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An Analysis of Interest Rate and Currency Swaps

Schuyler K. Henderson*

Companies in the United Kingdom developed currency swaps as a means of obtaining off-shore financing in the face of restrictive exchange controls in the mid-1970s. From this particularized context, swap financing has evolved into a 200 billion dollar industry and a driving force in international capital markets. Despite the development of swaps and their continued use as a means of obtaining economic results which might otherwise be barred by restrictive governmental regulations, the structure and form of swaps evolved free from governmental regulation through negotiations between separate parties on a case-by-case basis. A legal discussion of swaps is thus primarily an analysis of contractual provisions.

This article will first describe swaps and some of their uses. Next, it will discuss the credit exposure incurred by parties to a swap agreement, the documentation required for swaps, certain regulatory and tax implications of swaps, and some of the principal legal risks involved in enforcing swap agreements. The article will conclude with a description of several issues currently faced by leading swaps institutions including the transfer and reduction of swap risk and the securitization of swaps.

I. Description of Swaps

A typical interest rate swap involves an agreement between two parties. The first party agrees to pay to the second party an amount equal to the interest which would accrue on an agreed amount during a given period at one type of interest rate. The second party agrees to pay to the first party an amount equal to the interest which would accrue on that agreed amount at another type of interest rate. Virtually all common interest rates are regularly swapped: fixed, prime, London Interbank Offered Rate (LIBOR), bankers accept-

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2 LIBOR is typically based on the average rate at which deposits are offered to prime
The economic relationship of the parties in a simple interest swap agreement is illustrated in Figure 1. Party A is a company which is about to incur LIBOR based debt, but desires long-term fixed rate financing at a favorable rate, while Party B is a bank which is about to incur fixed rate debt but desires funds on a LIBOR basis.

In a typical currency swap, Party A agrees to pay a stated amount in one currency to Party B, usually at periodic intervals. Party B agrees to pay a stated amount in a different currency to Party A at the same or different intervals. These amounts may be expressed as either stated amounts due at stated times (in which case the interest rate and principal components are implicit in the specified amounts) or as interest accruing on principal amounts in different currencies plus, at appropriate amortization dates, principal components. It is possible, and not uncommon, to have the national interest rates applicable to each party's obligations in a currency swap calculated on different bases. The interest rate and currency swap are thereby effectively combined.

The economic relationship of the parties in a combined currency and interest rate swap agreement is illustrated in Figure 2. Party C is a company with LIBOR dollar liabilities and Swiss franc revenues while Party D has fixed rate Swiss franc liabilities and dollar revenues.
There are numerous variations on these swap structures, including those with delayed effectiveness, periodic amortization of principal, periodic increase of principal, options to extend, options to terminate, and other refinements. The only limitation on this variety is the imagination of swaps specialists and, as discussed in greater detail below, the existence of lending markets with unique investment criteria.

II. Uses of Swaps

Swaps can be used for a number of purposes. The above diagrams represent the use of swaps to obtain direct financing. In each example, one party has access to a given capital market on relatively more favorable terms than does the other. In the first diagram Party B is perhaps a European bank, well known in the Euromarkets, which has not issued fixed rate Eurobonds in the past because its sources of revenue are based on fluctuating rates of interest (for example, a LIBOR loan portfolio). Party A, less well known in the Euromarkets, would only be able to issue Eurobonds at a rate per annum of at least one percent in excess of the amount Party B could issue the bonds. Party A, however, can obtain bank financing at a spread of one-half percent over LIBOR while Party B would likely pay interest at LIBOR flat. Thus, the Eurobond market imposes a one percent credit differential between the parties, and the bank lending market imposes a one-half percent differential between them. This may be because the Eurobond investor is more "name" sensitive while bank lenders are able to conduct in-depth credit investigations. This difference in credit perceptions is arbitrated by each party incurring
debt in the market in which it has a relatively more favorable reception. Through the swap, each can effectively obtain financing at a lower rate.

In the second diagram, Party D represents a strong U.S. corporation, well known in the relatively thin Swiss franc capital market. Party C is a supra-national borrower which, though a stronger credit than Party D, has issued a substantial amount of Swiss franc debt in the past. Because investors wish to diversify their portfolios, there is less demand for Party C’s Swiss franc denominated obligations. The dollar market, however, is much deeper and less easily saturated. Therefore the dollar capital market would impose a larger spread in interest rates between the two parties than the Swiss franc capital market; the spread in the dollar market more accurately reflecting the real credit distinction between them. In this situation, the swap arbitrages the difference in spreads which results from the difference in depth between various capital markets, enabling each party to obtain financing in the market in which it is most favorably received.

The existence of the swap market thus permits financial advisors to devise debt obligations which may have narrow appeal in a targeted investment market. Even though the debt obligations are themselves unattractive to an issuer or borrower, the issuer or borrower can take advantage of anomalies presented thereby and swap into a favorable form of financing.

Swaps can also be used to alter a party’s existing liability structure. A party with outstanding floating rate liabilities may desire to prepay the debt and renegotiate a fixed rate debt when term rates have fallen. Alternatively, it may choose to enter into an interest rate swap and effectively convert its outstanding floating rate debt into a fixed rate liability. Such a swap is not a form of direct financing but instead represents the treasury function of managing an institution’s liability structure.

“Asset” swaps can also alter an investment in the hands of an investor. For instance, an investor, for portfolio diversification reasons, may be attracted to the credit of a particular issuer of a fixed rate debt instrument but, because of its funding sources, desires a floating rate asset. It can purchase the underlying fixed rate asset and enter into a swap with another entity by which the investor would pay a fixed rate equal to that paid on the asset purchased, and receive a floating rate from the swap counterparty. Since, as described below, swap payments are generally computed on a netted basis, the investor effectively takes the primary credit risk of the issuer (for principal and interest payments to the extent that the floating rate under the swap does not exceed the fixed rate on the asset) but takes the credit risk of the counterparty only to the extent that the floating rate under the swap exceeds the fixed rate on the asset.
during any period. The investor would also generally accept the risk that the underlying debt instrument would be prepaid. This latter risk is minimal since typically prepayment rights only arise in the unlikely event of the imposition of a withholding tax.

Parties entering into swaps for direct financing or investment purposes are termed "end-users." Parties desiring a swap on similar terms, but from reverse perspectives, however, may not have a commercial relationship with each other, be in the business of making credit decisions or be able to directly find counterparties. Each would have to seek a strong-credit financial institution to act as an intermediary. The intermediary financial institution would, in effect, stand in the middle by entering into matching reverse agreements with each party, thereby bearing the credit risk of each. Each agreement would typically be independent of the other. The end-users may not know of the existence of the other counterparty. Thus, the typical swap is not one illustrated in Figure 1 or 2, but a swap, as in Figure 3, in which one or more financial institutions act as intermediaries between end-users.

