

**PRESENT LAW AND ANALYSIS
RELATING TO THE
TAX TREATMENT OF DERIVATIVES**

Scheduled for a Public Hearing
Before the
SUBCOMMITTEE ON SELECT REVENUE MEASURES
of the
HOUSE COMMITTEE ON WAYS AND MEANS
on March 5, 2008

By the Staff
of the
JOINT COMMITTEE ON TAXATION



March 4, 2008
JCX-21-08

CONTENTS

	<u>Page</u>
I. SUMMARY	1
II. GENERAL OVERVIEW OF DERIVATIVES	2
A. Derivatives Defined	2
B. Uses and Abuses	4
C. The Building Blocks: Options, Forwards and Swaps	5
1. Options	5
2. Forwards	6
3. Swaps	9
III. SYNTHETIC OWNERSHIP	10
IV. BASIC MODES OF TAX ANALYSIS.....	12
V. SUMMARY OF CURRENT TAX RULES FOR DERIVATIVES WITH RESPECT TO PUBLICLY TRADED EQUITY	15
A. Options	15
1. Timing.....	15
2. Character.....	15
3. Source	16
B. Forwards	17
1. Timing.....	17
2. Character.....	17
3. Source	18
C. Swaps	19
1. Timing.....	19
2. Character.....	19
3. Source	20
D. Special Issues Raised by Source Rules as Applied to Equity Swaps	21
E. Summary Tables	23
VI. CASE STUDY: MANDATORY CONVERTIBLE SECURITIES	26
A. Background.....	26
B. Tax Treatment.....	28
1. Actual investment in Dogs of the Dow stocks.....	28
2. Treatment of mandatory convertible securities under present law	28
3. Constructive ownership approach.....	30
4. Mark-to-market treatment.....	31
5. Interest accrual approach	32

I. SUMMARY

This document¹ provides a brief introduction to financial derivative instruments (“derivatives”) and the complex tax policy issues that they raise. In Section II, we provide a definition of derivatives and discuss their uses in business and financial markets. We then define and explain options, forwards and swaps, the fundamental building blocks of all other derivatives. Expanding on the discussion of options and forwards, we outline in Section III how derivatives and debt instruments can be combined to synthesize the economic returns of an equity security. In Section IV we explore in general terms the challenges that derivatives and their uses pose for the income tax system. Section V contains a brief discussion of current tax law as it applies to options, forwards and swaps, along with two summary tables. The first table provides a broad overview of tax rules that currently apply to derivatives. The second table shows how the particular factual circumstances that apply to holders of the same type of instrument (a call option) can radically change the tax rules applicable to that asset. In Section VI, we present a more detailed case study of a single prepaid derivative contract (a “mandatory convertible”) that provides its holder with an economic return that matches an active stock trading strategy. In that context, we discuss various approaches to the tax treatment of prepaid derivative contracts, including the interest accrual approach adopted by H.R. 4912.² As described in greater detail below, H.R. 4912 changes the tax treatment of certain prepaid derivative contracts by requiring holders of the contracts to include on an annual basis as interest income an amount generally calculated by reference to a short-term applicable federal rate.

¹ This document may be cited as follows: Joint Committee on Taxation, *Present Law and Analysis Relating to the Tax Treatment of Derivates* (JCX-21-08), March 4, 2008. This document can also be found on our website at www.house.gov/jct.

² Introduced Dec. 19, 2007 (Rep. Neal).

II. GENERAL OVERVIEW OF DERIVATIVES

A. Derivatives Defined

As used in this pamphlet, a “derivative” is a bilateral (two-party) executory contract (a contract under which either or both parties must perform in the future, by delivering property or money) with a limited term (lifespan), the value of which is determined by reference to the price of one or more fungible securities, commodities, rates (such as interest rates), or currencies (an “underlier”).³ The value of a derivative may be determined by reference to the price of an underlier that is a single security, commodity, or currency, for example the price of a share of stock of a public company, the price of a barrel of oil, or the price of the Euro, or an underlier that comprises multiple securities, e.g., the S&P 500. Similarly, interest rates, such as the London Interbank Offered Rate (“LIBOR”), can serve as the underlier for a derivative; interest rates in turn can be described as the price of money. Underliers that are themselves identifiable tangible or intangible property, such as wheat, shares of stock or debt instruments, often are referred to as “physicals,” to distinguish them from the derivatives that reference them.

For the sake of clarity and brevity, this pamphlet focuses primarily on derivatives whose underliers are shares of stock of one or more domestic publicly traded corporations; these derivatives are usually described as “equity derivatives.” Again for clarity, this pamphlet addresses only equity derivatives employed in the capital markets, and not employee stock options or other deferred compensation instruments.

In effect, a derivative is a wager with respect to the change in the price or yield of an underlier.⁴ In many cases (e.g., options or forward contracts) one party to the derivative contract bets that the price of the underlier will increase, while the “counterparty” bets that it will decrease; these are usually described as “directional” bets. In other cases (e.g., interest rate swaps), the bet can be understood as an “outperformance” (or “relative value”) bet, in which the wager is not made with respect to absolute changes in prices or rates, but rather with respect to the relationship between two specified prices or rates.

In some cases, one party to the contract may own the underlier, but ownership of the underlier is not a requirement for entering into a derivative contract. In the case of an equity derivative, the issuer of the underlying physical equity may itself be one of the parties to a derivative (as when a corporation issues warrants to the public), or the contract may be a “side bet” between two third parties.

³ Excluded from this definition are executory contracts to purchase unique property. Thus, an option to purchase a particular piece of real property is not a derivative, but an option to purchase a quantity of a fungible commodity, e.g., gold or wheat, is. We also exclude for purposes of this pamphlet “derivatives” that function as bets on ascertainable outcomes that are not property or rates, such as the number of initial jobless claims in a month or the number of heating degree days in a month.

⁴ See generally, Kevin Dolan and Carolyn DuPuy, *Equity Derivatives: Principles and Practice*, 15 Va. Tax Rev. 161 (1995-1996).

The markets typically do not distinguish between cash-settled and physically settled derivatives. If the underlier is fungible and there is a functioning market for it, there should not be any material economic difference between a cash-settled contract and a contract that requires one party to deliver the underlier; if the party required to deliver the underlier does not own it already, it should be possible to acquire the underlier without incurring significant transaction costs.⁵

Derivatives are documented and traded as fungible publicly traded contracts with identical terms (e.g., exchange-traded options or futures contracts), or as privately negotiated (“over-the-counter,” or “OTC”) bilateral contracts. OTC derivative contracts often are documented using forms developed by the International Swaps and Derivatives Association, Inc. (“ISDA”), although the use of these forms is strictly a matter of market preference. Almost all swaps are OTC contracts.

Because derivatives are bilateral contracts, dealers are very important to the functioning of the derivatives markets. In practice, when a non-dealer (an “end-user”) wishes to enter into an OTC derivatives contract, it will enter into that contract with a derivatives dealer (thereby not only creating the risk position that the customer desires, but also taking on credit risk with respect to its counterparty, the dealer).⁶ That derivatives dealer in turn often will retain and hedge the resulting risk position in its derivatives “book.” In contrast, the counterparty to all futures contracts (i.e., forward contracts executed through the medium of a futures exchange) is (in effect) the exchange itself. This arrangement enables parties to liquidate positions without negotiating with a specific counterparty, and reduces credit exposure as well.

There is no natural limit to the number of derivatives that can exist with respect to an underlier. That is, because derivatives function as side bets, there can be as many derivatives in respect of an underlying share of stock as there are parties willing to wager on that stock.

⁵ Where the number of physically settled derivatives on an underlier exceeds the trading “float” in the underlier, a “short squeeze” can develop, in which parties to the derivative cannot locate enough of the underlier to make delivery as required under the contract. Such short squeezes have been a significant problem in recent years in the settlement of some fixed-income related derivatives, such as some credit default swaps.

⁶ Parties to OTC derivatives contracts often address counterparty credit risk through collateral or other arrangements.

B. Uses and Abuses

The ability to place a directional bet on prices or rates of a wide range of publicly traded physicals (or other derivatives) is extremely useful to businesses and speculators. Businesses regularly use commodity derivatives to hedge against price fluctuations in raw materials. Similarly, businesses commonly use currency derivatives to hedge against exchange rate fluctuations and interest rate derivatives to hedge against changes in the cost of capital. An investor or a portfolio manager that owns an underlier may use a derivative to hedge against a decrease in its value. Other taxpayers may use derivatives to establish leveraged risk positions consistent with the taxpayers' specific views of future market trends (a "directional" bet).

