z Corp.* under which (1) *X* will make quarterly payments to *Y* of \$25,000 each for five years and (2) *Y* will make a single payment to *X* in the event *Z* defaults on a payment due on the bond during that five-year period, equal to the difference between \$10 million and the fair market value of *Z* bonds in the principal amount of \$10 million. The contract term, often called its “tenor,” may be as long or short as the parties agree, but five years is the most common length. A credit default swap’s tenor is often different from that of the reference obligation, but a swap term cannot be longer than the term of that obligation. Most credit default swaps are made by an ISDA Master Agreement. Most of them are between dealers and institutional investors.¹¹ Swaps are written on many types of debt instruments, including senior unsecured bonds issued by corporations, obligations of national governments (sovereign bonds), syndicated secured leveraged loans, municipal bonds, and asset backed securities (e.g., mortgage backed securities).

A swap contract has a “notional amount,” which is an amount fixed by the parties as the quantity of credit protection bought and sold by the contract and is typically the reference from which both the buyer’s fee and the seller’s obligation are measured. The periodic fee, often called a premium, is usually payable quarterly for the term of the agreement or until a credit event earlier occurs. The fee is normally expressed as a percentage of the notional amount. For example, if the annual fee is 100 basis points (hundreds of a percentage points) and the notional amount is \$10 million, the annual fee

⁹ ISDA is a trade organization of “participants in the privately negotiated derivatives industry.” It was organized in 1985 and now has more than 840 members from 58 countries, including “most of the world’s major institutions that deal in privately negotiated derivatives, as well as many of the businesses, governmental entities and other end users that rely on over-the-counter derivatives to manage efficiently the financial market risks inherent in their core economic activities.” See <http://www.isda.org/> (visited 11 Nov. 2009).

¹⁰ ISDA, Product Descriptions and Frequently Asked Questions.

¹¹ Markit Credit Indices Primer.

is \$100,000 (one percent of \$10 million), and the quarterly fee is \$25,000 (one fourth of \$100,000).¹²

A protection seller must make a payment to the protection buyer if a credit event occurs during a swap's term. The term "credit event" includes a default on any payment of interest or principal by the reference entity on the reference obligation, and it also includes other events that can be expected to impair the value of the reference obligation, such as bankruptcy of the reference entity¹³ or a debt restructuring.¹⁴

Following the occurrence of a credit event, a credit default swap may be settled in either of two ways, physical settlement or cash settlement. In a physical settlement, the protection buyer transfers to the seller "deliverable obligations" in an aggregate principal amount equal to the notional amount, and the seller pays the notional amount to the buyer. The deliverable obligation may be the reference obligation, or the contract may allow the buyer to deliver any obligation of the reference entity meeting specifications spelled out in the agreement.¹⁵ In the XYZ example, a physical settlement would consist of X's delivery to Y of Z bonds in the face amount of \$10 million, and Y's payment of \$10 million to X.

The earliest swap contracts provided only for physical settlement, but the alternative of cash settlement has since become an essential aspect of the swap market. A protection buyer is not required to own a deliverable obligation, and as discussed further below, many protection buyers do not. The aggregate amounts covered by credit default swaps on a debt issue may therefore exceed the aggregate face amounts of all securities in the issue.¹⁶ If swap contracts could only be settled by physical settlement, protection

¹² For swaps on obligations of distressed issuers, the practice is to require an upfront payment by the buyer in addition to the quarterly premium. For example, if the annual premium on an obligation would be 1,000 basis points, a swap on the obligation might be priced at 500 basis points, with the buyer making a payment at the inception of the contract period to compensate the seller for the difference between 500 and 1,000.

¹³ If the reference entity is a national government, credit events may include a repudiation or payment moratorium, rather than bankruptcy. Repudiation or moratorium may also be a credit event if the reference entity is a company in an emerging market. NY State Bar Report at 6.

¹⁴ Markit Group defines restructuring as "the configuration of debt obligations is changed in such a way that the credit holder is unfavorably affected (maturity extended and/or coupon reduced)." It is "soft" event because "the loss to the owner of the reference obligation is not obvious." Markit Credit Indices Primer, App. 4. Not all credit default swap agreements include restructuring as a credit event.

¹⁵ This aspect of the physical settlement process is known as a "cheapest-to-deliver option" because it allows the protection buyer to deliver the qualifying debt instrument that is then trading at the lowest price. NY State Bar Report at 6.

¹⁶ See Helwege, Maurer, Sarkar & Wang (reporting that at one point, "the notional value of CDS contracts on General Motors' debt summed to \$65 billion, which is about \$20 billion more than the face value of the debt owed by GM"); NY State Bar Report at 10

buyers trying to cover their swap positions would create a wholly artificial market for a defaulted security, and in some cases, such securities could not be obtained at any price.¹⁷

In a cash settlement, the protection seller makes a payment to the buyer equal to the excess of the notional amount over the product of this amount and a “recovery ratio.” The recovery ratio is the fair market value of the reference obligation after the credit event, divided by the obligation’s face amount. In the XYZ example, if the face amount of each Z bond is \$1,000 and each bond is worth \$400 after a credit event, the recovery ratio is 40 percent, and if the contract is cash-settled, Y pays X \$6 million (notional amount of \$10 million times $(1 - 0.4)$).

Establishing a realistic fair market value for a defaulted security—the basic measure for a cash settlement—is often difficult. Because bond markets tend to be thin, reliable valuations for bonds are not easy, even for bonds not in default,¹⁸ and market pricing of defaulted bonds is typically even less reliable. Credit derivatives are written on bank loans, which are not actively traded and for which transparent market prices are rarely available. To alleviate this problem, an auction for a defaulted obligation has become a standard requirement of swap contracts.¹⁹ The price set in the auction becomes a uniform price for cash settlement of all credit default swaps on the obligation. This price, divided by the face amount of the obligation, is the recovery rate.

Although credit default swaps resemble insurance, they are not regulated as insurance, a fact that has considerable importance to the swap market. For example, insurance laws generally require the insured to have an insurable interest and allow an

n.12 (following bankruptcy of one reference entity, it was discovered that several billions of dollars of credit default swaps on the entity were outstanding, but the aggregate principal amount of deliverable obligations was only \$500 million).

¹⁷ Physical settlement of all contracts is possible, even if the aggregate notional amount of the swaps exceeds the face amounts of the outstanding bonds. Protection buyers holding the bonds could deliver them to their protection sellers, who could resell the bonds on a secondary market, where protection buyers not holding bonds could acquire them for delivery to their protection sellers. This process would, however, artificially inflate prices in the secondary market, reducing returns to protection buyers and costs for protection sellers. Moreover, because contracts must be settled within 30 days after a credit event, this round-robin approach could easily cause a market “squeeze.”

¹⁸ Trading data on publicly traded bonds is collected by the Financial Industry Regulatory Authority (FINRA) in its Trade Reporting and Compliance Engine (TRACE). See http://apps.finra.org/regulatory_systems/traceaggregates/1/ (visited 3 September 2009).

¹⁹ International Swaps and Derivatives Ass’n, 2009 ISDA AEJ Derivatives Protocol (9 March 2009), available at <http://www.isda.org/conf/> (visited 3 September 2009). The auction process and the results of auctions that have occurred are described and analyzed in Helwege, Maurer, Sarkar & Wang. They conclude, at p.15, “Based on auction results for 43 credit events since 2005, we find that the auctions generally served their purpose, as they appear to have allowed participants to settle their positions efficiently, with high participation and low levels of open interest.”

insured to recover no more than indemnity for a established loss. A protection buyer under a credit default swap is not required to have an insurable interest and may be a speculator.

How are credit default swaps priced?

At equilibrium, the premium on a credit default swap equals the excess of (1) the yield on the bonds covered by the contract over (2) the interest rate at which the credit default swap seller can borrow.²⁰ Assume *C* can borrow at the LIBOR, and a particular bond bears interest at 200 basis points (2 percentage points) above the LIBOR.²¹ The annual premium on a credit default swap sold by *C* on this bond should be 200 basis points. At this price, *C* can earn the same return by either selling a credit default swap or buying the bonds with borrowed funds. For example, *C* could earn \$50,000 each quarter by either

1. Selling a credit default swap with a notional principal amount of \$10 million and a quarterly premium of \$50,000 (one fourth of 2 percent of \$10 million), or
2. Borrowing \$10 million at the LIBOR and investing the funds in \$10 million of particular bonds.