![FIGURE 3](image)

Therefore, the majority of swaps written involve a financial institution which enters into such agreements in the ordinary course of its business to earn either spreads between matching swaps, a profit on their swaps portfolio on an aggregate basis, or a combination of the two. Many commercial banks view their swaps activity primarily as part of their business in providing financial services to their customers. Even if these banks do not enter into exactly matching swaps and hedge their risk on a portfolio basis, they may still view their primary function as one of providing a financial accommodation. Many investment banks and a number of commercial banks,
conversely, view their swap activity primarily as part of their dealing activities. Their profit is perceived as deriving from their ability to enter, transfer, and terminate swaps on a portfolio basis.

III. Swaps Exposure

Swap risk can be analyzed on two levels: short-term exposure and long-term exposure. Short-term exposure is the delivery risk on a payment-by-payment basis (the risk to a party making payment that the other party will not make the corresponding payment). A party's delivery risk is increased if it is obligated to make a payment prior to the other party's corresponding payment. An extreme example in an interest swap would be a LIBOR against zero coupon swap where one party makes six month LIBOR payments to the second party semi-annually over a five year term and the second party pays its full amount of accrued interest at a fixed rate on maturity. A more common example is one in which one party makes six month LIBOR payments to another party that is paying an annual fixed amount.

Delivery risk is increased in a currency swap because payments are made in different currencies and located in different time zones, with the result that, even if payments are due on the same day, one party may actually be required to deliver its currency to the other prior to receipt of its payment. When there is an exchange of notional principal amounts at maturity, this delivery risk is further increased because the final amount will be substantially greater than the individual periodic payments.

Long-term exposure is the value to a party, at any given time, of the swap over its remaining term (the loss which a party would incur if its counterparty were unable to perform or if the swap were to terminate for other reasons). In the first illustrated example above, each party may have incurred its underlying indebtedness (the bond issue by Party B and the LIBOR loan by Party A) in expectation of the swap. Thus, termination of the swap will result in each party having lost the benefit of its bargain and being exposed to future rate fluctuations because of its now mismatched position. The long-term exposure of each party to the other is the cost to it of replacing the cash flows (its payments and receipts) under the terminated swap.

IV. Documentation

One of the primary purposes of legal documentation in commercial transactions, other than setting forth the terms of the transaction in order to avoid doubt and ambiguity, is to provide a basis for enforcement by one party if the other party experiences credit difficulties or defaults on its obligations. Virtually all institutions will thus seek to reduce delivery and term exposure through specific provision in the swap agreement. Any institution analyzing its position
on specific swap provisions must take into account its institutional policies toward aggregate exposure and exposure to individual counterparties. A party, such as a bank, which views its swap activities as a financial service, may take a more credit-oriented approach to individual swap transactions. A party, such as an investment bank, which views its swap activities as a dealer function, may take a more standardized approach to documentation, relying on the public rating of its counterparties or certain credit enhancement methods. A party, such as a corporation, utilizing the swap for a direct financing, may be content to accept the documentation of its financial institution counterparty, as long as the provisions are relatively evenhanded.

Early swap documentation involved individual agreements between counterparties, usually with bank intermediaries, with the end-users seeking to obtain direct financing through a swap which, in reality, represented a simplified back-to-back loan. Documentation was in the nature of a loan agreement, but substantially less complicated because the exposure was regarded as less than that of direct lending risk, due to the conditional nature of the payments. Swaps evolved from this individualized mirror context to a more dealer-oriented business based on telephone commitments, followed by telex confirmation with subsequent formal documentation. As the volume of swaps increased dramatically in 1982, many institutions developed standard forms for these transactions. Nonetheless, substantial backlogs developed at active swaps institutions in 1983 and 1984. The first response of many institutions was to develop a form of master agreement which the institution could enter into with a given counterparty with whom it expected to do a number of future transactions. The master agreement provides the terms and conditions which apply to each separate transaction, each of which comes into effect through exchange of a relatively short supplement to the master agreement.

Significant variations, however, existed between different institutions' documents, resulting in negotiation and consequent delays. In addition, institutions preferring a dealer's approach to swaps believed that standardization of terms would assist in the development of a more liquid swap market. In 1985, two publications provided publicly available forms to which reference could be made for incorporation of standard terms and conditions.³ Both publications contain standard terms to which parties can refer in establishing swaps between themselves. While these publications, particularly the for-

mer, leave a number of items open to negotiation between the parties, these codes are resulting in standardization of the mechanical and technical aspects of swap transactions. In addition, form master agreements are being prepared for use with the codes or, for currency swaps, on a basis consistent with the codes.

Most provisions of a swap agreement, other than those "boiler-plate" provisions common to many forms of contracts and those provisions which set forth mechanical details, can be analyzed as addressing either short-term exposure or long-term exposure. Swap agreements typically include provisions for reducing short-term exposure through contractually providing for netting, conditionally of obligation and set-off. If payments are due on the same day, they are typically netted off against each other with only the difference being paid. In a pure interest swap, netting is accomplished by comparing the two amounts and requiring the party owing the larger amount to pay the difference to the other. When payment dates are only partially simultaneous (for example, semi-annual LIBOR against annual fixed), netting can be achieved by "rolling over" the first semi-annual amount calculated in each year. This first amount is added to the notional principal amount during the second semi-annual period for purposes of calculating the second semi-annual period's LIBOR amount. The annual LIBOR payment is the aggregate of the two calculated amounts.

In the currency swap, netting is accomplished by first converting one of the amounts due into the currency of the other at then current spot exchange rates. This converted amount is compared to the other amount due, and the party owing the larger amount is required to pay only the difference to the other. If netting is not feasible and, due to the different time zones of the relevant financial centers, simultaneous payments cannot be made, the only safe method to reduce delivery exposure is through escrow arrangements. In this arrangement, the party paying in the financial center which opens later deposits its required amount into the escrow bank in that financial center on the preceding business day so that payments can be made by an appropriate time in the other location.