Derivatives serve many important commercial and financial objectives. Derivatives are critically important tools in the risk management process, and the flexibility of the OTC derivative structure enables taxpayers to make highly customized bets to accomplish their trading strategies. Moreover, the trading of derivatives (and the quotation of their prices) makes markets more efficient by facilitating price discovery, both with respect to related derivatives and with respect to the underlying physicals.

One commercial reason for the popularity of derivatives is that derivative contracts typically afford a party much higher leverage than would be commercially possible (or permitted by relevant margin regulations) if the party were to establish a position in the underlying physical. That is, a taxpayer may use derivatives to place larger bets on price direction with smaller cash outlays. For example, a taxpayer with \$1,000 could purchase 10 shares of \$100 stock or options on a significantly greater number of shares; the options magnify potential profits or losses.

On the other hand, derivatives have also been used by some taxpayers to obtain tax-advantaged returns from bets that closely resemble an investment in an underlying physical. As discussed further below, a derivative or a combination of derivatives can be combined with a capital investment generating a risk-free rate of return, e.g., a Treasury security, to replicate the economic returns of virtually any underlier. Where ownership of the underlier would subject an investor's returns to different taxation than ownership of the economically equivalent derivatives and bonds, tax-sensitive investors at the margin will adjust the form of their investments to obtain the most beneficial tax treatment. As derivatives become more readily accessible to retail investors and provide more opportunities for them to synthesize various underliers at low-cost, one must anticipate that investors will gravitate towards tax-advantaged forms of investment, thus reducing overall tax revenues.

C. The Building Blocks: Options, Forwards and Swaps

1. Options

In general, an option on an underlying equity security is a contract that gives the holder of the option the right, but not the obligation, to buy from or to sell to the counterparty to the contract (the “writer,” “seller,” or “issuer” of the option) a specified number of shares of that equity security, at a fixed price (the “strike price”) at a specific time (a “European-style option”) or over a specific period of time (an “American-style option”). The option buyer pays the writer a “premium” for the option; by tradition, most options are structured with “prepaid” premiums; that is, the holder pays the option premium at the inception of the contract.

The amount of the premium will vary with the strike price, the term of the option, the volatility of trading prices for the underlier, and interest rates. Very generally, in the case of a “call” option to buy stock, the premium will go up as the strike price goes down, the term of the option is set longer, or the trading price of the underlier becomes more volatile. Options may be physically settled, meaning the actual security is delivered at settlement, or net cash settled, meaning that one party pays cash at settlement equal to the difference between the strike price of the option and the value of the underlier.

A “call option” is an option to buy property; it represents a directional bet by the purchaser that the value of the underlier will increase (and a bet by the writer that the price of the underlier will fall or, alternatively, that it will not rise to the level of the strike price).⁷

Example 1.—European-style, net cash-settled call option. Party A purchases a European-style, net cash-settled call option on a single share of XYZ stock from Party B (the issuer) on December 1, 2008, when XYZ is trading at \$100 per share. The option requires Party B to pay Party A the amount (if any) by which the market price of XYZ on the settlement date exceeds \$110. Suppose the value of XYZ stock on the settlement date is \$150. Party B would pay Party A \$40. Conversely, if the value of XYZ is \$105 on the settlement date, the option would expire unexercised. In either case, Party A would have paid a nonrefundable premium for the option.

A “put option” is an option to sell property and represents a directional bet by the purchaser that the price of the underlier will fall (and a bet by the writer that the price of the underlier will increase or, alternatively, that it will not fall to the level of the strike price).

Example 2.—Physically settled, European-style put option. Party A purchases a physically settled, European-style put option on a single share of XYZ stock from Party B (the issuer) on December 1, 2008, when XYZ is trading at \$100 per share. The option gives Party A the right (but not the obligation) to sell one share of XYZ stock to investor B on December 31, 2009, for \$100. (This is an “at-the-money” put option; that is, one where the strike price equals the market price for XYZ stock at inception.) Party A is betting that the price will fall. If the price of a share of XYZ is below \$100 on the settlement date, Party A will exercise his right to require Party B to buy one share for a price that exceeds its market value. Conversely, Party B is

⁷ A “warrant” is a call option that is written by a corporation on its own stock.

betting that the price will increase, and Party A will not exercise the option. In that case, Party B will profit to the extent of the premium Party B collected when Party B issued the option to Party A. Suppose the price of one share of XYZ on the settlement date is \$90. Party A will exercise his option and require Party B to purchase a share for \$100. Since A can acquire the share for \$90 and immediately sell it to B for \$100, A profits by \$10 (less the amount of option premium that A paid to B).⁸

2. Forwards

A traditional (“postpaid”) forward contract on an equity security is a bilateral executory contract pursuant to which the forward buyer agrees to purchase from the forward seller a fixed quantity of that security at a fixed price (the “forward price”); payment and delivery occur on a fixed future date (the “delivery date”). In a traditional forward contract, neither party to the contract makes a payment at the time the contract is executed, although arrangements for collateral may be made.

A forward contract is an implicit bet by the forward buyer that the price of the underlier will increase and by the forward seller that the price will fall. Like options, forwards can be physically settled or net cash settled by making a payment equal to the difference between the contract price and the then-current price at the time the contract expires.

A futures contract is simply a forward contract that is standardized and traded on an organized futures exchange, such as the Chicago Mercantile Exchange. The exchange acts as the counterparty to every transaction. As a result, every trade on the futures exchange effectively results in two contracts: one between the forward buyer and the exchange, and the other between the forward seller and the exchange. The parties to a futures contract post “variation margin”; this amount is adjusted daily to reflect the extent to which the position of a futures contract buyer or seller is “in the money” (i.e., reflects an unrealized profit) or “out of the money” (i.e., reflects an unrealized loss).

Example 3.—Net cash-settled, forward contract for stock. On December 1, 2008, when XYZ stock is trading at \$100/share, Party A, the forward seller, enters into a net cash-settled forward contract with Party B, the forward buyer, for the forward sale of one share of XYZ stock at a forward price of \$106 on December 31, 2009. If the price of XYZ stock on the settlement date is above the forward price, the contract requires Party A to pay Party B the excess of the market price over \$106. If the price is below \$106 on December 31, 2009, Party B is required to pay Party A the amount by which \$106 exceeds the market price.

⁸ Party A could make a similar directional bet by “shorting” XYZ stock. Party A would establish a short sale by borrowing one share from a broker and selling it into the market. To close his short position, Party A delivers a share of the stock to the broker (which may be worth more or less than the amount Party A received when Party A sold the share short). If the price of the stock falls, Party A “wins” the bet; if the price rises, Party A loses. A “naked short”, i.e., a short position that requires the short seller to go into the market and acquire replacement shares, has potentially unlimited downside (there is no limit to how much the price of the shorted stock could increase). For this reason, a put option, which is limited on the downside to the loss of the option premium, may be a more attractive bet for some investors.

Although forwards and futures are bets on the future prices of a specified underlier, in normal markets the price at which a forward contract trades contains no information about future price levels of the underlier. Instead, under standard arbitrage theory, the price under a traditional forward or futures contract for a nonperishable commodity (gold, for example), or a traded financial instrument is determined entirely by the item's current ("spot") price at the time the contract is executed, plus the "cost to carry" the item for the term of the contract (a time value of money return on the cash that would be invested in acquiring the item at execution of the contract and holding it until the final delivery date, together with any warehousing or similar expenses) and minus the expected cash yield on the item (for example, expected dividends if the item is corporate stock) over the term of the contract. For example, if one share of stock in Company XYZ costs \$100 today, the one-year interest rate is six percent, and XYZ is expected to pay \$4 per share in dividends over the coming year, the one-year forward price of one share of XYZ stock would be \$102 (\$100 plus 6 percent interest minus \$4 yield). If XYZ stock paid no dividend (or instead XYZ stock was a precious metal or foreign currency), the forward price would be \$106, reflecting simply the time value of money.⁹

In each case, the forward price reflects simply the current spot price, plus the "cost to carry," minus projected cash returns over the contract term, *not* market sentiments about where prices are headed in the future. Forward prices thus are driven primarily by current prices and interest rates and do not serve as predictions of the future. If, for example, forward prices were higher than that predicted by this model, then arbitrageurs could earn riskless profits by selling the property forward, actually buying the property today, and actually financing the net cost of owning the property until the contract matured. If forward prices were lower, arbitrageurs would sell the property short today, invest the cash proceeds at current interest rates, and buy the property forward to deliver to close out the short sale.

A "prepaid forward" requires the forward buyer to pay the forward seller the forward price (discounted to present value on the date of payment) at the time the parties enter into the contract (as opposed to the delivery date). The forward seller delivers the underlier or net cash settles the contract on the forward date.