If *C* takes the latter course, it would receive quarterly interest on the bonds at the LIBOR plus \$50,000 (one fourth of 2 percent of \$10 million) and would pay interest on the borrowing at the LIBOR, leaving *C* with \$50,000.²² Assume the bonds go into default during the term of the swap, and the recovery rate on the bonds is 40 percent. If *C* owns the bonds, it loses \$6 million (60 percent of \$10 million). If *C* sells \$10 million of credit protection on the bonds and cash settles on the default, it must pay the buyer \$6 million (\$10 million notional value of the credit default swap times $(1 - 0.40)$). Given these assumptions, with a premium of 200 basis points, *C* is indifferent between a debt-financed investment in the bonds and selling a credit default swap. If the premium is less than 200 basis points, *C* and all similarly situated investors will purchase the bonds, and no one is available to sell credit default swaps; if the premium is more than 200 basis

²⁰ See Helwege, Maurer, Sarkar & Wang at 22.

²¹ The London Interbank Offered Rate (LIBOR) is a rate determined daily, in several currencies and many maturities of less than one year, by the British Bankers Association (BBA). Although the LIBOR was developed as a guide for bank-to-bank lending, it is often used as an interest-rate index in financial instruments. According to the BBA, the LIBOR is “one of the fundamental benchmarks for global financial markets.” See <http://www.bbalibor.com/bba/jsp/polopoly.jsp;jsessionid=aanobHoghVq8?d=1621> (visited 13 Nov. 2009).

²² For example, if the LIBOR is 4 percent for a particular quarter, the coupon rate on the bonds is 6 percent, *C*'s results for the quarter are

Interest received (one fourth of 6 percent of \$10 million)	\$150,000
Interest paid (one fourth of 4 percent of \$10 million)	(<u>100,000</u>)
Net amount	\$50,000

points, all potential sellers of credit default swaps will do so, and the bonds search for buyers until the swap premium is bid down to 200.

Although the relationship between interest yield and swap premium is easiest to see for variable-rate instruments, the relationship also exists, with some differences, for fixed rate instruments. Because yields on a debt instrument differ depending on the instrument's term,²³ premiums for swaps on fixed-rate debt also differ depending on the length of the contract term. The term of a swap is often not the same as that of the reference obligation, and this fact further obscures but does not eliminate the relationship between interest rates and swap premiums.

The relationship between yield and swap premiums can also be explained as follows: Interest can be decomposed into three elements: (1) a risk-free return, which compensates the lender for the cost of money and inflation; (2) interest-rate risk, in the case of a longer-term instrument bearing interest at a fixed rate; and (3) compensation for credit risk. For a holder of a reference obligation buying protection under a credit default swap, the swap transfers the credit risk to the protection seller, leaving the protection buyer with ownership of the obligation and the interest-rate risk. The premium for the swap should therefore equal the portion of the interest on the reference obligation that represents compensation for credit risk.

Because of this relationship, swap premiums are often referred to as spreads.²⁴ A spread is the excess of the interest rate available to the reference entity as a lender over the risk-free rate and is also the premium payable under a credit default swap on an obligation of that entity.

How are credit default swaps used?

Each party to a credit default swap may have any one or more of several motivations for entering into the agreement. The financial reasons for taking a buyer's position or a seller's position in a swap are separately discussed below.

Protection buyers

If a protection buyer owns the reference obligation, a credit default swap directly protects against loss on the obligation. In the XYZ example, if X, the protection buyer, owns \$10 million of Z bonds when it enters into the swap, the payment it would receive from Y on Z's default or other credit event would make its investment in the bonds whole. Moreover, if Z's credit standing deteriorates without a credit event, the value of X's position under the swap will increase, at least partially offsetting the resulting loss in the value of Z bonds.

²³ Yields are usually higher for longer-term instruments than for shorter-term instruments. This condition is often called an upward-sloping yield curve. When yields are higher for short-term than long-term instruments, the yield curve is said to be inverted.

²⁴ The spread with respect to a swap "is the spread to be added to a benchmark rate to compensate an investor for taking credit risk on a particular instrument. In general the benchmark rate is LIBOR." Markit Credit Indices Primer, App. 4.

For such a buyer, the swap is a hedge.²⁵ Such a buyer may have various reasons for entering into the swap. For example, if the protection buyer is a bank, the swap, by reducing its risk exposure, may free capital for other investments. For a holder of a lower-rated obligation, buying credit protection has the same economic effect as selling this obligation and buying a more highly-rated obligation, but avoids any tax or accounting consequences of an actual sale. If the reference obligation is a bank loan, an actual sale of the loan may require the consent of or notice to the borrower, risking damage to the bank's relationship with the borrower, while a lender may usually offload the risk of holding a loan by a swap contract without the borrower's knowledge.

A protection buyer is not required to own the reference obligation. A buyer may enter into a swap as a hedge of an investment whose value is likely to fluctuate in parallel with the value of the reference obligation. In the XYZ example, X might be a bank that has loaned \$10 million to Z and makes a swap on Z bonds to protect its investment in the loan.²⁶ Also, if X is a shareholder of Z, recovery under the swap will indirectly offset loss on the stock if a credit event occurs, and if Z's credit standing deteriorates without a credit event occurring, the same offsetting will occur, as the stock declines in value and the swap position increases in value.

A protection buyer is not required to have any exposure to the reference entity. If a protection buyer does not have any investment that may be adversely affected by a credit event of the reference entity, the term "protection buyer" is a misnomer because that party will realize gain, not loss, from a credit event. Such a buyer is effectively taking a short position in the reference obligation. Not only will the buyer receive payment from the seller in the event of a credit event, but the value of the buyer's side of the contract will increase if the reference entity's credit deteriorates without a credit event. For the buyer, in other words, the swap's value varies inversely with the value of the reference obligation. An investor wanting to take a short position on a debt instrument might purchase a credit default swap, rather than making a short sale of the instrument directly, because there may be no market facility for selling the instrument short or because a swap contract may be made more easily than a short sale.

Protection sellers

A protection seller may be in the business of writing swap contracts, either making contracts only as protection seller, as AIG was, or maintaining a more or less balanced book by buying protection in some contracts and selling protection in others. In the AIG scenario, a seller is acting much like an insurance company, while in the balanced-book scenario, the seller is acting like a dealer.

²⁵ The hedge is often not perfect. For example, credit default swaps are usually written for standard periods (most commonly, five years), and none of these periods may match the term of the obligation held by a protection buyer.

²⁶ A swap contract, by reducing the bank's exposure to credit risk, may lessen the amount of regulatory capital that it must have to back up its holding of the loan, thereby allowing it to make more loans. Moreover, X may have internal risk management policies whose application may be affected by the swap. See NY State Bar Report at 8–10.

A seller may also be an investor, rather than an insurer or dealer. For example, if an investor holds \$10 million of Treasury bonds and sells credit protection on \$10 million of a bond issue of Z Corp., the investor's position is essentially that of a holder of \$10 million of Z bonds. As discussed earlier, the premium on a swap contract should approximate the portion of the interest on the reference obligation that is compensation for the risk of default. The sum of interest on the Treasuries and the swap premium should therefore approximate the interest on the Z bonds. Also, any loss in the value of Z bonds will be mirrored by a loss in the swap contract. An investor might hold Treasuries and sell credit protection, rather than holding Z bonds, for one or more of several reasons. First, Z bonds may not be available in the desired amount. The notional amount of a credit default swap can exceed the total face amount of all outstanding Z bonds. Second, the investor's synthetic position is equivalent to a Z bond with a term equal to the term of the swap, while actual Z bonds have a longer term. Third, Z bonds may be denominated in another currency, while the swap is denominated in U.S. dollars, allowing the investor (who accounts in dollars) to assume a credit risk on Z without also assuming a foreign currency risk.

A more complex example of synthesis achieved with credit default swaps is a so-called credit-linked notes structure.²⁷ In this structure, a sponsor (e.g., a bank) creates a trust that issues notes to investors, invests the proceeds of these notes in conservative debt instruments (typically, AAA-rated floating-rate instruments), and enters into swap contracts on debt of several issuers.²⁸ The sum of the notional amounts of the swap contracts equals the proceeds of the notes.²⁹ The notes bear interest at rates set to approximate the sum of the interest on the trust's assets and the premiums received under the swap contracts. If a credit event occurs under one of the trust's swap contracts, the principal amounts of the notes are reduced. Each note is effectively a synthetic debt instrument of a hypothetical issuer consisting of a composite of the reference entities in the trust's swap contracts.

What is a credit default index swap?

Up to this point, the discussion in this paper has focused on so-called single-name swaps, contracts on debt instruments of one issuer. In recent years, a market has arisen for credit default index swaps. This market is described here.

Most index swaps are based on two groups of indices maintained by the Markit Group:³⁰ the Markit CDX indices, which cover groups of companies in North America

²⁷ See NY State Bar Report at 10–11. For other examples, see *id.* at 10–15.

²⁸ The trust may also sell index swaps. See discussion below of credit default index swaps.