The process of netting marginally increases concerns regarding the application of the gambling or gaming prohibitions of various jurisdictions since it is common for the statutory definition of a gamble or wager to include a party making payment to another in an amount based on the difference between the value of two items on a given date. Most U.S. and English lawyers have concluded that, so long as the parties have an actual economic interest in the fluctuation of interest or currency rates, the commercial investment interest of the parties would foreclose a successful defense based on wagering. The conclusion does not rest on an analysis of the portion of the
Whether or not netting or escrow arrangements are feasible, swap agreements generally condition each party's payment on the other party having made, or simultaneously making, all payments then due from it. Some agreements also provide for deferral of a party's payment if an event of default is continuing with respect to the recipient. Other agreements go a step further and provide that, if the early payor feels insecure or if potential events of default have occurred with respect to the other, the early payor can request a rolling over. The effect is that the early payor is not forced to make a payment at a time when it may feel the creditworthiness of the other has declined. In both cases, the agreement seeks to reduce the risk that a party would have to pay under circumstances where the other party has either failed to make required payments or might be unable to make corresponding or future payments.

As a final precaution, the parties will generally grant a right of set-off to each other for amounts mutually owing under the agreement and, in some cases, the agreements will also provide a right to set off mutually owing amounts under other swap agreements as well. While such rights may not be fully or immediately effective in favor of a party in the event of the other party's bankruptcy, set-off rights,

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4 N.Y. GEN. OBLIG. LAW § 5-401 (1977) provides that "[a]ll wagers, bets or stakes, made to depend upon any ... unknown or contingent event whatever shall be unlawful." Section 5-411 further provides that "[a]ll contracts for or on account of any money or property, wagered, bet or staked, as provided in Section 5-401, shall be void." Id. § 5-411. The statute itself offers no assistance on what these words mean and the case law provides little guidance in the interpretation of these provisions in the context of business transactions. One New York court has carved out a "commercial purpose" exception to the statute, holding that when a party to a business venture has a "genuine personal stake" in the outcome of future events that are the subject of a contract, such as when he has "an insurable interest, an investment, or a contract involving goods or commodities," the transaction is judicially enforceable and, regardless of risk, does not amount to bet, wager, or illegal gamble. In Liss v. Manuel, 58 Misc. 2d 614, 296 N.Y.S.2d 627 (1968), the court stated that:

[When] a sum of money is put merely to abide a contingent event, at which time the event will determine to whom the money shall go, the transaction is clearly a wager. If, on the other hand, the money is used in the speculative enterprise, the reward of success is deemed a return on investment. The difference is that the investor does something, or attempts to do something to influence the favorable outcome of the venture, while the gambler passively awaits (or he should) the happening of the fortuitous event. The absence of a working investment, with money passing only after the event, is one of the indicia of an illegal wager.

Id. at 631. Informal discussions with U.S. and New York banking and other regulatory authorities would indicate that they do not regard swap agreements as gambling contracts.

5 11 U.S.C. § 553 (1982). The right of the solvent party to set-off any pre-petition claim which it has against a debtor subject to bankruptcy proceedings in the United States against pre-petition liabilities of the debtor to the solvent party will generally be preserved. The right of set-off is not preserved with respect to certain types of claims which arose within 90 days before commencement of the bankruptcy proceeding or represent an...
tied in to conditionality, will provide substantial protection.

V. Long Term Exposure

The provisions of a swap agreement which address long-term exposure can be analyzed in five categories: substantive credit controls; increased costs by reason of taxes or changes in law; controls with respect to subsequent illegality; right to terminate; and right to receive compensation on termination.

A. Substantive Credit Controls

A party's commercial concerns about the creditworthiness of its counterparty and its approach to swaps in general will be most directly reflected in its attitude toward the following substantive credit controls in the document: the closing documents, the representations and warranties, and the covenants and events of default. Closing documents and warranties lend assurance to each party at the commencement of the transaction as to the other party's requisite authority, financial standing, and compliance with governmental, corporate and other contractual restrictions. Covenants and events of default set the commercial and credit standards which serve as a basis for the maintenance of the credit relationship. The failure of a party to comply with these standards will make the other party want to terminate its credit exposure.

B. Increased Costs

When parties enter into a swap agreement, they will generally determine the tax, regulatory and other legal liabilities they expect to incur. If these laws change, the assumptions of the parties at commencement of the agreement may no longer be true. Therefore, it is customary to include provisions in swap agreements which permit the agreement to be terminated where there has been a change in the laws relied on by one or both of the parties.

1. Taxes

Due to increased volume and competition, swap margins have declined. Accordingly, changes in the law which increase the cost to a swap party are more likely to destroy the value of the swap to the affected party. For example, if a withholding tax is imposed on a payment, the payee receives a smaller amount under the swap and, in effect, has lost the value of its bargain. It is therefore customary, at least in cross-jurisdictional swap transactions, to include a clause

\footnote{Improvement in the position of the solvent party during such 90 day period. An allowable set-off claim will be treated in the bankruptcy proceeding as if it were a secured claim of the solvent party against the debtor to the extent of the liability which the solvent party owes to the debtor.}
providing for "grossing-up" if withholding taxes are imposed on payments by one party to another. The effect of grossing-up is that the payor pays additional amounts in favor of the payee so that, after deducting the relevant tax and paying it to the relevant taxing authority on behalf of the payee, the amount actually received by the payee equals the amount specified in the agreement. The burden is generally placed on the payor because the withholding tax is usually imposed by the jurisdiction of the payor's incorporation or principal place of business. Because payment of this additional amount will, however, effectively destroy the value of the swap to the payor, the payor will generally require the right to terminate the swap agreement if withholding taxes become payable.

The principal U.S. tax issue arising in swaps involves the question of withholding of U.S. federal income tax on swap payments. Such withholding is a possibility whenever a U.S. entity, whether acting domestically or through a foreign branch, enters into a swap with a counterparty which is a foreign corporation. The statutory withholding rate is thirty percent. This withholding rate may be reduced or eliminated, however, if the foreign counterparty is a resident in a jurisdiction having a favorable income tax treaty with the United States, or if the swap payments are effectively connected with a trade or business conducted by such counterparty in the United States.

Technically, withholding tax is a tax imposed on the foreign counterparty's U.S. source income. As the agent responsible for withholding, the U.S. party is required to retain the withholding and pay the same to the U.S. government. The government can collect such amount directly from the U.S. party even if no withholding has actually occurred.

As relevant to swap agreements, withholding of U.S. tax applies to payments of "fixed or determinable annual or periodical" income from sources within the United States. Examples of fixed or determinable annual or periodical (FDAP) income given in the Internal Revenue Code include interest, dividends, rents, wages, premiums and annuities. It is generally agreed that, while swap agreements employ many of the same terms used in loan agreements to describe the amounts due thereunder, swaps are not loans. Swap payments

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6 Similar concerns would arise if the counterparty were a nonresident alien individual or noncorporate foreign entity such as a foreign trust or partnership. Because swaps with noncorporate parties are a rarity, however, they will not be separately considered here.