Prepaid forward contracts were relatively uncommon in the markets until the development of publicly traded forward (not futures) contracts some 15 years ago. When those contracts first were considered, their sponsors needed to address the fundamental credit problem of assuring performance by members of the public who were forward buyers. This problem was solved by requiring that the forward buyer pay to the forward seller at the outset, rather than at maturity, the amount due under the contract.

A prepaid forward contract on an equity security is frequently referred to as a "mandatory convertible" security. This terminology can be confusing, because the tax analysis of a mandatory convertible security is quite different from that applicable to a true convertible bond.

Example 4.—Prepaid Forward Contract. Assume the forward price under a traditional (postpaid) forward contract for one share of XYZ stock on December 31, 2009, is \$106. XYZ

⁹ These examples ignore storage costs and minor timing differences in the cash flows.

today does not pay dividends, and it is not expected to begin to do so for the foreseeable future. XYZ stock today trades at \$100/share. On December 1, 2008, Party A and Party B enter into a net cash-settled, prepaid forward contract. Party B, the forward buyer, pays Party A \$100 (which is both the current trading price of XYZ stock and, by virtue of forward pricing theory described earlier, the present value on December 1, 2008, of a \$106 payment on December 31, 2009). If the price of XYZ stock on December 31, 2009 (the delivery date) exceeds \$106, Party A will be required to pay Party B the amount by which the market price of a share of XYZ stock exceeds \$106. If the price is equal to or below \$106, no payments are made (Party B met all of its payment obligations at the inception of the contract).

By contrast with the pricing of a traditional forward contract in which no payment is made when the contract is executed, the pricing of a true prepaid forward contract (in which the seller is free to use the forward sales proceeds that it receives at execution of the contract as it wishes, without compensation to the buyer) reflects only the spot price of the item to which the contract relates plus any warehousing or similar expenses. The long party in a prepaid forward contract obtains the economic return on the item underlying the contract but also pays for the item at the outset. If the underlying property has a current cash yield, then the seller in a true prepaid forward contract would in some fashion pass that yield (or an estimate thereof) to the buyer. Similarly, the pricing of a true prepaid forward contract in respect of property without a cash yield would be largely indistinguishable from that of a current cash sale.

Some prepaid forward contracts are better understood as traditional forward contracts in respect of which the forward buyer has posted 100 percent of the purchase price as collateral, on which the forward seller in turn is required to pay interest. The forward contract is priced like any other traditional forward contract, but the time value of money return paid to the buyer at settlement on the cash it paid on execution compensates the buyer for the time value of money accretion in the forward price of the property.

A prepaid forward contract thus might be priced like a current sale, or alternatively might be priced like a traditional forward contract, but in respect of which the forward buyer is paid or otherwise credited with a time value of money return. Arbitrage theory suggests that the two formulations are equivalent in value.

A *postpaid* forward contract is economically equivalent to writing a European put option and purchasing a European call option where the strike prices are equal in both cases to the forward price. (This is the basis of “put-call” parity, described below.) For example, if the forward price of a share of XYZ stock on December 31, 2009 is \$106, a party selling a put with a \$106 strike price and buying a call at the same strike price is making the same bet as the forward buyer (Party B) in Example 3. If the price of XYZ stock is above \$106, the call option gives Party B a right to the upside in XYZ’s price, and if the price is below \$106, the put option will require Party B to pay the downside.

Similarly, a *prepaid* forward contract is economically equivalent to the sale of a put and the purchase of call at the forward price plus the acquisition of a zero-coupon bond (maturing on the delivery date) with a principal amount equal to the forward price. For example, the forward buyer in Example 4 (Party B) could purchase a zero-coupon bond from the prepaid forward seller that pays an amount equal to the forward price (\$106) on the delivery date (rather than

paying the same sum to the counterparty under the forward contract). Then, as discussed above, Party B could enter into offsetting puts and calls with a strike price equal to the forward price. The effect of purchasing the zero-coupon bond is the same as prepaying the forward price: Party B will not have to produce additional funds to pay Party A at maturity of the contract.

3. Swaps

A swap is an agreement between two parties to exchange sets of cash flows over a period of time. Swaps are more complex instruments than are simple options or forward contracts, because swaps are extremely flexible instruments that can be used in practice to take on many different economic risk positions.

A traditional interest rate swap, for example, is a bet that payments of a floating interest rate will exceed a specified fixed interest rate (or vice versa) over the term of the contract. These contracts can be explained as the economic equivalent of a series of cash-settled forward contracts on short-term LIBOR deposits, but this explanation is not always intuitive. Another, more intuitive, way of understanding these contracts is that they are “relative value” or “outperformance” bets; instead of betting on the absolute direction of interest rates, the party to an interest rate swap is betting that one set of cash flows (e.g., floating rate interest on a specified “notional” principal amount that is used solely for purposes of calculating the flows under the swap) will be greater than another set of flows (e.g., fixed interest on the same “notional” principal amount). Thus, the fixed rate payor under an interest rate swap expects that the value of the floating interest payments that it will receive over the life of the swap will exceed the value of the fixed coupon it has agreed to pay.

Other swaps, usually referred to as “total return swaps,” most easily are understood as the economic equivalent of making a 100-percent leveraged investment in the underlier. An “equity swap” is a total return swap on a specified equity security.

Example 5.—Equity Swap. In a “plain vanilla” equity swap, Party A agrees to make 10 payments to Party B on December 31 of each of the next 10 years, in an amount equal to the sum of: (1) the appreciation, if any, in value of 100 shares of XYZ stock during the year, and (2) dividends paid on 100 shares of XYZ stock during the year. Likewise, Party B agrees to make 10 identically timed payments to Party A, in an amount equal to the sum of: (1) the depreciation, if any, in value of 100 shares of XYZ during the year, and (2) a fixed (or floating) rate of interest multiplied by the value of 100 shares of XYZ stock at the beginning of the year. Since the payments are all due on the same day, the parties agree that all payments are netted, and only one party makes a net payment to the other.

Economically, this equity swap in the example puts Party A in the same economic position as it would have been in if it bought XYZ stock at the inception of the swap contract and borrowed the purchase price; Party A incurs the same costs (expressed as the interest on a “notional” principal amount), receives the same current returns (dividend-equivalent amounts), and is subject to the same market opportunities and risks (appreciation or depreciation in the value of the stock).

III. SYNTHETIC OWNERSHIP

As background to the tax discussion that follows, it is important to understand how derivatives can be used to synthesize the cash returns of virtually any physical underlier. A total return swap achieves this “synthetic ownership” directly through the terms of the swap itself. The same result can also be achieved, however, with forward contracts or options.

The relationship between European-style put and call options with the same strike prices and expiration dates (a relationship known as “put-call parity”) is expressed by the following equation:

$$S + P(K) = Z(K) + C(K)$$

Where:

S is the value of a share of stock, which pays no dividends, on the expiration date of European-style put and call options (P and C);

$P(K)$ is the value on the expiration date of an option to sell (put) S at a strike price of K ;

$Z(K)$ is a zero-coupon bond worth K on the expiration date of the options (P and C);
and

$C(K)$ is the value of an option to buy (call) S at a strike price of K on the expiration date.

One commentator has explained the relationship expressed by the equation as follows:

Intuitively, this relationship [among the values of the stock, the bond, and the options] makes sense, because an investor who holds both a share of stock and a put at a strike price of K . . . will at the date of exercise have assets worth S but no less than K , because he will exercise the put if S is less than K . Similarly, an investor who holds a zero coupon bond that will pay K on the exercise date and a call at a strike price of K is guaranteed the value of K on that date; if S is then greater than K , she will exercise the call to receive stock with the value of S . If the stock plus a put must equal the zero plus a call on the exercise date, the two positions must also be equal in value before that date if there are competitive markets for each contract. Otherwise, arbitrageurs would sell the more expensive position and acquire the cheaper position to obtain a riskless windfall to the extent of the difference in value.¹⁰

¹⁰ Alvin Warren, *Financial Contract Innovation and Income Tax Policy*, 107 Harvard L. Rev. 460, 466 (1993).

Using simple algebra, the equation can be solved for S , showing the combination of instruments that capture the value of the stock:

$$S = Z(K) + C(K) - P(K)$$

In plain English: the value of the stock (S) on the expiration date of the options can be replicated by: (i) purchasing a zero-coupon bond that will pay K (the strike price of the options) on the expiration date of the options (C and P); (ii) purchasing a call option (C) on S at price K ; and (iii) writing a put option on S at price K (with the same expiration date as the options). If the value of S on the expiration date of the options is greater than K , the call option will be exercised, increasing the return to the holder of the option/bond combination to the amount that would have been provided by ownership of S . If the value of S on the expiration date of the options is less than K , the put option will be exercised by the counterparty, reducing the return to the holder of the option/bond combination to the amount that would have been provided by ownership of S .