²⁹ The sponsor retains a residual equity interest in the trust, but because it makes only a minimal investment in the trust and the notes direct most of the trust's income to the note holders, this equity interest does not usually have significant value.

³⁰ “Markit was founded in 2001 as the first independent source of credit derivative pricing.” <http://www.markit.com/en/about/about-Markit.page> (visited 12 Nov. 2009). See *infra* note 37 and accompanying text.

and emerging markets, and the Markit iTraxx CDS indices, which cover groups of companies in Europe and Asia.³¹ Each index is based on a basket of reference obligations and is reset semi-annually (for the major North American indices, as of March 20 and September 20). At a reset date, Markit may drop some reference entities from an index and add others, based on changes in credit standing and other factors. An index includes one reference obligation of each reference entity.

An index swap, unlike a single-name swap, normally requires a protection buyer to make a payment when the contract is made (upfront payment or price) in addition to quarterly premium (coupon) payments. The price and coupon rate are initially fixed by dealers before a contract begins trading. For example, if a contract is priced at 100 basis points, with a premium of 60 basis points, a buyer of protection at the time the contract begins trading must pay an upfront amount of one percent of the notional amount (100 basis points), and for each quarter during the contract term, the buyer must make a coupon payment of one fourth of 0.6 percent of the notional amount (60 basis points). For a \$10 million contract, the upfront payment is \$100,000, and the quarterly premium is \$15,000 (one fourth of \$60,000). If a person buys or sells protection after the contract begins trading, the coupon rate is the same, but the upfront payment may be more or less than the price initially fixed, reflecting any difference between the coupon rate and the spread in the market at the time the contract is written. In the example, if a contract is made when the spread is 90, the upfront payment exceeds 1 percent of the notional amount, while a contract made when the spread is 40 requires an upfront payment of less than one percent. The coupon rate is the same for all contracts, whether made when trading begins or later.

Index swaps, like single-name swaps, are usually documented on forms developed by ISDA. The credit events under most index swaps are bankruptcy and failure to pay. If a credit event occurs with respect to a reference obligation included in an index, each buyer of protection on the index receives a payment and each seller of protection must make a payment. A recovery rate on the reference obligation (the ratio of the obligation's fair market value after the credit event to the obligation's face amount) is established by an auction. The amount of the payment is the notional amount of the swap, multiplied by (1) the weight of the particular obligation in the index and (2) the recovery rate. For example, if a credit event occurs with respect to an obligation making up one percent of an index and the recovery rate for that obligation is 70 percent, the payment under a \$10 million contract on the index is as follows:

$$(\$10 \text{ million})(0.01)(1 - 0.7) = \$30,000$$

Following a credit event with respect to a name in the index, the swap terminates with respect to that reference entity, but it continues until the expiration of the contract term with respect to reference entities not incurring credit events.

³¹ The indices were created by others, but the Markit Group acquired them in 2007. Markit Credit Indices Primer §2. "Markit was founded in 2001 as the first independent source of credit derivative pricing." <http://www.markit.com/en/about/about-Markit.page> (visited 12 Nov. 2009).

Large-scale trading in index swaps began in 2004.³² According to Markit, as of 2009, swap contracts based on its indices comprise more than 40 percent of the credit derivatives market.³³

How are credit derivatives traded?

Until relatively recently, credit default swaps have only been traded in over-the-counter markets.³⁴ That is, each swap contract has been a private agreement between two persons, not governed by the rules of any exchange or clearinghouse. Swap markets have been beset by two problems for the parties and for the financial system as a whole: counterparty risk and lack of transparency. Many policymakers believe that swap markets would function better, both for protection buyers and sellers and for the global financial system, if swaps were traded on exchanges and centrally cleared.

Counterparty risk

An over-the-counter swap is a contract between two parties, each of which bears some counter-party risk—the risk that the other party may be unable to satisfy its contractual obligations. The counter-party risk is, however, asymmetric. If a buyer defaults, the seller loses the benefit of the bargain, but retains all premium payments made by the buyer. If a seller defaults, the buyer not only loses the benefit of the bargain, but gets nothing for the premiums paid.³⁵

Transparency

Over-the-counter markets in derivatives generally, and credit default swaps in particular, are often criticized as lacking in transparency. According to ISDA,

In financial markets, transparency usually means *transaction transparency*, that is, the degree to which information regarding prices and volumes of financial transactions is made publicly available. ...

Transaction transparency in turn takes two forms. One is *pre-trade transparency*, which refers to the reporting of information on prospective trading interest or limit order books. The other is *post-trade transparency*,

³² According to the IRS, writing in mid-2004, “Recent news reports suggest that market participants are considering the creation of CDS indexes through which participants could buy and sell protection on a defined basket of credit exposures on standardized terms.” Notice 2004-52, 2004-32 IRB 168.

³³ <http://www.indexco.com/default.asp?Alias=lokken&LoginID=WUxCmGEKk6HtRSFrBSaZ> (visited 10 September 2009).

³⁴ Most trades are between dealers and institutional investors. Markit Credit Indices Primer (2009).

³⁵ According to ISDA, a “protection buyer gives up the risk of default by the reference entity, and takes on the risk of simultaneous default by both the protection seller and the reference credit,” while a protection seller “takes on the default risk of the reference entity, similar to the risk of a direct loan to the reference entity.” ISDA, Product Descriptions and Frequently Asked Questions.

which refers to the reporting of prices and volumes of completed transactions.³⁶

Transaction transparency is generally seen as desirable because it promotes market efficiency and liquidity by reducing information asymmetries and allowing investors to obtain the best possible execution of deals at favorable prices.³⁷

The major source of pre-trade and post-trade information for credit default swaps is the Markit Group, a financial information services company that is headquartered in London but has offices in Europe, North America and the Asia-Pacific area.³⁸ Markit has two data services for credit default swaps.³⁹ First, it provides “indicative intraday spreads,” based on bid and offer prices supplied by dealers.⁴⁰ Although these spreads are not officially “live” prices at which customers can buy and sell credit protection, they “are considered to accurately reflect the current terms on which posting firms will transact.” Second, Markit provides “end-of-day consensus prices, which are based on book of record prices at active market makers and used by subscribers to mark their books to market.”

Transparency is facilitated by standardization of contract terms. Credit default swaps are largely standardized through the use of ISDA forms. “In order to encourage liquidity, the major dealers adopted a higher degree of standardization than is found in other OTC derivatives; all index CDS payments and maturities, for example, occur on standard settlement dates.”⁴¹

The Markit Group maintains a Reference Entity Database (RED), which has become a “market standard” for confirming the relationship between a reference entity and its reference obligation, known as a “pair.”⁴² Each entity is identified with a unique 6-digit alphanumeric code, and each pair has a 9-digit code. “RED codes are widely and successfully used by CDS market participants to electronically match and confirm CDS transactions.”

³⁶ ISDA Transparency.

³⁷ Each of these points may be disputed. For example, increased transparency could reduce liquidity by causing the spreads between bid and asked prices to decline to the point that some market makers would leave the market. See ISDA Transparency at 6–8.

³⁸ See <http://www.markit.com> (visited 10 September 2009). Markit was founded in 2001 to collect and make available information on credit derivative pricing and now provides data, valuations, and trade processing services. According to Markit, “Over 1,500 financial institutions use our independent services to manage risk, improve operational efficiency and meet regulatory requirements.”

³⁹ Much of this data is only available to subscribers, but some of it is available to the public without charge. See <http://www.markit.com/cds/cds-page.html> (visited 10 September 2009)

⁴⁰ ISDA Transparency at 6.

⁴¹ ISDA Transparency at 5.

⁴² Market Credit Indices Primer at §1.