7 I.R.C. § 1442(a) (1986).
8 See infra note 29 and accompanying text.
9 I.R.C. § 1442(a) (1986).
10 Id. § 1461.
11 Id. § 1442(a).
12 Id. § 1441(b).
are not considered interest for federal tax purposes, because such payments are not compensation for the use or forbearance of money.\textsuperscript{13} Since none of the other items specifically mentioned in the statute are descriptive of swap payments, it is necessary to examine the general meaning of FDAP income.

The FDAP concept is broader than might appear from the plain meaning of the words. For example, income can be "periodical" even if it is paid in a single lump sum, and it is "determinable" whenever there is a basis for calculating the amount to be paid.\textsuperscript{14} One type of income which clearly is not FDAP, however, is income or gain from the sale of property.\textsuperscript{15} This exemption is based on the legal requirement that withholding can only apply to the gross income realized by foreign parties from U.S. sources.\textsuperscript{16} Proceeds from the sale of property are not gross income to the extent they represent a return of capital (basis) in the property sold. Although the amount of gross proceeds paid by a U.S. buyer to a foreign party on a sale of property would be definitely and easily ascertainable by the buyer, the amount of gain realized by the foreign seller (the amount subject to withholding), would not necessarily be known to anyone but the seller. The exemption of capital gains is, thus, intended to make the withholding system administrable on a practical basis.

In \textit{Commissioner v. Wodehouse} the U.S. Supreme Court suggested that the rationale for this exemption should cover more items than simply capital gains. Commenting upon the meaning of "annual" and "periodical," the Court wrote:

\begin{quote}
Those words are merely generally descriptive of the character of the gains, profits and income which arise out of such relationships as those which produce readily withholdable interest, rents, royalties and salaries, consisting wholly of income, especially in contrast to gains, profits and income in the nature of capital gains from profitable sales of real or personal property.\textsuperscript{17}
\end{quote}

Accordingly, the "character" of FDAP items is that they are (i) readily withholdable and (ii) consist wholly of income. For the reasons discussed above, proceeds from the sale of property do not have this "character." Significantly, the Court did not limit the excluded category to such proceeds, but broadly construed it to include "gains, profits and income in the nature of capital gains."\textsuperscript{18}

Payment received by a foreign counterparty in a swap may not represent proceeds from the sale of property.\textsuperscript{19} In virtually all cases, 

\begin{footnotes}
\item[14] \textit{Treas. Reg.} \textsection 1.1441-2(a)(1), (2) (1960).
\item[15] \textit{Id.} \textsection 1.1441-2(a)(3).
\item[16] \textit{Id.} \textsection 1.1441-2(a)(3).
\item[18] \textsection 337 U.S. 369, \textit{reh'g denied}, 338 U.S. 840 (1949).
\item[19] \textit{Id.} at 393-94.
\item[20] Currency swaps may involve purchases or sales of property. For example, a swap
\end{footnotes}
however, a significant component of such payments will either represent a return of the foreign party’s prior investment in the transaction, or be subject to offset by future investments which the party is contractually bound to make. On any particular payment date (except the last), the proportion, if any, of the payment which is actually income to the foreign party cannot be known. A U.S. withholding agent could make no more than an educated guess as to the appropriate amount to withhold on such payments. Hence, swap payments seem neither to be readily withholdable nor to consist wholly (or even mostly) of income. They share the “character” of capital gains, and for this reason should not be considered to be FDAP.21

Unfortunately, whether or not swaps will be considered to be FDAP is far from certain under current law. Aside from a rather obscure ruling dealing with premiums by foreign insurers, the Internal Revenue Service has never expressly adopted the view that payments which are not sales proceeds, yet contain a return-of-investment element or have other directly associated costs, are not FDAP.22 The courts have not developed the issue significantly since Wodehouse. In the absence of authority more closely on point, many swap market participants may feel that the FDAP rules by themselves are too uncertain to rely upon in undertaking cross-border swaps.

Even if the income realized by the foreign party in a swap is FDAP, it will not be subject to withholding unless it is derived from a U.S. source. In Advance Notice 87-4, the Internal Revenue Service held that income attributable to dollar denominated interest rate swaps should generally be sourced at the place of the recipient.23 Accordingly, swap income received by a non-U.S. person (a foreign corporation, for example) will generally have a foreign source and will, therefore, not be subject to withholding. A different rule applies in which U.S. corporation A agrees to deliver X dollars to Swiss corporation B in exchange for Y Swiss francs on a date one year hence is probably a forward purchase of dollars by B for tax purposes, and the delivery of dollars on the specified exchange date should not raise U.S. withholding tax concerns. Similarly, if A’s obligation under the swap is to deliver francs and B’s obligation is to deliver dollars, the transaction is a forward sale of dollars by B, also not subject to withholding. The fixed or determinable annual or periodical (FDAP) issue may become relevant in more complex currency swaps, however, and is always a concern in dollar-denominated interest rate swaps.

21 Although the income element in the last payment under a swap, if such payment happens to be made to the foreign counterparty, is determinable, it would be anomalous to have a withholding rule which applied only to last payments. Such payment will almost certainly contain a return-of-investment component, an indication that it is “in the nature of capital gains.” It is noteworthy that a foreign seller’s gain on a sale of property may in some cases be determinable by a U.S. withholding agent, yet this fact does not cause such transactions to be subject to withholding.

22 I.T. 1359, 1-1 C.B. 292, 294 (1922) (no withholding on such premiums, because most would be added to loss reserves, and Congress intended that withholding only apply to payments with “very high content” of net income), amplified and superseded Rev. Rul. 80-222, 1980-2 C.B. 211.

23 Rev. Rul. 87-5, 1987-3 I.R.B.
plies where the swap income is attributable to a U.S. trade or business carried on by the non-U.S. recipient. Here, the swap income will be sourced in the United States and, as described below, will generally be subject to regular income taxation at the graduated tax rates applied to the income of U.S. persons. Since it is subject to direct taxation, it will not be subject to withholding.

The Notice does not deal with the tax treatment of currency swaps.\textsuperscript{24} A provision included in the recently enacted Tax Reform Act of 1986 establishes a general rule that income derived from transactions such as currency swaps should be sourced at the residence of the recipient.\textsuperscript{25} The legislation, however, grants regulatory authority to the Treasury Department to determine the appropriate tax treatment of income derived in hedging transactions. Both the legislative history of the Act\textsuperscript{26} and a recent release from the Service\textsuperscript{27} recognize that a currency swap may be a hedging transaction. Neither gives definitive guidance, however, so the possible application of withholding to currency swaps is still an open issue. In addition, since Notice 87-4 only relates to income realized on or after the date of the Notice, the possibility of withholding also remains open with respect to interest swaps for prior open years of an entity which has not made an election to apply the principles of the Notice to all (but not part) of swap income in such years.