Forward contracts, option contracts and swaps on a common underlier thus all are directly related to each other, and to the underlier that they reference. In practice, this close connection means that financial specialists can engineer one such contract from the others, or separate one component of an underlier's returns from the others, and sell those separate components to different taxpayers.

IV. BASIC MODES OF TAX ANALYSIS

The tax analysis of financial instruments usually proceeds by considering three basic questions:

1. What is the character of the income generated by the instrument? (This can include capital gain as opposed to ordinary income, and also tax-preferred income of various types, such as tax-exempt interest income from a municipal bond.)
2. What is the timing of income recognition in respect of economic returns from the instrument?
3. What is the source (U.S. or non-U.S.) of the income generated by the instrument? (This last question is relevant for determining whether U.S. withholding tax is imposed on payments from a U.S. person to a foreign person.)

The tax law generally approaches the resolution of these questions as applied to a particular financial product through a “cubbyhole” system.¹¹ A few different sets of rules have been developed for a few broad types of instruments, e.g., debt, equity, options, and forward contracts and swaps. For example, the tax system largely leaves to caselaw to define the indicia to be used to distinguish corporate debt from corporate stock. Once the instrument is identified as stock (is placed in the “stock” cubbyhole), then taxpayers can look to the Internal Revenue Code to learn that a sale of stock by an investor at a profit ordinarily results in capital gain when the stock is sold (and not before); distributions out of “earnings and profits” are taxed as dividends; and those dividends in turn are treated as paid from U.S. sources when the issuer is a domestic corporation.

These rules are a product of “different policy choices with respect to timing, source, character or other attributes.”¹² Judgments about the financial risks associated with different kinds of instruments provide a partial explanation for the differing tax treatment accorded to them. As Warren explains, “[i]ncome is generally taxed annually on a yield-to-maturity basis on financial assets with fixed returns [e.g., debt], whereas a wait-and-see approach is usually applied to assets with contingent returns [e.g., equity].”¹³

When a new or innovative product becomes available, tax professionals try to determine how it should be taxed by picking the most closely analogous product for which rules exist and then assigning the new product to the existing cubbyhole. The tax consequences for the instrument then follow from the tax characteristics of the cubbyhole to which the instrument is assigned. But this approach has its pitfalls; “[r]easoning by analogy is a potent tool when

¹¹ Edward D. Kleinbard, *Equity Derivative Products: Financial Innovation’s Newest Challenge to the Tax System*, 69 Tex. L. Rev. 1319 (1990-1991).

¹² David Weisbach, *Tax Responses to Financial Contract Innovation*, 50 Tax L. Rev. 491, 494 (1995).

¹³ Warren, 107 Harvard L. Rev. 460, 465 (1993).

applied to incremental variations on a familiar theme, but it fails miserably when applied to genuine innovations.”¹⁴

Importantly, the caselaw disfavors decomposing (“bifurcating”) a financial instrument into different subcomponents. In part, this reluctance reflects the fact that there is often a large number of combinations of different subcomponents into which the same instrument could plausibly be decomposed, as demonstrated in Section III. As a result, the IRS and taxpayers typically are required to assess all the terms of the instrument and decide into which existing cubbyhole the undivided instrument most neatly fits. In the case of some new financial instruments, no existing cubbyhole is a wholly persuasive receptacle for the instrument, and one must settle for choosing the least awkward alternative.

For example, a prepaid forward contract on equity (a mandatory convertible) has some characteristics similar to a bond; the purchaser pays the entirety of her investment at inception, and receives in return periodic cash flows (or is credited with those amounts) together with a final payment at maturity. The contract in fact often is labeled a debt instrument for securities law purposes. At the same time, the contract does not satisfy some key criteria that traditionally are used to define the “debt” cubbyhole, in that the amount paid at maturity is wholly contingent, because it is determined by reference to the future value of a share of stock. Because the caselaw disfavors “bifurcation,” the IRS and taxpayers must effectively choose between two imperfectly fitting preexisting cubbyholes (the debt cubbyhole and the forward contract cubbyhole).

The usual modes of tax analysis also generally disfavor aggregating combinations of smaller components into one synthetic instrument for tax purposes. Thus, while a taxpayer can create a synthetic share of stock through options and a debt instrument, those instruments ordinarily are taxed separately, even when acquired as a single unit.¹⁵

Legislation can address these limitations in the current methodology for analyzing new financial instruments by creating new cubbyholes. At the same time, there are dangers inherent in developing statutory rules for every new financial product. First, instruments can often be replicated through combinations of other instruments, thereby undoing some of the categorizations contemplated by new statutes. Second, drawing the line between different instruments (i.e., assigning one instrument to one cubbyhole, and another to a different one) itself can be very difficult, and may result in economically similar instruments being taxed quite differently. And finally, the pace of financial innovation is such that a system that contemplated a new statute for every new product would be perennially out of date.

In the case of derivatives, the tax analysis is further complicated by several important additional considerations. First, because derivative contracts can be used to achieve economic returns indistinguishable from a leveraged investment in an underlying physical security, taxpayers and the IRS as a preliminary matter must apply traditional economic substance modes of analysis to determine whether the bundle of derivatives in question ought more properly to be analyzed as a direct investment in the underlier(s) through the mechanism of a disguised agency

¹⁴ Kleinbard, 69 Tex. L. Rev. 1319, 1355 (1990-1991).

¹⁵ Cf. Rev. Rul. 2003-97, 2003-34 I.R.B. 380.

arrangement with the contracts' counterparty. This issue is particularly relevant, for example, to the taxation of some equity swaps and similar total return swaps.

Second, current law tax rules applicable to derivatives are not fixed, but rather change depending on the context in which the derivative is employed. For example, the same option contract may give rise to capital gain when held as a speculative investment, but ordinary income when held as a hedging contract. Similarly, returns from that option are taxed on a "wait and see" basis in general, but are taxed under "mark to market" rules when held by a trader who has elected that treatment, and are subject to "hedge accounting" timing rules when held as a hedging contract. And derivatives on foreign currency are taxed under a completely different set of rules than are other derivatives.

Third, the tax rules applicable to derivative instruments are not completely developed. The character rules applicable to swaps, in particular, follow from a series of IRS administrative rulings, many of which have no binding effect. Those rulings in turn have been criticized by some observers for treating all forms of swaps identically, even when those swap contracts fill different economic roles (as described above).

In sum, despite the economic equivalence of the returns that can be synthesized with the aid of various combinations of derivatives, current law does not necessarily treat economically equivalent returns in the same manner. As a result, the availability of derivatives can create tax planning opportunities for sophisticated investors, often allowing them to choose or change the timing, character, or source of economically closely comparable cash flows.

V. SUMMARY OF CURRENT TAX RULES FOR DERIVATIVES WITH RESPECT TO PUBLICLY TRADED EQUITY

A. Options

1. Timing

In general, gain or loss from options on stock is recognized on a wait-and-see (open transaction) basis. The purchaser capitalizes the cost of his option premium, and the option writer does not immediately include it in income.¹⁶ Instead, the amount of gain or loss is determined at the time of a subsequent recognition event; that is, the parties wait and see what happens when the option is exercised or sold (or when it expires unexercised).¹⁷ For instance, the purchaser of a cash-settled call option would determine gain or loss at the time the option is exercised by subtracting the option premium from the amount (if any) received from the writer of the option.

Different rules apply to certain options that are treated as “section 1256 contracts”. These include options on broad-based equity indices (such as an option on the S&P 500). Section 1256 contracts held as investments generally are marked to market at year-end (resulting in annual income or loss inclusions). Gain or loss is treated as 60 percent long-term capital, and 40 percent short-term capital, regardless of the taxpayer’s holding period.

2. Character

Gain or loss recognized by the purchaser of an option is considered to have the same character as the property to which the option relates in the hands of the option purchaser (or would have if acquired by the purchaser).¹⁸ Thus, in the case of a purchaser of an option on publicly traded stock as an investment, gain or loss will be capital. (Different results would be reached if the purchaser were a dealer in securities, a taxpayer using the option as a hedging contract, or a corporation purchasing an option on its own stock). In the case of an option writer, gain or loss from delivery is typically capital (unless the option is granted in the ordinary course of the taxpayer’s business). That gain or loss may be affected by the straddle rules of section 1092. In the case of the termination of an option other than through delivery of the underlier, the writer’s gain or loss typically is treated as short-term capital gain or loss, regardless of the term of the contract.¹⁹

¹⁶ See generally Rev. Rul. 78-182, 1978-1 C.B. 265.