The Depository Trust & Clearing Corporation (DTCC), which operates a group of clearing, settlement, and information services,⁴³ maintains a “Trade Information Warehouse” containing trade records on all over-the-counter derivatives that can be electronically processed.⁴⁴ DTCC’s credit default swaps matching and confirmation service provides automated, real-time matching and confirmation for standard single-name credit default swaps and credit default index swaps. “The automated system currently supports new trades, full terminations, partial terminations and assignments (i.e., the assignment of the contract from one party to another, also called novation) through a fully automated environment.”⁴⁵ DTCC also publishes statistics on CDS notional amounts by reference entity, index, and maturity.⁴⁶

Central clearing

The derivatives industry has taken steps toward creating a central clearing system for credit default swaps, but these steps have not yet taken concrete form. Although regulators have “actively encouraged” development of a central counterparty, these steps are a “result of cooperative efforts by private firms to solve problems—most notably, counterparty credit risk management and operational efficiency—that were difficult for firms to solve acting alone.”⁴⁷ DTCC has announced that it will, “in an effort to bring greater certainty and safety to the market for credit derivatives, ... support all central counterparty (CCP) solutions for credit default swaps (CDS), in a non-discriminatory manner” and will allow its Trade Information Warehouse to be used in effectuating any such solution.⁴⁸ A group of 15 over-the-counter derivatives dealers, including four banks that control about 90 percent of the market, informed the New York Federal Reserve Bank in September 2009 that they plan to put 90 percent of their trades through clearinghouses by the end of 2009.⁴⁹

An effective clearinghouse system would most obviously solve the counterparty-risk problem. Under a central clearing system, a clearinghouse is the counterparty on every contract, effectively guaranteeing all parties’ performance of all obligations under the contracts. Under such a system, sellers of credit protection would be required to post collateral in prescribed amounts to minimize the possibility of seller default. Even if a sudden swing in prices caused particular sellers to default, the clearinghouse guarantee would protect buyers so long as the entire clearing system does not fail. A clearinghouse

⁴³ DTCC provides these services “for equities, corporate and municipal bonds, government and mortgage-backed securities, money market instruments and over-the-counter derivatives.” <http://www.dtcc.com/about/business/> (visited 13 Nov. 2009).

⁴⁴ DTCC, *Explanation of Trade Information Warehouse Data* (2009).

⁴⁵ *Markit Credit Indices Primer*, App. 4.

⁴⁶ See http://www.dtcc.com/products/derivserv/data_table_i.php (visited 10 September 2009).

⁴⁷ ISDA *Transparency* at 5.

⁴⁸ Melanie Best (2009).

⁴⁹ http://www.thedeal.com/dealscape/2009/09/aig_fed_jpmorgan_goldman_bac_citigroup_derivatives.php (visited 10 Sept. 2009).

would also likely alleviate transparency issues because the prices in all transactions would be collected in the clearing system.

How should be credit default swaps be taxed?

Although credit default swaps have been traded in large volumes for more than a decade, the U.S. tax treatment of these transactions has never been established. Even the IRS has not tipped its hand on its view of the transactions. Since U.S. tax law contains no rules explicitly applicable to credit default swaps, current law can only be applied to them by identifying a type of instruments that they most nearly resemble and applying the rules for the analogous instruments. Two plausible solutions under current law—treating credit default swaps as options and applying the regulations on notional principal contracts — are discussed at length below. A solution that might ultimately become the best alternative—marking credit default swaps to market—is discussed thereafter.

Three categories of problems are primary: the timing of income and loss from credit default swaps; the character of this income or loss; and the treatment of cross-border swaps. No set of rules available under current law provides ideal solutions for all of these issues, but the two primary solutions discussed here achieve the best answers possible under current law. Ideal solutions, if possible, can only be achieved by legislation, which should probably use a mark-to-market approach for at least some swaps.

The nature of credit default swaps, as currently traded, may defy a wholly satisfactory solution of timing issues. Of the two primary solutions discussed here, the notional principal contract rules probably handle these issues best. The option rules can, however, be applied in a way that adequately resolves these issues.

Ideally, all income, gain, expense, and loss from a credit default swap should have the same character. In particular, it should not be possible for a taxpayer to change an item's character by choosing the way in which a contract is closed out. Of the two primary solutions discussed here, options treatment does the best job of meeting this goal. Under an options model, for investors, all payments made and received under credit default swaps are capital gains and losses. If a credit default swap is treated as a notional principal contract, most income and expense under the swap is ordinary, but gain or loss on ending the swap position may be ordinary income or loss if the position is terminated in one way (e.g., cash settlement following a credit event) or capital gain or loss if it ends in another way (e.g., physical settlement or a sale of the swap position when a credit event is imminent). These opportunities to manipulate character are a significant problem with using the notional principal contract rules as the model for taxing credit default swaps.

Income from cross-border investments are often subject to withholding taxes in the countries of source. For example, if a foreign person receives a dividend on stock of a U.S. company, the United States imposes a withholding tax on the dividend of 30 percent.⁵⁰ Payments under cross-border credit default swaps should not be subject to

⁵⁰ IRC §§871(a)(1), 881(a). The rate is usually reduced to 15 or 5 percent (or even zero) if the recipient is a resident of a country with which the United States has an income tax treaty. See Bittker & Lokken ¶67.2.3. The tax is called a withholding tax because,

withholding taxes.⁵¹ For example, if a U.S. company buys credit protection from a foreign bank, it should not be required to withhold U.S. tax from its premium payments to the seller, and if a U.S. bank sells credit protection to a foreign buyer, it should not be required to withhold U.S. tax from its payment to the borrower following a credit event. Although the foreign person is, in each of these cases, receiving income that could be considered U.S. source income of a kind that should be subject to withholding tax, there are two reasons why no such tax should apply. First, withholding taxes are imposed on the gross amounts of payments, without regard to any costs the foreign recipient may have. If applied to types of payments associated with significant expense, a withholding tax at a modest rate can exceed 100 percent of the recipient's net income. Receipts under a credit default swap are likely to be associated with significant expense in many cases.⁵² Second, because the market for credit default swaps is very international, withholding taxes on swap payments would likely drive the credit default swap market offshore unless all countries with financial centers (including, for example, the Cayman Islands) impose similar withholding taxes. Thus, considerations of both fairness and practicality require that swap payments be exempted from withholding taxes.

Under current law, both of the primary solutions discussed here would exempt swap payments from withholding taxes. A mark-to-market regime for credit default swaps could only be instituted by a statutory change, and the legislation making such a change could provide appropriate withholding tax treatment for swaps.

Some methods of taxing credit default swap that might seem plausible are, on examination, not plausible and are not extensively discussed here. For example, credit default swaps bear a resemblance to insurance, but this resemblance is more apparent than real.⁵³ A fundamental principle of insurance law is that a purchaser of insurance must have an insurable interest in the thing being insured. No one can, for example, purchase fire insurance on a stranger's house because only a person having an interest in the house, as owner or mortgage lender, has an insurable interest. A purchaser of credit protection is

although it is a tax on the foreign investor, it is collected by the U.S. payor by withholding it from payments to the foreign investor.

⁵¹ The term "cross-border" is here refers to a swap between a U.S. person and a foreign person that is not made in the course of a U.S. trade or business of the foreign person. A swap between a U.S. person and a foreign person incident to the foreign person's U.S. business should be taxed in the same way as a swap between two U.S. persons.

⁵² For a dealer that makes swaps as both buyer and seller, for example, its premium income from swaps written as seller would be offset by premiums paid on swaps written as buyer.

⁵³ According to the IRS, "Some commentators have noted the Supreme Court's opinion in *Helvering v. LeGierse*, 312 U.S. 531, 61 S. Ct. 646, 85 L. Ed. 996 (1941), that the essence of insurance activity is the shifting and distribution of insurance risk. These commentators have suggested that many protection sellers do not shift or distribute risk with respect to CDSs in this way, and that it is not clear how a protection buyer could know how its counterparty manages risk with respect to a particular CDS." Notice 2004-52, 2004-32 IRB 168.

not required to have an insurable interest. An investor can buy credit protection on debt of IBM Corp., even if he or she does not own IBM bonds and would sustain no loss if IBM defaulted on its debt. Indeed, a credit default swap is a very efficient and widely used way of taking a short position in a bond. A short seller of IBM stock gains if IBM stock goes down, but loses if IBM stock goes up. Similarly, a buyer of credit protection on IBM bonds, who owns no IBM debt, gains if IBM's credit standing deteriorates but gets nothing for premium payments under the swap if IBM's credit remains strong. A credit default swap, in other words, is a derivative financial instrument, not insurance, and should be taxed by rules developed for derivatives.⁵⁴

Treat credit default swaps as put options

A credit default swap resembles a put option (an option to sell). In a put option transaction, one party (the holder) pays a premium to the other (the writer), usually when the option is written, and the writer agrees to purchase specified property (the underlying) at a specified time for a specified price (the strike price). For example, *H* might pay a \$50 premium to *W* in exchange for *W*'s agreement to purchase 100 shares of *U* Corp. (the underlying), should *H* so demand, 90 days hence (the exercise date) for \$10 per share (the strike price).⁵⁵

Credit default swaps' resemblance to put options is most easily seen when a swap is physically settled. A physical settlement consists of the protection buyer's transfer of reference obligations to the protection seller in exchange for the seller's cash payment equal to obligations' face amounts. A physically-settled swap can be seen as an option held by the credit protection buyer to sell reference obligations to the credit protection buyer for a strike price equal to the obligations' face amounts on the occurrence of a credit event. Viewed as an option, one unique feature of a physically-settled swap is that it may only be exercised if a credit event occurs. Most options are not explicitly contingent, but they are contingent in the sense that a holder exercises an option only if the relationship between the strike price and the fair market value of the underlying makes exercise profitable for the holder. This difference—an explicit contingency versus a market contingency—does not seem relevant to the appropriateness of treating credit default swaps as options for tax purposes.