Even in situations where the application of the U.S. withholding taxes to swap payments remains uncertain, relative certainty can otherwise be obtained under certain circumstances. For instance, there is an exemption from U.S. federal income tax of payments made to international organizations, foreign governments, and governmental entities not engaged in commercial activities in the United States.\textsuperscript{28} A more useful rule is that swap payments which are effec-

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{24} The Notice by its terms deals only with interest rate swaps denominated in U.S. dollars. Not even an interest rate swap in which the payment obligations of both parties are denominated in the same foreign currency is within the purview of the Notice. The risk of extending the conclusion of the Notice beyond its announced scope is explored infra note 28 and accompanying text.
\item \textsuperscript{25} I.R.C. § 988(a)(3) (1986).
\item \textsuperscript{26} H.R. REP. No. 841, 99th Cong., 2d Sess. No. 9B, at II 665 (1986).
\item \textsuperscript{27} I.R.S. Notice 87-11, 1987-4 (Jan. 26, 1987). According to this Notice, if a non-U.S. person enters into a "qualified hedging transaction" that gives rise to U.S. source interest income (for example, the simultaneous acquisition of a debt instrument denominated in dollars and a currency swap which effectively converts the instrument to one denominated in foreign currency), the withholding provisions of U.S. law will "be applied separately to" payments under the debt instrument and payments under the swap. \textit{Id.} Whether the application of the withholding \textit{provisions} will lead to the application of the withholding tax cannot be discerned with certainty from this language.
\item \textsuperscript{28} See I.R.C. § 892 (1986); Treas. Reg. § 1.892-1(3) (1980), defining entities entitled to this exemption. As drafted, Notice 87-4 does not appear to apply to swap income realized by foreign governments, due to a gap in the coverage of the definition of "residence." This leads to the anomalous result that a foreign government may be subject to withholding on swap income as part of its commercial activities whereas a privately-owned commer-
\end{itemize}
\end{footnotesize}
tively connected to the conduct of a trade or business in the United States by a foreign counterparty are not subject to withholding, but are subject to direct U.S. income taxation at the regular corporate rates. A common application of this principle is to swap transactions with U.S. branches of foreign banks.

Income tax treaties are also widely relied upon to provide protection from withholding in cross-border swaps. Most treaties which the United States has concluded with other countries contain provisions exempting the "industrial and commercial profits" (sometimes referred to as "business profits") earned by a resident of one of the contracting states from tax by the other state, unless connected with a permanent establishment located in the other state. Accordingly, if a foreign entity is entitled to the benefits of such a treaty and has no office or other fixed place of business in the United States, it can probably enter into swaps with U.S. parties without withholding tax exposure. Advance Revenue Ruling 87-55 has clarified whether swap income would constitute "industrial and commercial profits" under the relevant treaty. In this ruling, the Service held that a Netherlands bank, not having a permanent establishment in the United States, is exempt from federal income taxation on payments made to it by the U.S. party in a dollar-denominated interest rate swap, because the payments constitute "industrial or commercial profits" within the meaning given the term in Article III of the Income Tax Convention between the United States and the Netherlands. The Revenue Ruling is significant in that it dispels the fear that the Service might seek to characterize swap payments as interest, which is not fully exempt from withholding under many income tax treaties that the United States has concluded with other countries. Moreover, the definition of industrial or commercial profits in the Netherlands Convention—"income derived from the active conduct of a trade or business"—is generic. Thus the Revenue Ruling ought to be equally applicable to other income tax treaties. Questions may remain, however, as to the applicability of this result where the non-U.S. party to the swap is not a financial institution. The

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29 I.R.C. §§ 1442(a), 1441(c)(1) (1986) (establishing exemption from withholding); id. § 882(a) (imposing regular corporate income tax). The counterparty must file Form 4224 annually with the U.S. withholding agent to be entitled to this exemption. Treas. Reg. § 1.1441-4(a)(2) (1960).

30 See infra notes 35, 36 and accompanying text.

31 To establish this exemption, the counterparty must file Form 1001 with the U.S. withholding agent once every three years. Treas. Reg. § 1.1441-6(c) (1971).

32 Rev. Rul. 87-5, 1987-3 I.R.B.

33 Id.

34 Id.

35 Uncertainty is perhaps greatest where the swap is meant to hedge investment activities of the foreign counterparty, and least where the counterparty is a foreign bank enter-
best protection is furnished by treaties with a "residual" clause providing an exemption for all items of income not dealt with specifically in the treaty.\textsuperscript{96}

2. Other Changes in the Law

The swap agreements of only a very few institutions address the possibility of changes in reserve, liquidity, and risk asset ratio requirements that could impose additional costs on parties subject to the relevant regulations. The Bank of England, the Comptroller of the Currency, the Federal Deposit Insurance Corporation and the Federal Reserve Board recently jointly announced revised requirements which include certain contingent liabilities in calculating risk asset ratios (with respect to English banks) and capital adequacy (with respect to U.S. banks), as well as the pending imposition of similar requirements with respect to swaps.\textsuperscript{97} The effect of these changes may be to impose additional costs on a bank with respect to its outstanding swap portfolio. A few banks customarily include in their agreements clauses, similar to those found in Eurodollar loan agreements, provisions for payment by the counterparty to the bank the amount necessary to compensate the bank for increased costs resulting from a change in regulation. Whether or not these clauses would cover restrictions on overall capital ratios must be reviewed on a case-by-case basis. Generally, a party would, as with withholding taxes, have a right to terminate the agreement if it becomes obligated to reimburse its bank counterparty for such costs.

C. Illegality

Illegality of performance may also be included as an event which

\textsuperscript{96} See, e.g., Convention Between the Government of the United States of America and the Government of the United Kingdom of Great Britain and Northern Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and Capital Gains, Dec. 31, 1975, art. 22(1), 31 U.S.T. 5669, 5685, T.I.A.S. No. 9682 ("Items of income of a resident of a Contracting State, wherever arising, not dealt with in the foregoing Articles of this Convention shall be taxable only in that State"). This clause would provide no protection if the counterparty maintained a U.S. permanent establishment to which the swap payments were connected.

permits a party to terminate the agreement. The illegality clause serves two purposes: (1) in order to avoid the risk of becoming a defaulting party on the next payment date, a party for which it has become illegal to perform will be permitted to terminate the agreement; and (2) where its counterparty has become unable to perform by reason of a change in law, a party can terminate the agreement immediately rather than being forced to make a payment with the knowledge that the counterparty will not be able to perform in the future. An illegality clause may be especially significant in a currency swap which provides for netted out termination payments in one currency if the illegality is based on a foreign exchange regulation which prohibits payment by a party in another currency.