¹⁷ In the case of a physically settled option, recognition of gain or loss is deferred until the point that the underlier, acquired at the time of exercise, is itself sold or exchanged. The premium paid to acquire the option is simply added to the basis of the underlier (along with the amount paid to exercise the option) at the time of exercise. See *id.*

¹⁸ Sec. 1234. Unless otherwise noted, all section references are to the Internal Revenue Code of 1986, as amended.

¹⁹ Sec. 1234(b)(1).

3. Source

Since the character of the income recognized by the holder of an option on publicly traded equity is typically capital gain or loss, the income is normally sourced based on the residence of the taxpayer.²⁰ Thus, U.S. persons typically recognize U.S.-source gain or loss, and non-U.S. persons recognize foreign-source gain or loss.

²⁰ See sec. 865(a).

B. Forwards

1. Timing

The execution of a forward contract in respect of an underlying stock generally has no immediate income tax consequences. Like an option, a standard forward contract is an executory contract and is treated as an open transaction until the contract is settled. If a forward contract is settled by delivery of the property underlying the contract, the taxpayer delivering the property recognizes gain or loss based on the difference between the price received and the taxpayer's basis in the property.²¹ The forward purchaser, by contrast, reflects the contract price as the basis for the property so acquired; gain or loss (if any) is deferred until the time of a subsequent sale or exchange of such property. (Conversely, performance under a section 1256 contract is treated as a taxable event to the purchaser as well.)²² The fact that a forward contract calls for payment by one party to the other party at the time the contract is executed has not been treated as changing the tax treatment of the contract.²³

As previously described, futures contracts are standardized formal contracts traded through the medium of a futures exchange, such as the Chicago Mercantile Exchange. Futures contracts traded on domestic (and some foreign) futures exchanges are generally treated as "section 1256 contracts" in the hands of investors or speculators. As applied to equity futures contracts held by investors, the rules of section 1256 apply primarily to futures contracts on broad-based indices; single-stock futures contracts (for which there is a limited market in the United States) are governed by a different set of rules in section 1234B.

As noted earlier, section 1256 imposes a mark-to-market timing regime on instruments within its scope. Gain or loss recognized by an investor in respect of a section 1256 contract (whether from a year-end mark-to-market valuation or termination of the contract) generally is treated as 60 percent long-term capital and 40 percent short-term capital, regardless of the investor's holding period. Different rules can apply to section 1256 contracts held as part of a hedging transaction or a "mixed straddle."

2. Character

The character of the gain or loss generally is the same as the character of the property delivered. If a forward contract is settled by cash payment, the gain or loss is capital if the underlying property is capital in nature.²⁴ If a forward contract is sold, the character of the gain or loss is capital if the forward contract is a capital asset in the hands of the selling taxpayer. The

²¹ Sec. 1001.

²² Section 1256(c)(1).

²³ Cf. Rev. Rul. 2003-7, 2003-1 C.B. 363 (Feb. 3, 2003).

²⁴ Sec. 1234A.

character of gain or loss recognized by a forward seller may be affected by the tax straddle and short sale rules of sections 1092 and 1233, respectively.

3. Source

As in the case of options, if the character of the income recognized by a party to a forward contract is capital gain or loss, the income is normally sourced based on the residence of the taxpayer.²⁵ Thus, U.S. persons typically recognize U.S.-source gain or loss, and non-U.S. persons typically have foreign-source gain or loss.

²⁵ See sec. 865(a).

C. Swaps

1. Timing

A swap with respect to publicly traded equity such as the one described in Example 5 is taxed as a “notional principal contract” pursuant to regulations under section 446. These regulations essentially require that the parties to the notional principal contract classify all payments pursuant to the contract as either: (i) a “periodic” payment; (ii) a “non-periodic” payment; or (iii) a “termination” payment.²⁶ Each type of payment is treated differently. Taxpayers generally must recognize (as income or deduction, whichever is relevant) the ratable daily portions of all “periodic” and “non-periodic” payments for the taxable year to which that payment relates, and must recognize a “termination” payment in the year the notional principal contract is extinguished, assigned, or terminated (i.e., in the year the payment is made).²⁷ Under proposed regulations, contingent non-periodic payments (such as a single termination payment tied to the increase or decrease in the value of the underlier) are accrued over the term of the swap based on an estimate of the amount of the payment.²⁸ The amount of a taxpayer’s accruals is periodically redetermined as more information about the expected amount of the non-contingent payment becomes available.²⁹

2. Character

Unlike the character of the income recognized from options and forwards, which typically is determined with reference to the character of gains and losses that result from a taxpayer’s transactions with respect to the underlying property, the character of swap payments is not determined by the character of the underlier. Proposed regulations issued in 2004 under section 1234A would clarify that any swap payment other than a termination payment (i.e., a periodic or non-periodic payment) generally constitutes ordinary income or expense.³⁰ This is consistent with the view that ongoing (periodic) payments with respect to a swap or similar notional principal contract should be treated as ordinary income, because these payments are not made with respect to a sale or exchange of a capital asset. In general, by application of section 1234A, gain or loss attributable to the termination of a swap contract should be capital if the contract is a capital asset in the hands of the taxpayer, and the proposed regulations would clarify this point as well.³¹

²⁶ David H. Shapiro, *Taxation of Equity Derivatives*, Tax Management Portfolio No. 188-1st, section III.A.2.a.

²⁷ *Id.*

²⁸ *See* Prop. Reg. sec. 1.446-3.

²⁹ *Id.*

³⁰ Prop. Reg. sec. 1.1234A-1.

³¹ The proposed regulations would treat any payment on a “bullet swap” or forward contract, including payments made pursuant to the terms of the contract, as termination payments for purposes of

3. Source

Income from a swap is generally sourced by reference to the residence of the taxpayer (with an exception for income earned through a U.S. branch).³² This rule has been seen by some observers as presenting an attractive opportunity for foreign investors to synthesize the return from ownership of U.S. stocks while avoiding the U.S. withholding tax that would apply with respect to dividends received from actual investments in those stocks.

Thus, if XYZ in Example 5 above is a U.S. corporation, Party A is a U.S. person, and Party B is a foreign person, the income that Party B receives from Party A (the dividend equivalent payments and the appreciation in the XYZ stock) will be treated as non-U.S. source income. As such, the income will not be subject to U.S. withholding tax (which applies only with respect to income that is treated as having a U.S. source). By contrast, if Party B had actually invested in 100 shares of XYZ stock, the dividends that Party B would have received would have been treated as U.S. source income. As such, the dividends would have been subject to U.S. withholding tax at either the 30-percent statutory rate or at a lower rate (typically 15 percent for a portfolio investor) if Party B were entitled to the benefits of an income tax treaty between the United States and his country of residence.

Section 1234A. Both of these types of contracts provide for all payments to be made at or close to the maturity of the contract.

³² Treas. Reg. sec. 1.863-7.

D. Special Issues Raised by Source Rules as Applied to Equity Swaps

As the preceding example demonstrates, there is a substantial difference in the U.S. withholding tax consequences for a foreign investor choosing between investing directly in U.S. stocks, on the one hand, or investing synthetically through an equity swap (total return swap), on the other. Many hedge funds and other unregulated collective investment vehicles are organized as partnerships or corporations resident in the Cayman Islands or another zero-tax jurisdiction with which the United States does not have an income tax treaty. These sophisticated institutional investors (as well as many others) often choose to invest in U.S. equities synthetically, in order both to obtain the implicit 100-percent leverage possible in an equity swap (but not in a direct investment in margin securities), and to reduce to zero the withholding tax rate imposed on dividend-equivalent payments made under the swap.

The counterparty to a foreign investor's equity swap often is a U.S. derivatives dealer, which in turn frequently will hedge its exposure to the foreign investor by buying the "physical" underlier that the swap references.³³ These arrangements in turn raise two important issues for tax administration. The first is the factual question of whether, under the facts and circumstances of a particular implementation, an equity swap should properly be characterized as a derivative contract (thereby availing itself of the favorable source rule for derivatives), or instead should be characterized as an actual purchase of "physical" stocks through a nominee (the dealer counterparty to the contract).

The resolution of this issue requires a case-by-case analysis, focusing on the extent of the foreign investor's control over the U.S. dealer's hedging, as reflected in the pricing of the contract, and similar factors. Anecdotally at least, there are some fact patterns that are, or have been, prevalent in the market that could raise concern (e.g., cases where a foreign investor sells U.S. stock to a U.S. dealer shortly before a dividend date, enters into an equity swap over the dividend, and then repurchases the stock from the U.S. dealer).