Most credit default swaps written in recent years may be cash settled, and many swaps do not permit physical settlement. In options markets, however, most options can be cash settled, and many options can only be cash settled.

⁵⁴ Another possibility, treating a credit default swap as a credit guarantee, is equally flawed. A swap, like a guarantee, may protect a buyer against loss on an obligation, but it may and often does serve other functions. Also, the rights of a protection seller are quite different from those of a guarantor following a payment on the swap.

⁵⁵ According to the IRS, "A CDS has been analogized to a contingent put option that the option buyer is entitled to settle either for cash value or by physical exercise with respect to the deliverable obligation following the occurrence of a credit event." Notice 2004-52, 2004-32 IRB 168.

The U.S. tax rules on options are relatively simple.⁵⁶ The parties to an option have no income, gain, or loss when the option is written or thereafter until the option is exercised or lapses. Until that time, the holder's premium payment is not income to the writer or deductible by the holder. The exercise of an option is treated as a sale of the underlying in exchange for the strike price. Assume H pays \$50 to W in exchange for a right to put 100 U Corp. shares to W 90 days hence for \$10 per share. W's exercise of the option is treated as a sale of 100 U shares by W for \$1,000 (100 times \$10). If H's tax basis for the shares is \$800, H's gain on the sale is follows:

Amount realized		\$1,000
Less		
Adjusted basis	\$800	
Option premium	<u>50</u>	<u>850</u>
Gain		\$150

If H held the stock for investment (not as a dealer), this gain is capital gain. H takes a tax basis of \$1,000 for the shares but recognizes no income, gain, or loss until she disposes of the stock.

If an option lapses unexercised, the premium is income to the writer and expense for the holder, who may then deduct it if the option was held in a trade or business or a transaction for profit. In the example, if H does not exercise the option,⁵⁷ the \$50 option premium is income for W and expense for H when the option lapses. For a holder, the expense recognized on lapse is a capital loss if the underlying is a capital asset; for a holder not owning the underlying, the loss is capital if the underlying would be a capital asset, had the holder owned it.⁵⁸ If H held the option as an investment, this means that on a lapse, she may only deduct the \$50 premium as a capital loss. For a writer, the income on lapse is capital gain if the option is "with respect to property which is (or on acquisition would be) a capital asset."⁵⁹

A holder or writer of an option may also have gain or loss on a transfer or termination of the option. For example, either party may sell or assign his or her position to a third person, or holder and writer may agree to terminate an option in exchange for some payment from one to the other.⁶⁰ For a holder, gain or loss on a sale, exchange, or termination of an option is capital gain or loss if the underlying is or would be a capital

⁵⁶ **Error! Main Document Only.** Rev. Rul. 78-182, 1978-1 CB 265.

⁵⁷ H will not exercise the option if U shares are each worth \$10 or more on the exercise date.

⁵⁸ IRC §1234(a)(1).

⁵⁹ IRC §1234A.

⁶⁰ If an option is exchange traded, either party may terminate his or her rights and obligations by acquiring an equal and opposite position. A holder can, for example, terminate an option by writing an identical option, causing both options to terminate by merger.

asset.⁶¹ For a writer, gain or loss on a transaction terminating its obligation under an option is short-term capital gain or loss if the underlying is a stock, security, commodity, or commodity futures contract and the holder is not engaged in a trade or business of writing options.⁶²

The tax rules for options apply a “cash settled option,” which is an option that “on exercise settles in (or could be settled in) cash or property other than the underlying property.”⁶³ That is, the rules apply whether cash settlement is the only means of settling the option or an alternative to physical settlement. Assume the *H-W* option is cash settled, and the trading price of *U* stock on the settlement date is \$9 per share. The settlement consists of *W*'s payment to *H* of \$100 (strike price of \$10 times 100, less fair market value of the underlying on the settlement date of \$9 times 100). On the settlement, *H* has gain of \$50 (\$100 received, less \$50 option premium paid), and *W* has loss of \$50. *H*'s gain is capital gain if, in her hands, *U* shares are or would be a capital asset,⁶⁴ and *W*'s loss is short-term capital loss unless *W* is in the trade or business of writing options.⁶⁵

A disadvantage of the options rules is that they defer recognition of option premium until options are exercised or lapse. For credit default swaps, which are typically written for five-year terms, it would not be appropriate to defer all tax consequences until swaps end by lapse or the occurrence of credit events. The standard swap format, however, lends itself to another approach: If credit default swaps are analyzed as options, a swap should be treated as a separate option for each period covered by a premium payment. In the standard format of quarterly payments, a swap contract should be treated as a series of three-month options. At the conclusion of each quarter without a credit event, the parties should be taxed as though an option had lapsed. A credit protection buyer should be allowed to deduct the premium for that quarter, and a protection seller should be required recognize the premium as gain. For a quarter during which a credit event occurs, the parties should recognize gain or loss under the options rules discussed above.

An advantage of the rules for options is that they give the same character to all potential income, gain, expense, and loss under an option—capital gain or loss for a position held as an investor and ordinary income or loss for a position that the taxpayer entered into as a dealer.

For cross-border options, U.S. withholding taxes apply to neither option premiums nor transfers and payments made on exercise of options. The withholding taxes only apply to specifically described types of income and other “fixed or determinable

⁶¹ IRC §1234(a)(1).

⁶² IRC §1234(b).

⁶³ IRC §1234(c)(2).

⁶⁴ IRC §1234(a)(1).

⁶⁵ IRC §1234(b). This provision only applies to a writer's sale, exchange, or termination of an option, not to an option's exercise or lapse, but a cash settlement is, for this purpose, treated as a sale or exchange of the option, not an exercise or lapse. **Error! Main Document Only.** Rev. Rul. 88-31, 1988-1 CB 511.

annual or periodical income.”⁶⁶ Neither option premiums nor gains on sales of property are among the specifically described items, and according to the regulations, neither is considered fixed or determinable annual or periodical income.⁶⁷ The exercise of a physically-settled option is, in both form and substance, a sale of property, and for investors, cash settlements of options are treated as sales of property.

Apply the regulations on notional principal contracts

The U.S. Treasury, in 1993,⁶⁸ adopted regulations on “notional principal contracts” in order “to enable the clear reflection of” income and expenses from these contracts “by prescribing accounting methods that reflect the economic substance of such contracts.”⁶⁹ The regulations refer most directly to interest rate swaps, which were the principal variety of swap contracts in 1993, but they are not limited to particular kinds of swap contracts. Although the application of the regulations to credit default swaps is not entirely clear, the regulations provide an entirely plausible way of taxing income from these swaps.⁷⁰ As discussed below, in this context, the notional principal contract regulations offer significant opportunities for converting ordinary income into capital gain. These opportunities are the most persuasive reason for rejecting the notional principal contract model for taxing credit default swaps.

The notional principal contract regulations generally

According to the regulations, a notional principal contract is “a financial instrument that provides for the payment of amounts by one party to another at specified intervals calculated by reference to a specified index upon a notional principal amount in exchange for specified consideration or a promise to pay similar amounts.”⁷¹ Assume *A* and *B* make a contract by which they agree that for a period of five years, *A* will make quarterly payments to *B* equal to interest at the 90-day U.S. dollar LIBOR on \$10 million and *B* will pay \$100,000 (one fourth of 4 percent of \$10 million) to *A* on each of these quarterly payment dates.⁷² The term “specified index” includes, among other things, a “fixed rate, price, or amount” and an “index that is based on objective financial information.”⁷³ In the example, the 90-day LIBOR and 4 percent are both specified indexes. A notional principal amount is a “specified amount of money or property that, when multiplied by a specified index, measures a party's rights and obligations under the

⁶⁶ IRC §§871(a)(1), 881(a).

⁶⁷ Reg. §§1.1441-2(b)(1)(i), 1.1441-2(b)(2).

⁶⁸ TD 8491, 58 Fed. Reg. 53125 (Oct. 14, 1993). For a more complete description of the regulations, see Bittker & Lokken ¶57.4.

⁶⁹ Reg. §1.446-3(b).

⁷⁰ For an eminent endorsement of this approach, see NY State Bar Report.

⁷¹ Reg. §1.446-3(c)(1)(i).

⁷² For the LIBOR, see *supra* note ?21.

⁷³ Reg. §1.446-3(c)(2).

contract, but is not borrowed or loaned between the parties as part of the contract.”⁷⁴ In the example, the notional principal amount is \$10 million. Neither party transfers \$10 million to the other, but that amount is the base from which both parties’ payments are computed. Each party makes its payments in exchange for a promise to pay similar amounts. The *A-B* swap is thus a notional principal contract.