Most agreements providing for the right of termination in the event of taxes, increased costs, or illegality by one or both of the parties, also include one of the three following conditions as a prerequisite to terminating the agreement: the parties must first negotiate in good faith to restructure the agreement; the parties must change the relevant booking offices to avoid the adverse impact of the change; or the terminating party must use its best or reasonable efforts to avoid the impact of such change.

D. Termination

The enforcement provisions of a swap agreement provide the remedy for a breach of the substantive credit controls and, failing negotiations, enable the parties to avoid a change in law which has altered the basis of their arrangements. These clauses entitle the non-defaulting party or the party affected by the change in law to terminate the swap agreement and allocate the gains or losses on termination.

Termination may be a last resort because in some instances a party will prefer to take legal action for a specific breach. For example, if there is a willful payment default (where an agreement has become unfavorable to the payor), the other party could elect not to terminate and sue for the specific payment due, as well as generally claim under standard provisions in the agreement for reimbursement of legal expenses.

There are a number of legal limitations on the right to terminate. The first and most significant limitation on the right of termination is found in jurisdictions with insolvency laws which are based on the principle of reorganization rather than liquidation. Reorganization-oriented insolvency laws are unsympathetic to termination and generally restrain enforcement in order to permit the

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insolvent party to restructure its affairs and, hopefully, to emerge as a viable entity. Liquidation oriented insolvency laws, on the other hand, generally favor termination of contracts and the distribution of the insolvent party's assets.

The bankruptcy laws of the United States are primarily reorganization-oriented. The primary U.S. insolvency laws are federal laws (rather than state laws). These laws apply to bankruptcy proceedings conducted anywhere in the United States regardless of the jurisdiction where the debtor is incorporated and of the choice of contract law governing the terms of any particular agreement.

Because both parties have obligations remaining to be performed, a swap agreement is likely to be held an "executory" contract under section 365 of the Bankruptcy Code. This mutuality of obligation also makes it unlikely that a swap agreement would be held a financial accommodation. In this case, the clauses in the agreement permitting the solvent party to terminate by reason of the insolvent party's insolvency proceedings or financial condition of the insolvent party (collectively, "ipso facto clauses") are not effective. The debtor in

39 See generally 11 U.S.C. §§ 1101-46 (1982). Chapter 11 provides for the financial reorganization of the debtor pursuant to the terms of a court approved plan of reorganization. There are certain entities, e.g., domestic and foreign banks, that cannot be subject, as a debtor, to a case under the Bankruptcy Code. The insolvency proceedings of such entities are governed by both state and federal statutes. E.g., id. § 109(b)(2).

40 The Bankruptcy Code preempts state insolvency laws to the extent that the latter are inconsistent with it. See, e.g., Missouri v. United States Bank. Ct. for E. Dist. of Ark., 647 F.2d 768 (8th Cir. 1981), cert. denied, 454 U.S. 1162 (1982). Although the U.S. bankruptcy court will refer to substantive state law on matters of contractual interpretation, the relevant contract law (whether that of a State or of a foreign country) is in effect modified or overridden in a U.S. insolvency proceeding to the extent inconsistent with the U.S. federal insolvency laws. As a general rule, however, the provisions of the Bankruptcy Code do not become operative unless and until a case has been commenced under its provisions. 11 U.S.C. § 103 (1982).

41 Though there is no precise definition of what contracts are executory, it generally includes contracts on which performance remains due to some extent on both sides. A note is not usually an executory contract if the only performance that remains is repayment. Performance on one side of the contract would have been completed and the contract is no longer executory.


42 If a swap agreement "is a contract to make a loan, or extend other debt financing or financial accommodations, to or for the benefit of the debtor" within the meaning of 11 U.S.C. § 365(c)(2) (1982), the solvent party would be entitled to suspend its performance under the swap agreement and seek relief from the automatic stay imposed by § 362(a) in order to terminate the swap agreement, such termination being deemed to be retroactively effective as of the date immediately preceding the commencement of the case. There is, however, no useful precedent on the issue of whether or not a swap agreement is a financial accommodation, as no U.S. bankruptcy court has fully adjudicated a swap agreement. The scant case law interpreting the phrase "financial accommodation" in § 365 of the Bankruptcy Code, however, indicates that a swap agreement would not constitute a financial accommodation. See, e.g., In re Adana Mortg. Bankers, Inc., 12 Bankr. 977, 987 (Bankr. N.D. Ga. 1980) ("[t]he obligation to pay money on the obligation of another is a financial accommodation") (emphasis added).

possession, or the trustee in bankruptcy (collectively, the "trustee"), has the right, subject to court approval, to reject the swap agreement, to assume and perform it, or assume and assign it to a third party regardless of any attempted or purported automatic clause in the swap agreement. In deciding whether to approve the assumption or rejection of an executory contract, the court is likely to apply the "business judgment" test. This test involves the determination of whether the debtor, as a business matter, is better off as a result of the assumption or rejection of the contract.

If the trustee chooses to reject the swap agreement, then, under section 365(g) of the Bankruptcy Code, the swap agreement is deemed breached and thus terminated, usually as of the date immediately preceding the commencement of the bankruptcy case.

Conversely, if the swap agreement is assumed, it is fully binding on the debtor or, if assigned by the trustee, binding on the assignee and the solvent party according to its terms. There is an exception for the terms of any ipso facto clauses. Under section 365(b) of the Bankruptcy Code, the trustee or the assignee must cure all existing defaults other than the ipso facto clauses. The trustee or assignee is also required to provide "adequate assurance" of future performance under the contract. Such assurance would be a showing of financial ability to perform in the future or collateralization. The assurances accepted and approved by the court may not be what the solvent party was anticipating or would have preferred.