The second issue raised by the fact pattern of foreign investors using equity swaps on underlying U.S. equities in part to avoid U.S. dividend withholding tax is the underlying policy question of how to resolve the conflict between the withholding tax rules for dividends, in particular, and those applicable to all swap contracts. The conflict has led some to question whether the United States should retain the withholding tax on U.S. source dividend income,

³³ Since the swap economically is a direct surrogate for the underlying stock (but for the right to vote the stock), the dealer that hedges in this manner will buy exactly as many shares of the underlier as the swap references. For this reason, equity swaps and similar total return swaps are sometimes described as "Delta 1" contracts. From a dealer's perspective, this line of business sometimes also is referred to as "equity finance," to signify that the dealer is not taking significant market risks with respect to the swaps it writes or the hedges (physical stocks) it buys, but rather earns the preponderance of its profits from the business from the difference between the dealer's actual funding costs for its hedge, on the one hand, and the implicit funding rate it charges the equity swap counterparty (in the form of the fixed or floating notional interest rate embedded in the swap).

since it would appear to be so easily avoided.³⁴ An alternative approach, adopted with respect to dividend equivalent payments made in connection with stock loans,³⁵ would be to source the dividend equivalent portion of any outbound equity swap payment on a “look-through” basis by reference to the source of the dividend income on the underlier. Under this approach, the dividend equivalent portion of the payments received by Party B would be treated as U.S. source income subject to U.S. withholding tax, although the remainder of such payments would be treated as foreign source income. This approach has serious disadvantages as well, however, including the possibility of “cascading” U.S. withholding taxes when Party B in turn enters into an equity swap in respect of XYZ stock with Party C, another non-U.S. person, and Party C enters into another similar swap with Party D, and so on.³⁶

Resolution of this policy question may require a re-examination of the rationale for and benefits derived from the withholding tax on dividends in light of the growing possibilities to circumvent that tax.

³⁴ See, e.g., David P. Hariton, *Equity Derivatives, Inbound Capital and Outbound Withholding Tax*, *The Tax Lawyer*, 60 *Tax. Law.* 313, Winter (2007); Gregory May, *Flying on Instruments: Synthetic Investments and Withholding Tax Avoidance*, *Tax Notes*, December 9, 1996, p. 1225.

³⁵ See *Treas. Reg. sec. 1.861-3(a)(6)*.

³⁶ See, e.g., *Notice 97-66, 1997-2 C.B. 328*.

E. Summary Tables

The tables set out below summarize the rules that apply under current law with respect to the timing of income recognition, and the character and source of income derived from the basic types of derivative transactions. As the tables illustrate, the tax treatment of different types of derivatives can vary, notwithstanding that they can often be used to produce equivalent returns. Moreover, as the case study discussed in Section VI illustrates, the tax treatment of a derivative that represents synthetic ownership of an underlier can differ dramatically from the tax treatment of returns derived from actual ownership.

The first chart below provides a broad overview of the general tax rules that currently apply to standard equity derivatives held for investment where the underlier is the common stock of a widely held and publicly traded domestic corporation. The second chart shows how the particular context in which a financial instrument is used (in this case, a call option on stock of a domestic publicly traded corporation) can radically change the application of the rules.

Table 1.–Overview of Tax Rules for Standard Equity Derivative Products

Type of derivative instrument	Forward	Option	Exchange-traded futures and options	Equity (Total Return) Swap
Timing of income recognition	Deferred until settlement date	Deferred until settlement date or expiration	Marked to market based on exchange's rules at end of taxpayer's year	Up-front or nonperiodic payments amortized over contract's term; periodic payments based on tax year accrual; termination payments upon termination; all payments netted
Character	Based on nature of underlier (usually capital)	Capital based sections 1234 and 1234A	60% long-term capital (unless otherwise ordinary), regardless of holding period	Ongoing periodic payments and amortized portion of nonperiodic payments probably ordinary; termination payments probably capital under section 1234A
Source	Generally taxpayer residence	Generally taxpayer residence	Generally taxpayer residence	Generally taxpayer residence

Note: Table adapted from Steven D. Conlon and Vincent M. Aquilino, *Principles of Financial Derivatives, U.S. and International Taxation*, Exhibit B1.1, p.B1-5 (2006).

Table 2.—Context-Based Taxation of Holder of Call Option

Holder	Tax Treatment/Special Rules
Investor holds call options with respect to publicly traded stock as its only investment.	Options are taxed on a wait-and-see basis (taxation is generally deferred until exercise, sale or expiration); gain or loss is capital. <i>See</i> secs. 1234 and 1234A.
Investor holds a call option and has sold short the stock of the same underlier.	Transaction constitutes a tax “straddle.” Losses upon sale or exchange of the call option are taken into account only to the extent they exceed unrecognized gain on short position. <i>See</i> sec. 1092.
Corporation offers its executives nonqualified deferred compensation measured by performance of unrelated public companies; employer hedges by buying call options on those companies to match against deferred compensation obligations.	Option gains or losses are ordinary. Treas. Reg. sec. 1221-2. Timing of gains/losses depends on timing of recognition of loss/gain on property being hedged. <i>See</i> Priv. Ltr. Rul. 200415009 (July 2, 2003).
Trader in securities with section 475(f) election holds call option on publicly traded stock as part of its trading strategy.	Option is marked to market at the end of each year; gains and losses are recognized and taxed as ordinary income. <i>See</i> sec. 475.
Corporation holds call options on its own stock.	Gain or loss generally not recognized with respect to the option. <i>See</i> sec. 1032; <i>Cf.</i> Rev. Rul. 88-31, 1988-1 C.B. 302.

Note: Table prepared by the staff of the Joint Committee on Taxation.

VI. CASE STUDY: MANDATORY CONVERTIBLE SECURITIES

A. Background

As described earlier, a prepaid forward contract on an equity security is frequently referred to as a “mandatory convertible” security. Mandatory convertibles are a subset of the larger category of prepaid forward contracts, which includes both publicly traded and OTC contracts on numerous types of underliers.

Several financial institutions have recently issued long-term mandatory convertibles that are colloquially referred to as “exchange traded notes” (“ETNs”). Existing ETNs generally are intended to provide investors the returns of specified market indices (less fees owed to the issuing bank). Examples of returns tracked by these indices include changes in the values of physical commodities, currency exchange rate movements, and the performance of developing market equities or other groups of equities.³⁷ The discussion herein is limited, however, to ETNs and other mandatory convertibles that reference equity securities.³⁸

ETNs often have long maturity dates (for example, 30 years), but afford investors an opportunity to “cash out” earlier through optional redemptions. Exchange trading provides additional liquidity.

Both ETNs and non-exchange traded mandatory convertibles often track the performance of a notional investment in a basket of cash securities that pay a current yield. The current dividends or other yields on the underlying securities in turn notionally are reinvested in the basket, so that the relevant index constitutes a “total return” index. The constituent securities in the index in turn are periodically “rebalanced” in accordance with the predetermined rules of the synthetic investment strategy. Consistent with the prior discussion, the economic position of the investor in such mandatory convertible can be viewed as similar to that of an investor who pursued the underlying investment strategy by buying the actual “cash” securities that comprise the index.

Mandatory convertibles that are not exchange-traded often have shorter maturities and may also provide for more limited redemption rights. Issuers of mandatory convertibles are typically financial institutions that are believed to hedge their exposure under the mandatory convertible security by purchasing the underlying stock referenced in the contract or by

³⁷ See Rev. Rul. 2008-1, 2008-2 I.R.B. 248 (Dec. 7, 2007), with regard to the treatment of an ETN linked to a foreign currency.

³⁸ Some ETNs track the performance of a notional position in futures contracts that are periodically “rolled” before their maturity date into new futures contracts. At the same time, the purchaser’s cash investment is credited with a notional specified time value of money return. Consistent with the prior discussion, the economic position of the investor in such an ETN can be viewed as analogous to the results that would be obtained if the investor engaged in a series of rolling futures or forward contracts, and simultaneously posted cash collateral with the financial institution (the forward seller), on which the financial institution (the forward seller) paid interest.

acquiring an offsetting contract. The issuer is typically required to mark-to-market both the mandatory convertible and the hedge under section 475, with the result that its economic income from the two offsetting transactions consists in effect of fees for serving as intermediary between the counterparties in the two transactions.

The discussion that follows seeks to illustrate the general points set out in earlier sections of this pamphlet by examining a mandatory convertible security that tracks the “Dogs of the Dow” investment strategy (a “Dogs of the Dow Security”) over a ten-year period. Under the Dogs of the Dow strategy, an investor selects annually for investment the ten stocks in the Dow Jones Industrial Average (DJIA) with the highest dividend yields (in other words, whose dividend is the highest fraction of their price). The investor invests equal dollar amounts in each of the ten stocks, and the portfolio is rebalanced annually based on the closing price of each stock in the DJIA on the last trading day of the year.