The regulations provide two sets of rules for payments under notional principal contracts, one for periodic payments and the other for nonperiodic payments, and a third set of rules for termination payments. Payments are periodic if they “are payable at intervals of one year or less during the entire term of the contract.”⁷⁵ A termination payment is a “payment made or received to extinguish or assign all or a proportionate part of the remaining rights and obligations of any party under a notional principal contract.”⁷⁶ All other payments are nonperiodic.⁷⁷ All payments under the *A-B* swap are periodic.

Periodic payments are recognized as income to the recipient and expense to the payor for the period for which they are made.⁷⁸ The expense is deductible if it qualifies as a business or investment expense.⁷⁹ If a contract requires the parties to exchange payments simultaneously, the payments for each period are typically netted, and only one party actually makes a payment for each quarter. In *A-B* example, if the LIBOR for a particular period is 3.75 percent, the net payment for the quarter is made by *B*, calculated as follows:

One fourth of 4 percent of \$10 million	\$100,000
Less one fourth of 3.75 percent of \$10 million	<u>93,750</u>
<i>B</i> ’s payment	\$6,250

A makes no payment to *B* for the quarter. The payment is currently taxable to the recipient (*A*) as ordinary income and deductible by the payor (*B*).

The rules for nonperiodic payments are more complex.⁸⁰ A swap contract normally requires a nonperiodic payment if only one of the parties is required to make periodic payments. For example, under a type of contract known as a cap, one party (the purchaser) makes a payment to the other at the contract’s inception (the premium) and the other party (the seller) agrees to make a periodic payment to the buyer whenever a

⁷⁴ Reg. §1.446-3(c)(3).

⁷⁵ Reg. §1.446-3(e)(1)(i).

⁷⁶ Reg. §1.446-3(h)(1).

⁷⁷ Reg. §1.446-3(f)(1).

⁷⁸ Reg. §1.446-3(e)(2). If the period begins in one taxable year and ends in another, the payment is allocated on a daily basis and is recognized for each year to the extent allocated to days within that year.

⁷⁹ IRC §§162(a) 212.

⁸⁰ A payment is nonperiodic if it is not a periodic payment under the definition described above. Reg. §1.446-3(f)(1).

variable interest rate exceeds a stated threshold. Assume *C* purchases a three-year cap from *D* under a contract that requires *C* to pay \$100,000 to *D* when the contract is made (an upfront payment) and requires *D* to make a payment to *C* for each quarter during the contract period for which the 90-day U.S. dollar LIBOR exceeds 5 percent. For each such quarter, *D*'s payment is (1) interest on \$10 million at the LIBOR for 90 days, less (2) \$125,000 (one fourth of 5 percent of \$10 million).⁸¹ *D*'s payments to *C* are periodic and are thus governed by the rules described in the preceding paragraph, but *C*'s payment to *D* is nonperiodic.

The parties must recognize a nonperiodic payment in increments over the contract term.⁸² Under the *C-D* contract, some portion of *C*'s premium payment must be recognized as income by *D* and expense of *C* for each day during the cap's three-year term. The regulation's general rule is that a nonperiodic payment is allocated in "accordance with the forward rates ... of a series of cash-settled forward contracts that reflect the specified index and the notional principal amount."⁸³ For caps, the regulations alter this rule to require a premium to be allocated "in accordance with the prices of a series of cash-settled option contracts that reflect the specified index and the notional principal amount."⁸⁴ The idea underlying this rule is that a cap is similar to a call option on the LIBOR with a strike price equal to a threshold rate (5 percent in the example). If a cap is based on an interest index on which options are publicly traded for terms comparable to that of the cap, market quotations are used to price the hypothetical options. Otherwise, these options are priced using some variant on the Black-Scholes Model.⁸⁵

The regulations provide a simpler alternative, a "level payment method," which a taxpayer can use for a cap made "primarily to reduce risk with respect to a specific debt instrument or group of debt instruments held or issued by the taxpayer."⁸⁶ In the example, *C* could use this method if it had borrowed money at the LIBOR and purchased

⁸¹ The contract is a notional principal contract because (1) it requires *D* to make payments at specified intervals (quarterly) calculated by applying a specified index (the 90-day LIBOR, less 5 percent) to a notional principal amount (\$10 million) and (2) *D* undertakes this obligation in exchange for "specified consideration" (\$100,000).

⁸² Reg. §1.446-3(f)(2)(i).

⁸³ Reg. §1.446-3(f)(2)(ii).

⁸⁴ Reg. §1.446-3(f)(2)(iv). This rule also applies to floors. Under a floor, a periodic payment is required when a variable rate falls below a stipulated fixed rate. For example, a floor might require a party to make a quarterly payment equal to the amount by which interest on \$10 million at 2 percent for the quarter exceeds interest for the quarter on \$10 million at the 90-day LIBOR.

⁸⁵ See, e.g., Reg. §1.446-3(f)(4) Ex. 1. For the Black-Scholes Model, see http://en.wikipedia.org/wiki/Black-Scholes#Black.E2.80.93Scholes_model.

⁸⁶ Reg. §§1.446-3(f)(2)(iii)(A), 1.446-3(f)(2)(v). For notional principal contracts other than caps and floors, a taxpayer can use this method regardless of its purpose for holding the instrument.

the cap to ensure that its net interest expense on the loan would not exceed 5 percent. Under the level payment method, an upfront payment is amortized as though it were the present value of a series of equal payments made throughout the contract term. The discount rate in this calculation must be the rate used by the parties to determine the amount of the nonperiodic payment.⁸⁷ Each of the equal payments is separated into its principal recovery and time value (interest) components. The principal component of each payment is the portion of the premium payment that is allocated to that period. The time value components are disregarded. For example, if *C* and *D* determined the \$100,000 premium for the cap with an interest rate of 6 percent compounded quarterly, the hypothetical level payment is \$9,168 for each quarter. The 12 quarterly payments over the three-year term of the contract are separated between principal and interest as follows:

Quarter	Principal balance	Principal payment	Interest payment
1	\$100,000.00	\$7,668.00	\$1,500.00
2	92,332.00	7,783.02	1,384.98
3	84,548.98	7,899.76	1,268.23
4	76,649.22	8,018.26	1,149.74
5	68,630.96	8,138.53	1,029.46
6	60,492.42	8,260.61	907.39
7	52,231.81	8,384.52	783.48
8	43,847.29	8,510.29	657.71
9	35,337.00	8,637.94	530.05
10	26,699.05	8,767.51	400.49
11	17,931.54	8,899.03	268.97
12	9,032.51	8,897.02	135.49

The amounts in the principal payment column are the portions of the premiums allocated to each quarter. For the first quarter in the swap’s term, for example, *D* must report income, and *C* has expense, of \$7,668 on account of *C*’s premium payment. The figures in the interest column are disregarded.

A termination payment—a payment made or received to extinguish or assign all or a proportionate part of a party’s rights and obligations under a notional principal contract—is recognized as income to a recipient or as expense by a payor for the year during which the contract is extinguished, assigned, or exchanged.⁸⁸ A termination payment may be a payment between the original parties to the contract (an extinguishment) or between one party to the contract and a third person (an assignment).

⁸⁷ If this rate is not “readily ascertainable,” the calculation must be done with a discount rate “that is reasonable under the circumstances.” Reg. §1.446-3(f)(2)(iii)(A).

⁸⁸ Reg. §§1.446-3(h)(1), 1.446-3(h)(2). One party’s assignment of its rights and obligations to a third person has no tax consequence to the “nonassigning counterparty” unless, following the assignment, the counterparty’s rights and obligations differ “materially” from those it previously had, in which case the assignment is considered a sale or exchange by the counterparty. Reg. §§1.446-3(h)(1), 1.1001-1(a).

Gain or loss on an exchange of one notional principal contract for another is also a termination payment.

Applying the notional principal contract regulations to credit default swaps

Conventional credit default swaps are within the definition of notional principal contract—“a financial instrument that provides for the payment of amounts by one party to another at specified intervals calculated by reference to a specified index upon a notional principal amount in exchange for specified consideration or a promise to pay similar amounts.”⁸⁹ Credit default swap are financial instruments. They require one party (the credit protection buyer) to make payments to the other (the credit protection seller) at specified intervals (typically, quarterly) throughout the instrument’s term.⁹⁰ These payments are calculated by applying a specified index (usually, a fixed rate) to a notional amount. And, the buyer makes these payments in exchange for specified consideration (the credit protection seller’s promise to pay on the occurrence of a credit event).⁹¹ Although the definition of notional principal contracts requires periodic payments, it does not require that both parties make periodic payments. So long as one party makes periodic payments in exchange for “specified consideration,” the nature of that consideration is not relevant. A credit protection seller’s promise to make a payment on the occurrence of a particular event is consideration specified by the contract.