If the court approves an assignment of the swap agreement and the trustee assigns the contract, the trustee and the debtor's bankruptcy estate are relieved from any liability for any breach of the swap agreement occurring after the assignment. Thus, after the assignment, the solvent party may look only to the assignee for

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44 Id. § 365(d). In re Whitcomb & Keller Mortg. Co., 715 F.2d 375, 380 (7th Cir. 1983).
47 In re Marple Publishing Co., 20 Bankr. 933 (Bankr. E.D. Pa. 1982) (dealing with assumption of executory contracts and unexpired leases); but see In re Schatz Fed. Bearings Co., 5 Bankr. 549, 552-53 (Bankr. S.D.N.Y. 1980) (an assumed contractual obligation to provide vacation pay was binding on the debtor as an administrative expense only to the extent that performance under contract actually benefitted the bankruptcy estate).
49 Id.
50 See, e.g., In re Ridgewood Sacramento, Inc., 20 Bankr. 443 (Bankr. D.E. Cal. 1982) (creditor not entitled to any form of adequate assurance of future performance where contract was not in default on date that trustee assumed contract).
After the trustee has assumed the contract, the debtor could compel performance.\textsuperscript{52} Hence, a solvent party may find itself in this dilemma: its right to terminate is not enforceable; it is required to make payments to the debtor while rates are unfavorable; and, when rates move in favor of the solvent party, the debtor ceases to perform and rejects the contract, leaving the solvent party with a claim for damages. Such rejection would then enable the solvent party to terminate the agreement and file a proof of claim for damages.\textsuperscript{54}

Even in situations not involving insolvency, courts have refused to uphold termination of agreements for breaches deemed by the court to be immaterial or not central to the performance of the defaulting party's primary obligations.\textsuperscript{55} In addition, general equitable considerations and questions of contract interpretation can result in the termination being enjoined, as illustrated in a recent case before the Superior Court of the State of California, \textit{Beverly Hills Savings v. Renault Acceptance B.V.}\textsuperscript{56} In 1983, Beverly Hills, a California chartered savings and loan association, and Renault entered into a swap agreement. Beverly Hills agreed to pay to Renault interest at a fixed rate (approximately 12.37 percent) and Renault agreed to pay to Beverly Hills interest at LIBOR, on a notional principal amount of twelve million dollars.\textsuperscript{57} As security for the obligations of Beverly Hills under the agreement, it delivered collateral in the amount of approximately two million dollars to Bank of America as pledgeholder for Renault.\textsuperscript{58} The agreement permitted either party to terminate the agreement and recover damages on the occurrence and continuation of the following event: "the [other party] has become insolvent or . . . has appointed or suffered to be appointed any receiver or trustee of the whole or any material part of the assets. . . ."\textsuperscript{59}

In April 1985, Beverly Hills was declared insolvent by the U.S. Federal Savings and Loan Insurance Corporation ("FSLIC") and

\textsuperscript{52} 11 U.S.C. § 365(k) (1982) provides: "Assignment by the trustee to an entity of a contract or lease assumed under this section relieves the trustee and the estate from any liability for any breach of such contract or lease occurring after such assignment." \textit{Id.}

\textsuperscript{53} Depending on the stage of the insolvency proceedings at the time of such rejection, the solvent party's claim for damages may have some priority over other unsecured claimants. \textit{Id.} §§ 365(g), 726(b).

\textsuperscript{54} \textit{Id.} § 365(g); \textit{2 W. Collier on Bankruptcy} § 385.08 (15th ed. 1979).


\textsuperscript{57} Plaintiff's Complaint, at 3, \textit{Beverly Hills} (No. C549684).

\textsuperscript{58} \textit{Id.} at 4.

\textsuperscript{59} Plaintiff's Complaint, exhibit 1 at 3, \textit{Beverly Hills} (No. C549684).
went into receivership. Its assets were immediately transferred to a new federally chartered savings and loan association at the same location and with the same name. Beverly Hills was in compliance with all provisions of the agreement except the above-quoted event of termination. Upon learning of Beverly Hills’ insolvency and reconstruction, Renault terminated the agreement and entered into a replacement swap agreement. Renault calculated its damages in accordance with the compensation provision of the agreement and requested that Bank of America sell the collateral and pay the amount of such damages to Renault. Beverly Hills brought an action to restrain Renault from terminating the agreement and realizing on the collateral.

Beverly Hills contended it was essentially the same institution as before, except more solvent, and at the time of the purported termination by Renault it was not insolvent. Thus, any event of termination which may have occurred was no longer continuing, and was not continuing on the date of Renault’s attempted termination. It was also argued that an assignment by operation of law could not be blocked contractually. Beverly Hills finally contended that permitting the agreement to be terminated by Renault would disrupt public confidence in the orderly transfer of assets to the new Beverly Hills.

Renault’s position was relatively straightforward. The agreement provided that Renault could terminate the agreement and collect the stated damages if Beverly Hills became insolvent. Because the original Beverly Hills became insolvent Renault is entitled to terminate the agreement. Furthermore, Renault argued that the new Beverly Hills is an institution on which Renault has no information and with which it has no relationship. Any purported assignment to the new Beverly Hills would not be effective since the agreement barred assignment. In this connection, Renault noted that the FSLIC documentation for the transfer of assets to the new Beverly Hills contemplated that some depositors might not consent to the transfer, in which case FSLIC would pay them off and claim on an indemnity from the new Beverly Hills. Renault argued that this implied an acknowledgement that the transfer of obligations would re-

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60 Id. at 2.
61 Id. at 4.
62 Id. at 1.
63 Plaintiff’s Reply Memorandum at 2, Beverly Hills (No. C549684).
64 Id. at 4.
65 Id. at 10.
66 Defendant’s Memorandum of Points and Authorities in Opposition to Motion for
Preliminary Injunction, Beverly Hills (No. C549684).
67 Id. at 3.
68 Id. at 8.
quire the consent of the creditors.69

A temporary restraining order was granted on May 3, 1985,70 and a preliminary injunction was granted on June 19, 1985.71 These court orders prohibited Renault from terminating the agreement and Bank of America from disposing of the collateral. Beverly Hills has continued to make the payments under the agreement. Since the date of the court orders, the parties have apparently been trying to settle the dispute through negotiation.

On February 5, 1986, Beverly Hills brought a motion to compel payment of the interest that had accrued on the collateral.72 One reason for requesting the payment was that Renault was withholding permission to pay the interest in order to improve its negotiating position in settlement discussions.73 On March 7, 1986, Renault filed a reply brief, arguing that the documentation provided for interest to be retained for the benefit of Renault during the period of default and that the solvency of the new Beverly Hills, even after the reconstitution, was still in question.74 While the original court orders blocked it from terminating, Renault argued that this order should not be construed as holding that a default had not occurred.75 Therefore, retaining the interest was necessary to protect Renault's secured position. Renault finally argued that to deny it collateral protection would be to cut off sources of funding for all thrift institutions, since confidence in enforcement of parties providing financing would be eroded.76 On March 12, 1986, the court denied the Beverly Hills motion.77

If the parties reach a negotiated settlement, the merits of this case will never be determined. Nevertheless, Beverly Hills is helpful in illustrating the legal and judicial restraints, not evident from the explicit terms of the agreement, which courts will apply before terminating a swap agreement.