For purposes of the following discussion, assume that an individual investor in the Dogs of the Dow Security makes a payment of \$1,000 to the issuer to purchase the note.³⁹ Under the terms of the security, the investor would receive no payment from the issuer until maturity of the security in ten years. On maturity, the investor would receive an amount equal to the amount he or she would have received from an actual \$1,000 investment in a basket of stocks managed in accordance with the “Dogs of the Dow” strategy over the ten-year life of the security. Current dividends paid on the underlying stocks are notionally reinvested in the basket, and the constituent securities in the basket are periodically “rebalanced” in accordance with the predetermined rules of the Dogs of the Dow strategy. The economic position of the investor in a Dogs of the Dow security can therefore be viewed as similar to that of an investor who pursued the Dogs of the Dow investment strategy by buying the actual stocks that comprise the Dogs of the Dow index. The investor is exposed, however, to the credit risk of the issuer of the Dogs of the Dow Security, as well as all the risks associated with an investment in the underlying equity securities.

³⁹ The discussion assumes that the investor is not subject to any special rules by virtue of his or her status (for example, that the investor is not a dealer in mandatory convertible securities) and thus is subject to the general rules governing timing, character and source of investment income.

B. Tax Treatment

1. Actual investment in Dogs of the Dow stocks

As an initial matter, it is useful to consider the tax treatment that the investor would have received if he had actually invested \$1,000 in a portfolio of stocks chosen in accordance with the Dogs of the Dow strategy, and then managed that portfolio in accordance with the Dogs of the Dow strategy over a ten-year period. In that case, the investor would have been required to include in income currently any dividends paid on the stocks in the portfolio. In addition, to the extent that adhering to the Dogs of the Dow strategy required the investor periodically to sell one or more stocks in the basket and purchase others, the investor would have been required to recognize capital gain or loss at the time of the sale. The gain or loss would be short-term or long-term, depending upon the holding period for the particular stock sold.

Similarly, if the investor had purchased for \$1,000 shares in a mutual fund⁴⁰ that tracked the Dogs of the Dow strategy and held those mutual fund shares for ten years, the investor would be required to include currently each year an amount reflecting dividend distributions on the underlying stocks and short- or long-term capital gains realized in connection with rebalancing the portfolio.⁴¹ The investor would also recognize long-term capital gain or loss upon disposition of the mutual fund shares after ten years.

2. Treatment of mandatory convertible securities under present law

Existing mandatory convertible securities generally are treated as debt for financial accounting purposes, and holders of these securities are subject to the credit risk of the issuing bank. Nonetheless, the prevailing view among issuers of mandatory convertible securities and their counsel is that these securities should be treated for tax purposes as prepaid forward contracts. This conclusion is based on analogy to the treatment of other prepaid forward contracts that have been issued in the capital markets in recent years.⁴² Under that view, the investor in the Dogs of the Dow Security would not be required to include in income any amount during the time he holds the security, and any gain or loss recognized upon maturity or other disposition of the security would generally be treated as capital gain or loss.

The execution of a forward contract generally has no immediate income tax consequences under present law. In general, as an executory contract, a standard forward

⁴⁰ Diversification requirements under the securities laws to which mutual funds are subject may preclude a mutual fund from following the Dogs of the Dow strategy precisely, but we have used this example for ease of illustration. The analysis set out herein would apply equally to an investment strategy involving a larger and more diverse portfolio of actively managed stocks.

⁴¹ Sec. 852. A regulated investment company is effectively required to distribute substantially all of its taxable income to shareholders in order to avoid taxation of that income at the level of the regulated investment company. An investor may elect to reinvest the distribution in shares of the fund, but the investor is still taxed on the distribution in that circumstance.

⁴² Rev. Rul. 2003-7, 2003-1 C.B. 363.

contract is treated as an open transaction until the contract is settled. If a forward contract is settled by delivery of the property underlying the contract, the taxpayer delivering the property recognizes gain or loss based on the difference between the price received and the taxpayer's basis in the property.⁴³ The character of the gain or loss generally is the same as the character of the property delivered. If a forward contract is cash-settled, the recipient of the payment recognizes gain and the payor recognizes loss at the time the payment is made. This gain or loss is capital if the underlying property is capital in nature.⁴⁴ If a forward contract is sold, gain or loss is recognized, and the character of the gain or loss is capital if the forward contract is a capital asset in the hands of the selling taxpayer.

The fact that a forward contract calls for payment by one party to the other party at the time the contract is executed (a "prepayment") has not been treated as changing the tax treatment of the contract.⁴⁵ The IRS has announced, however, that it is considering, among other questions, whether the parties to prepaid forward contracts that are not treated as indebtedness should be required to accrue income or expense during the term of the contract.⁴⁶

Treatment of the Dogs of the Dow Security as a prepaid contract produces very different tax results for the investor than investment in the underlying portfolio. An actual investment would result in current annual inclusions of both ordinary dividend income and capital gain, while synthetic ownership of the portfolio through the Dogs of the Dow Security defers income recognition to maturity and effectively converts ordinary dividend income to long-term capital gain.

This disparity presents two different but overlapping federal income tax issues. First, the underlying "index" to a mandatory convertible or similar financial product typically includes an explicit time value of money (i.e., interest) component, or alternatively includes the current yield on specified "cash" securities (e.g., the dividends paid on a specified basket of stocks). If these securities are treated in the same manner as prepaid forward contracts under present law, investors need not reflect this current return in income. This tax result is materially more favorable to investors than the result they could obtain through an investment in the actual stocks or an investment in a regulated investment company (i.e., a mutual fund).

Similarly, where the underlying index represents a series of notional investments and reinvestments in a basket of securities, the composition of which is periodically rebalanced, the investor in the mandatory convertible may achieve more favorable treatment than an investor in

⁴³ Sec. 1001.

⁴⁴ Sec. 1234A.

⁴⁵ *Cf.* Rev. Rul. 2003-7, 2003-1 C.B. 363. However, the normal tax treatment of forward contracts may be affected by special rules applicable to "section 1256 contracts," "constructive sale" transactions, and for short sales, straddles, hedging transactions, and conversion transactions. Special rules also apply under section 988 to forward contracts that relate to a foreign currency. In the case of forward contracts entered into by a dealer, mark-to-market rules apply under section 475.

⁴⁶ Notice 2008-2, 2008-2 I.R.B. 252 (Dec. 7, 2007).

the stocks or a mutual fund. An investor in the actual underlying securities (whether directly or through a regulated investment company) would recognize gain or loss as the securities portfolio was rebalanced.

The availability of the Dogs of the Dow Security as an alternative to actual ownership of a Dogs of the Dow portfolio thus presents a tax planning opportunity for sophisticated investors. On the one hand, this may suggest that the tax treatment of the mandatory convertible security, and prepaid contracts more generally, should be changed to conform more closely to the treatment of the returns from actual ownership of the underliers. On the other hand, the existing treatment of a prepaid forward contract as an open transaction reflects the principle that income generally is not taxed until realization occurs (e.g., upon a sale, exchange or payment), when the amount of the income is known and the taxpayer has received cash with which to pay the tax.

Exceptions exist under which taxpayers are required to include imputed income prior to realization. In general, these exceptions apply only in contexts where the taxpayer is assured of receiving at least a repayment of his investment, e.g., the rules governing debt instruments with original issue discount. In the case of a contingent debt instrument that yields a return contingent on the performance of an index, an investor is required to include income currently at an imputed fixed rate notwithstanding that he may receive more or less than that amount (and in fact may receive no investment return at all, if the index performs poorly) when actual payments are made on the debt instrument. (Adjustments are made to reflect differences between the imputed income included currently and actual payments when they are eventually made.) In that case, however, the investor will receive at least a repayment of his principal amount under the terms of the debt instrument. In effect, the tax treatment of a contingent payment debt instrument can be analogized to the treatment of a fixed rate debt instrument coupled with a swap of the fixed return for a contingent return.

By contrast, the investor in a mandatory convertible is not assured of receiving any return at all, including repayment of his original investment. For that reason, the mandatory convertible is not subject to the income imputation regime that applies to contingent debt instruments. Rather, to date, mandatory convertible securities have been placed in the forward contract “cubbyhole” for which income imputation is not required. Under present law, the assurance of a repayment of one’s investment has served as a sort of dividing line between circumstances in which income imputation is required and those in which it is not.