Under the notional principal contract regulations, a credit protection buyer’s periodic payments are recognized as income to the seller and expense of the buyer for the periods for which they are made.⁹² Thus, if a credit default swap contract requires the protection buyer to make quarterly premium payments, each of these payments is prorated among the days of the period, and the parties recognize the daily portions as income and expense throughout the quarter. If a swap requires the buyer to make an upfront payment, as is common in index swaps, the notional principal contract regulations characterize this payment as “nonperiodic” and require the parties to recognize it over the contract’s term by methods described earlier.⁹³

The treatment of a seller’s payment following a credit event is less clear. Since this payment occurs only once, if at all, it is “nonperiodic,” but the regulations’ approach to nonperiodic payments—spread them over the contract term—does not work for these payments. Whether there will be a payment by the seller and, if so, the amount of that payment cannot be known until the contract ends either by the expiration of its term or the occurrence of a credit event. It would not be feasible for the parties to recognize such

⁸⁹ Reg. §1.446-3(c)(1).

⁹⁰ A credit default swap should be considered a notional principal contract even if it requires the buyer to make only one payment when the contract is made, equal to the present value of the periodic payments normally provided in a comparable swap, but the Treasury may have to amend the regulations to bring such a contract within the definition.

⁹¹ Reg. §1.446-3(c)(1)(i).

⁹² Reg. §1.446-3(e).

⁹³ Reg. §1.446-3(f), discussed supra text accompanying notes ?.

a payment retroactively throughout the contract term. For example, if a credit event occurs near the end of a contract's five-year term, the statute of limitations on tax assessments for the early years of that term (usually three years) has likely expired before the amount of the payment is known.

The Treasury and IRS have issued two bits of guidance on the treatment of contingent payments under swaps. The IRS, in 2002, issued a ruling on an 18-month contract under which a taxpayer (*T*) agreed to make quarterly payments to a counterparty (*CP*) equal to interest at the three-month LIBOR on \$100 million and *CP* agreed to make one payment on expiration of the contract equal to \$8.28 million, plus or minus the product of \$8 million and the percentage change in the value of the S&P 500 over the contract's term.⁹⁴ The parties calculated the \$8.28 million figure as simple interest on \$92 million for 18 months at an annual rate of 6 percent. The treatment of *T*'s periodic payments was clear—accrue them on a daily basis, but the proper treatment of *CP*'s nonperiodic payment was not.⁹⁵ The ruling requires the parties to segregate the contingent and noncontingent portions of the nonperiodic payment and recognize the noncontingent portion (\$8.28 million) on a daily basis over the contract's term. The ruling allows the parties to defer recognizing the contingent portion (the addition or subtraction based on the S&P 500) until the conclusion of the contract,⁹⁶ but the possibility of this portion being negative (because of a decline in the S&P 500 over the contract's term) is disregarded in accruing the noncontingent portion.

Under a credit default swap, the protection seller's payment is wholly contingent unless and until a credit event occurs during the swap's term. As applied to credit default swaps, the 2002 ruling suggests two conclusions: First, neither party should recognize any portion of a seller's payment until the existence and amount of the payment is fixed on the occurrence of a credit event. Second, the possibility of the seller being required to make a payment should be disregarded in accruing the buyer's periodic payments. That is, each periodic payment should be fully recognized over the period for which it is made, with no reduction for the possibility that the seller may be required to make a payment.

The Treasury, in 2004, suggested a different approach in proposing amendments to the notional principal contract regulations addressing contingent nonperiodic payments.⁹⁷ According to the Treasury, the "underlying principle" of the current

⁹⁴ Rev. Rul. 2002-30, 2002-21 IRB 971. See Hariton, Confusion about Swaps and Rev. Rul. 2002-30, 95 Tax Notes 1211 (May 20, 2002).

⁹⁵ Reg. §§1.446-3(e)(2), 1.446-3(f)(2)(i).

⁹⁶ The IRS warned taxpayers entering into such contracts that by deferring recognition of the noncontingent portion until the conclusion of the contract, they may incur penalties. Notice 2002-35, 2002-21 IRB 992 (transaction that uses notional principal contract to claim current deductions for periodic payments made while disregarding accrual of right to receive future offsetting payments is listed transaction under §1.6011-4(b)(2)), clarified by Notice 2006-16, 2006-9 IRB 538. See Lanning, Notice 2006-16: IRS Clarifies Prior Guidance on Notional Principal Contracts with Contingent Nonperiodic Payments, 7 Derivatives 1 (May 2006).

⁹⁷ REG-166012-02, 69 Fed. Reg. 8886 (Feb. 26, 2004).

regulations on nonperiodic payments— spreading such a payment over the contract’s term in a way that appropriately reflects the economic substance of the contract—should also apply to contingent nonperiodic payments in order to achieve “symmetry between fixed payment NPCs and contingent payment NPCs.”⁹⁸ The proposed regulations suggest a “noncontingent swap method,” which would require

taxpayers to project the expected amount of contingent payments, to take into account annually the appropriate portions of the projected contingent amounts, to reproject the contingent amounts annually, and to reflect the differences between projected amounts and reprojected amounts through adjustments. [Although] annual rejections will require additional effort by taxpayers and the IRS[,] the annual reprojection requirement is essential to ensure clear reflection of income with respect to NPCs with one or more contingent nonperiodic payments. Moreover, rejections, and the resulting adjustments to current inclusion and deduction amounts, are especially important for the income and deductions generated by these types of contracts because otherwise taxpayers might be more likely to attempt to manipulate the character of the income or deductions from the contract.⁹⁹

A common example of a contract providing for such a payment is an equity swap by which the parties agree that, at the conclusion of the agreement’s term, one party will pay to or receive from the other an amount equal to the appreciation or depreciation in the value of a notional amount of stock during the term of the agreement. Under the noncontingent swap method, as applied to such a swap, the payment at maturity would be projected from, for example, futures prices for the stock, and the projected amount would be amortized over the swap’s term as though it were a noncontingent amount payable at maturity. After one

⁹⁸ REG-166012-02, 69 Fed. Reg. 8886, 8887 (Feb. 26, 2004). See Notice 2001-44, 2001-2 CB 77 (requesting comments on appropriate treatment of contingent nonperiodic payments); Biondo & Rosier, *The Effect of the Proposed Swap Regulations on the Hedge Fund Industry: Goodbye to Total Return Swaps?* 103 Tax Notes 1171 (May 31, 2004); Garlock, *The Proposed Notional Principal Contract Regulations: What’s Fixed? What’s Still Broken?* 102 Tax Notes 1515 (March 22, 2004); New York State Bar Ass’n Tax Section, *The Timing of Income and Loss from Swaps Providing for Contingent Payments*, 93 Tax Notes 1761 (Dec. 24, 2001) (recommending noncontingent swap method).

⁹⁹ REG-166012-02, 69 Fed. Reg. 8886, 8887–88 (Feb. 26, 2004). See Notice 2001-44, 2001-2 CB 77 (requesting comments on appropriate treatment of contingent nonperiodic payments); Biondo & Rosier, *The Effect of the Proposed Swap Regulations on the Hedge Fund Industry: Goodbye to Total Return Swaps?* 103 Tax Notes 1171 (May 31, 2004); Garlock, *The Proposed Notional Principal Contract Regulations: What’s Fixed? What’s Still Broken?* 102 Tax Notes 1515 (March 22, 2004); New York State Bar Ass’n Tax Section, *The Timing of Income and Loss from Swaps Providing for Contingent Payments*, 93 Tax Notes 1761 (Dec. 24, 2001) (recommending noncontingent swap method).

year, the final payment would be estimated again, and the newly projected payment would be amortized over the contract term, with appropriate adjustment for the portion recognized for the first year.

Some version of the noncontingent swap method could be applied to credit default swaps. For example, the seller's payment could be estimated as the notional principal amount, multiplied by (1) the probability of a credit event occurring during the contract's life and (2) the expected recovery ratio.¹⁰⁰ Because a credit event could occur at any time during the contract term, the foregoing amount would have to be adjusted to reflect that fact. Since a seller's payment is either a substantial amount or zero, depending on whether a credit event occurs during the swap's term, the payment projected by this methodology would be more than zero but substantially less than the payment will likely be required if a credit event occurs. That is, an actual payment by the seller will almost certainly differ substantially from the projected amount. For a buyer of credit protection on a single name, this result can hardly be justified as a clear reflection of income. For the parties to an index swap or a seller of credit protection on debt of many reference entities, the results may more nearly represent actual experience.