3. Constructive ownership approach

Section 1260 provides an alternative constructive ownership approach. Under that section, gain from a “constructive ownership transaction” with respect to any financial asset that would otherwise be treated as a long-term capital gain is instead treated as ordinary income to the extent that the gain exceeds the net underlying long-term capital gain. The amount of capital gain that is thus converted to ordinary income is then subject to an interest charge reflecting the deferral of the gain recognition. A constructive ownership transaction is defined to include any circumstance in which a taxpayer (i) holds a long position under a notional principal contract with respect to the financial asset, (ii) enters into a forward or futures contract to acquire the financial asset, (iii) is the holder of a call option and is the grantor of a put option with respect to a financial asset and such options have substantially equal strike prices and substantially

contemporaneous maturity dates or (iv) enters into any other transaction described in Treasury regulations that has substantially the same effect as any of the foregoing transactions.

In effect, section 1260 treats the taxpayer as if he were obligated to include the current return on his investment in income on a current basis over the life of the transaction but failed to do so.⁴⁷ In other words, the taxpayer is placed in roughly the same position as if he had actually owned the underlying financial asset but had failed to pay tax on his investment return on a timely basis.

Section 1260 today probably does not apply to the Dogs of the Dow Security, because, in the absence of Treasury regulations, that Code section applies only to constructive sales transactions in respect of underlying partnership interests, mutual fund interests, and interests in similar “pass-through” entities.⁴⁸ In theory, however, section 1260 could be extended to apply to a mandatory convertible security such as the Dogs of the Dow Security. In general terms, on maturity of the security, the investor would be required to determine what portion of his gain represented the notional receipt of dividends or short-term capital gains on the underlying stocks over the life of the security. This treatment has the advantage of postponing taxation until there is a realization event, at which point the actual amount of the investor’s return (if any) is known and the investor presumably has funds with which to pay any tax liability. The investor’s return is then taxed on a “lookback” basis.

The scope of section 1260 is quite narrow, however, under present law. In considering whether it might be appropriate to expand the scope of section 1260 to apply to mandatory convertibles, it would be necessary to consider whether an approach in which the investor is required to reconstruct the returns that he would have received from an actual investment is administrable as a practical matter. For the Dogs of the Dow Security, such an approach might be possible, since the basket of underliers would consist of only ten publicly traded stocks at any one time. Market information needed to reconstruct the investor’s annual return would be readily available. For many mandatory convertible securities, however, such an approach could be impractical, e.g., where the security is linked to an index consisting of hundreds of underlying securities, or securities for which market information is not readily available.

4. Mark-to-market treatment

Mark-to-market taxation of a mandatory convertible security would present similar implementation issues. Under a mark-to-market approach, an investor would be treated as though he had sold his security at the end of each taxable year for fair market value and then

⁴⁷ This approach is analogous to the treatment of a U.S. shareholder upon a disposition of stock in a passive foreign investment company under section 1291.

⁴⁸ Section 1260 applies only with respect to positions in respect of “financial assets” that, at present, include only equity interests in certain “pass-thru entities” (such as partnerships, regulated investment entities, real estate investment trusts, S corporations and passive foreign investment companies). Although the Secretary of the Treasury is authorized to issue regulations that would define a “financial asset” more broadly to include debt instruments and stock in corporations that are not “pass-thru entities,” no such regulations have been issued to date.

repurchased the security as of the beginning of the following taxable year at the same price. The investor would thus be taxed annually on unrealized appreciation in the security, and his basis in the security would be increased to avoid double taxation of that appreciation upon maturity or an actual disposition. If the value of the security declined, the investor would be entitled to claim the unrealized loss to the extent that he had previously included unrealized appreciation, and his basis in the security would be reduced.⁴⁹

This approach presents, however, two obvious difficulties. The first is that many mandatory convertible securities may not have a readily ascertainable fair market value, e.g., where they are not actively traded on an exchange. Determining a value at which to mark the securities to market each year could present challenges for both taxpayers and the IRS in those circumstances. Moreover, the mark-to-market approach has the potential disadvantage of imposing taxation with respect to amounts that the investor may never receive and at a time when he has received no cash payments with which to pay his tax liability. For these reasons, mark-to-market taxation is limited under current law to a relatively few situations in which those disadvantages do not typically arise, e.g., for dealers in securities (or electing traders) under section 475.

5. Interest accrual approach

H.R. 4912 adopts a fourth approach, under which the holder of a prepaid derivative contract is required to include as interest income each year in respect of the contract an amount determined by reference to a short-term interest rate (the “interest accrual amount”).⁵⁰ The interest accrual amount for any taxable year generally equals the product of the holder’s adjusted basis in the contract at the beginning of the year and the monthly Federal short-term rate determined under section 1274(d) for the first month ending during that year.⁵¹ If a prepaid derivative contract credits a holder with notional amounts, and the rate at which the notional amounts are credited is higher than the applicable Federal short-term rate determined under section 1274(d), the interest accrual amount is determined by using the rate at which notional interest is credited.⁵² The amount of interest income required to be included in respect of a publicly traded prepaid derivative contract is capped in a manner that prevents the amount of this

⁴⁹ This approach is analogous to the mark-to-market election that U.S. shareholders may make under section 1296 with respect to “marketable stock” in a passive foreign investment company, and that traders in securities can make under section 475(f).

⁵⁰ The bill does not affect the tax treatment of the issuer of a prepaid derivative contract.

⁵¹ The Federal short-term rate used for any taxable year in determining an interest accrual amount with respect to a prepaid derivative contract thus may vary from year to year over the holding period of the contract.

⁵² Thus, for example, if the return on a prepaid contract reflects the return that would be derived from an unleveraged investment in futures contracts on physical commodities plus the interest that would be earned if cash collateral were invested in Treasury bills, and the interest rate on the Treasury bills is higher than the applicable Federal short-term rate, the interest accrual amount is determined by using the Treasury bill rate.

interest income from exceeding the amount of gain that accrues on the contract during the time the taxpayer holds the contract.

A holder's basis in a prepaid derivative contract is increased by any interest accrual amount that the holder includes in gross income. Consequently, interest inclusions have the effect of reducing the amount of any gain or increasing the amount of any loss on the sale of a prepaid derivative contract. If a holder has a loss from the disposition of a prepaid derivative contract, the loss is treated as an ordinary loss to the extent it does not exceed the amount by which the holder's basis in the contract has increased as a result of prior inclusions of interest accrual amounts.

If a holder receives a distribution under a prepaid derivative contract, the distribution is not includible in the holder's gross income. Instead, the holder's adjusted basis in the contract is reduced by the amount of the distribution (but not below zero), and any excess of the distribution over the holder's adjusted basis (determined immediately before reduction for the distribution) is treated as gain from the sale of the contract. In determining the amount of basis reduction and gain (if any) resulting from distributions during a taxable year, the holder's adjusted basis in a contract is determined after increasing the holder's basis by the interest accrual amount for that year.

In the case of a mandatory convertible security, this interest accrual approach effectively accepts the characterization of the security as an indivisible prepaid forward contract, which is the view adopted by issuers of those notes under present law. H.R. 4912 also reflects the view, however, that the treatment of a prepaid forward contract under present law does not adequately reflect the underlying economics of that contract. In particular, a prepaid forward contract may be understood as a traditional forward contract in respect of which the forward buyer has posted 100 percent of the purchase price as collateral, on which the forward seller in turn is required to pay interest. The forward contract is priced like any other traditional forward, but the time value of money return paid to the buyer on the cash it paid on execution compensates the buyer for the time value of money accretion in the forward price of the property. A prepaid forward contract thus might be priced like a current sale, or alternatively might be priced like a traditional forward contract, but in respect of which the forward buyer is paid or otherwise credited with a time value of money return. Arbitrage theory suggests that the two formulations are equivalent in value.

As noted in connection with the discussion of prepaid forward treatment under present law, the assurance of a repayment of one's investment has served as a sort of dividing line between circumstances in which income imputation is required and those in which it is not. The interest imputation approach of H.R. 4912 would move that dividing line to a point at which a time value of money return can be identified, even if the investor is at risk of losing not only that return but his principal amount. This approach has the advantage of reducing opportunities for tax arbitrage between actual and synthetic ownership. It also avoids some of the difficulties inherent in a constructive ownership or mark-to-market approach with respect to determining the appropriate amount of income inclusion. On the other hand, it has the potential disadvantage of requiring income inclusion at a time when the investor may not have received a cash payment, and in respect of an amount that he may never ultimately receive. These issues of fairness and ability to pay underlie the treatment of prepaid forward contracts under present law. A question

now presented for policymakers is whether a competing consideration, the growing opportunities for tax arbitrage presented by synthetic ownership transactions, justifies a different treatment.