The possibility of physical settlement raises additional issues. A physical settlement of a credit default swap consists of the protection buyer's transfer of reference obligations to the protection seller in exchange for the seller's cash payment equal to obligations' face amounts. A physical settlement, in other words, takes the form of a sale and purchase of debt instruments. For a physically-settling buyer, the seller's payment should be considered the amount realized on the sale of the reference obligations, and for the seller, the payment, at least to the extent of the obligations' fair market value, should be the tax basis of the instruments received in the settlement. This treatment of the seller's payment is possible only if none of it is recognized by the parties before settlement. Thus, if physical settlement is even a possibility under a swap contract, the seller's payment should not be recognized to any extent before the occurrence of a credit event.

Probably, the only feasible treatment of the seller's payment under a credit default swap is to require it to be recognized by both parties only when the amount is determined. That is, the approach that the IRS took in the 2002 ruling, not the approach Treasury took in the proposed regulations, is likely the only practical approach for credit default swaps.

Character of income, gain, and loss under notional principal contracts

The notional principal contract regulations only address issues of timing and leave issues of the character of income, gain, expense, or loss to be determined by other provisions of the tax law. Income or expense under a notional principal contract is generally ordinary income and expense, not capital gain or loss, whether the income or

¹⁰⁰ The probability of a credit event and the expected recovery ration would be inferred from swap premiums because the market for credit default swaps is the only significant evidence of these factors.

expense derives from a periodic or nonperiodic payment.¹⁰¹ Capital gain or loss can only arise on a sale or exchange of a capital asset,¹⁰² and receiving or making a payment required by a notional principal contract is usually not a sale or exchange.

However, a physical settlement of a credit default swap consists of the protection buyer's transfer of reference obligations to the protection seller in exchange for the seller's cash payment of the notional amount. A physical settlement, in other words, takes the form of a sale and purchase of debt instruments. If the buyer holds the reference obligations as capital assets (investment property), the statutes entitle the buyer to report gain or loss on this transaction as capital gain or loss. Moreover, it is a basic principle of income tax that a purchaser of property must capitalize the property costs,¹⁰³ and a protection seller acquiring reference obligations in a physical settlement should thus not be allowed an immediate deduction for the payment.

The treatment of termination payments raises additional issues. Normally, a transaction in which a taxpayer's rights are extinguished is not considered a sale or exchange.¹⁰⁴ If a taxpayer terminates a swap position in a transaction with the counterparty, the position is extinguished, not transferred to the counterparty. However, §1234A provides that gain or loss is deemed to be realized on a sale of a capital asset if it is "attributable to the cancellation, lapse, expiration, or other termination of ... a right or obligation ... with respect to property which is (or on acquisition would be) a capital asset in the hands of the taxpayer."¹⁰⁵ It is not obvious that many swaps are "a right or obligation ... with respect to property." For example, an interest rate swap refers to interest rates and a notional principal amount, not any particular debt instrument or even type of debt instrument. However, the policy underlying §1234A—to prevent taxpayers from manipulating transactions to derive capital gains from profitable positions and ordinary losses from unprofitable positions—may apply to swaps.¹⁰⁶ For example, because a swap position is property, it is a capital asset if held for investment, and an assignment of the position to a person other than the counterparty is a sale or exchange. Without §1234A, a taxpayer could realize capital gain on selling profitable positions to

¹⁰¹ Prop. Reg. §1.162-30, proposed by REG-166012-02, 69 Fed. Reg. 8886 (Feb. 26, 2004).

¹⁰² IRC §1222.

¹⁰³ IRC §263(a).

¹⁰⁴ **Error! Main Document Only.** *Fairbanks v. US*, 306 US 436 (1939). In the Court's view, a sale or exchange is a transfer of property to another person, in exchange for money or other property, and in a transaction extinguishing a taxpayer's interest, the taxpayer transfers no property to the other person. In *Fairbanks*, the court held that a holder of a debt instrument had ordinary income or loss when the instrument was paid because of the lack of a sale or exchange. Congress overturned the Court on these particular facts (IRC §1271(a)), but the principle remains valid in contexts where not changed by statute.

¹⁰⁵ IRC §1234A.

¹⁰⁶ For §1234A and Congress' reasons for enacting it, see Bittker & Lokken ¶57.3.3.

other persons and ordinary loss on losing positions by working out terminations with the counterparties. If §1234A applies to swap positions, all terminations, regardless of how effected, generate income or loss of the same character—capital gain or loss if the position is held as a capital asset.

To clarify this ambiguity, the Treasury has proposed regulations that would apply §1234A to gain or loss on making or receiving a termination payment under a notional principal contract.¹⁰⁷ The proposed regulations would further clarify that §1234A does not apply to any payment made under a notional principal contract, whether periodic or nonperiodic, even if the payment is made at the conclusion of the contract.¹⁰⁸ Section 1234A could only apply to a termination payment, which is a payment received or made on assigning a position to a third party or received from or made to the counterparty in a separate transaction extinguishing the position.

Although the proposed regulations are correct as an application of current law, they would allow taxpayers to generate results contrary to the spirit of §1234A. Shifts in market prices often cause swap positions to increase in value. For example, if *T* makes a three-year contract to swap the LIBOR for fixed payments at 4 percent and interest rates thereafter rise so that the LIBOR can only be swapped for fixed payments at 5 percent, *T*'s position, which initially had no net value, now has a positive value. At this point, *T* could either continue collecting payments under the swap contract or cash out the swap position immediately. If *T* takes the first alternative, the net payments received are ordinary income, but if *T* takes the latter alternative, the cash received is capital gain.¹⁰⁹

Section 1234A would have especially pernicious effects if applied to credit default swaps. For a credit protection buyer, the value of a swap position increases as the credit standing of the reference entity deteriorates and the probability of a credit event becomes higher. A buyer's position becomes especially valuable if public information about the reference entity suggests a high probability of that the entity will soon default or declare bankruptcy. Under a contract requiring cash settlement, such a buyer may either (1) wait for the credit event and receive payment under the contract as ordinary income or (2) sell the position before a credit event occurs, realizing a capital gain. Apart from taxes, these two alternatives might pose a difficult investment choice, but if the buyer is unincorporated and has held the contract for more than one year, tax considerations would virtually compel the buyer to use the sale alternative.

From a policy perspective, such opportunities to change the character of income or gain under credit default swaps are a major fault with the notional principal contract

¹⁰⁷ Prop. Reg. §1.1234A-1A(a), proposed by REG-166012-02, 69 Fed. Reg. 8886 (Feb. 26, 2004). The proposed regulations will only apply to notional principal contracts made after final regulations are issued. Prop. Reg. §1.1234A-1A(d).

The IRS issued a private letter ruling indicating that §1234A applies to swap positions under the current regulations. PLR 9824026 (March 12, 1998).

¹⁰⁸ Prop. Reg. §1.1234A-1A(b).

¹⁰⁹ The capital gains result can only be obtained by accelerating the taxable event, eroding the advantage some, but the net advantage of this alternative might still be substantial.

rules in this context. Since these opportunities arise under statutes (§1234A in particular), Treasury could deny them only by amending the notional principal contract regulations to exclude credit default swaps from their scope.

Cross-border notional principal contracts

Income under a notional principal contract usually has its source at the taxpayer's residence.¹¹⁰ The U.S. withholding taxes only apply to income of nonresidents from sources within the United States.¹¹¹ Thus, the source rule effectively exempts income under notional principal contracts from the withholding taxes.

Mark-to-market treatment for credit default swaps

Since 1981, U.S. tax laws have contained provisions requiring parties to some derivatives transactions to recognize gain or loss from the transactions by marking them to market annually.¹¹² A common characteristic of these derivatives is that they are traded in public markets where they are marked to market daily. Currently, credit default swaps are traded exclusively in over-the-counter markets distinguished by a lack of transparency. A mark-to-market regime for these swaps is not appropriate under those conditions. Credit default swap markets are becoming more transparent, and exchanges may soon be created for these swaps. The time may soon come when mark-to-market taxation is appropriate for at least some credit default swaps.

Conclusion

Credit default swaps are complex financial instruments and the tax treatment of these instruments inevitably raises difficult issues. This article examines several sets of U.S. tax rules that could apply to credit default swaps. Under current law and current market conditions, two alternatives—treating credit default swap as contingent put options and treating these swaps as notional principal contracts—are feasible. Of these two, I believe that option treatment best handles the principal tax issues—the timing of income and expense, the character of income and expense, and the treatment of cross-border swaps.

¹¹⁰ Reg. §1.863-7(b)(1). See Bittker & Lokken ¶73.9 text accompanying notes 9–14.

¹¹¹ IRC §§871(a)(1), 881(a).

¹¹² IRC §1256(a).

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