E. Compensation

To be fully effective, the right to terminate must be coupled with the right to receive compensation upon termination. Most swap agreements permit a non-defaulting party which terminates an agreement to receive compensation for its loss, and to retain any

69 Id.
70 Beverly Hills (No. C549684) (order granting temporary restraining order).
71 Id. (order granting preliminary injunction).
72 Motion to compel payment, Beverly Hills (No. C549684).
73 Id.
74 Memorandum of Points and Authorities in Opposition to Motion Regarding Preliminary Injunction at 6, Beverly Hills (No. C549684).
75 Id.
76 Id. at 7.
77 Beverly Hills (No. C549684) (order denying plaintiff's motion to modify preliminary injunction).
gain on termination. The non-defaulting party may be able to reap a substantial windfall profit by termination if rates have moved against its position in the swap to the benefit of the defaulting party. Consequently, it is more likely that such a termination and compensation provision will be deemed a penalty rather than a payment provision based on the actual economic gains and losses of both parties. This is especially true where the court determines that the intent of the parties is to compel performance.\(^7\)\(^8\) This "penalty" aspect of the termination and compensation provision could possibly make the provision unenforceable.\(^7\)\(^9\)

As mentioned above, courts often refuse to uphold termination provisions in agreements where the breaches are deemed immaterial or not central to the performance of the defaulting party’s primary obligation. It follows that the more onerous the result of termination, the less likely a court would view a given breach as central to the agreement. Thus, Renault’s position in Beverly Hills would have been much less attractive if rates had risen after the agreement’s commencement, and termination would have resulted in a gain to Renault. Similarly, a trustee in a bankruptcy will be much less likely to reject an agreement (and hence permit termination) if the result is a loss of profit to the debtor in the agreement. The draconian result of a one-sided compensation obligation on termination may be to force a court into neither supporting the agreed compensation nor permitting termination on grounds of contract law or relevant insolvency laws.

Compensation may be based either on a general indemnity or by a contractually defined method. Termination provisions based on an indemnity provide that the defaulting party will indemnify the non-defaulting party for all of its losses and damages occasioned by termination of the agreement, usually describing in general terms the various forms of redeployment the parties might choose. Termination provisions providing a defined method for calculating damages refer to the cost to the parties in recreating the cash flows under the terminated swap agreement. The cost is determined by either a formula, which compares two termination amounts based on a series of borrowings and investments, or "agreement value," which is based on the cost of entering into a replacement swap.

The formula approach, which presupposes the parties will re-

\(^7\)\(^8\) Truck Rent-a-Center, Inc. v. Puritan Farms 2nd, Inc., 41 N.Y.2d 420, 361 N.E.2d 1015, 393 N.Y.S.2d 365 (1977) (reaffirming rule that liquidated damages provision which does not bear a reasonable relationship to the actual economic loss suffered by the non-breaching party will be treated as a penalty and not enforced).

place the revenues and liabilities of the terminated swap through a combination of borrowings and investments, was the preferred method of defining damages prior to the existence of a well-developed and deep swaps market. Using the currency swap illustrated in Figure 4, Party C would pay to Party D the Swiss franc termination amount which is the amount that must be either borrowed or invested, to recreate the Swiss franc cash flow. In other words, Party C pays Party D the present value of the future Swiss franc payments (including the notional Swiss franc principal amount at maturity) using the then current long-term fixed rate as the discount factor, and Party D pays Party C the notional dollar principal amount. Under most agreements, the defaulting party is required to pay the excess of its termination amount over the other (netted, in a currency swap, at the current spot exchange rate on the close-out date) but, as discussed above, the non-defaulting party is not required to pay if its closing amount (as so netted) is the larger. Other agreements provide that each party pay its termination amount to the other, or that the party with the larger closing amount (at then spot rates) pays the difference. In addition to formula calculations, the defaulting party is usually obligated to pay enforcement and other directly related costs. Minor adjustments must be made if the termination date is not a scheduled payment date or if there are margins over or below the floating rate under the swap.

80 The reader will note that the present value of a principal amount from a future date, which principal amount carries interest at a floating market rate (adjusted for any margin), is that principal amount.
Implicitly, each party is borrowing the amount it pays and investing the amount it receives. The element of fault therefore becomes relevant in the formulas for the choice of the rates used in discounting the relevant fixed rate amounts back to the termination date. Party D can presumably invest the Swiss francs in a high quality obligation at a lower rate than the rate at which Party C can borrow Swiss francs. Thus, depending on whether or not the formula uses the lower investment rate or the higher borrowing rate as the discount factor, the Swiss franc termination amount is larger or smaller, respectively. The choice of the investment rate or the borrowing rate generally depends upon which of the parties is perceived to be at fault. Thus, if Party C is in default, the investment borrowing rate would be used. Often, if the close-out event is “neutral,” such as illegality or imposition of withholding taxes, the parties will agree to use an average of the borrowing and investment rates.

In interest swaps in the same currency, the formula assumes a borrowing/investment of the notional principal amount at a redeployment rate equal to the fixed rate prevailing in the market at the time of termination for the balances of the term of the swap agreement. Again, choice of the borrowing or investment rates as the redeployment rate will depend on which party was in default. Notional payments of principal on maturity of the swap can be disregarded (since in this case such notional payments are equal in amount and therefore a “wash”) and only the redeployment rate at the time of termination over the remaining period of the transaction is compared to the original fixed rate. The product (adjusted for semi-annual, quarterly or other periodic payment dates) of the difference between those rates, expressed as a percentage, and the notional principal amount is then discounted back from each settlement date to the termination date.

If the redeployment rate at termination exceeds the fixed rate under the agreement, the aggregate present values would be payable by Party B (unless it is in default), because it is able to receive more income from the investment than under the swap, while Party A will pay more on its borrowing than under the swap. This is illustrated in Figure 5. If the prevailing fixed rate at termination is less than the agreement’s fixed rate, the aggregate present values would be payable by Party A (unless it is in default). Additional calculations must be made to provide for payment of accrued amounts. Calculation of any gain or loss on redeployment of the floating amount during the current floating period resulting from termination other than on a scheduled payment date must also be made. Compensation for margins over or below LIBOR would be effected by the termination amount receivable by a party receiving the margin over LIBOR or a
party paying a margin under LIBOR being increased by the present value of the future margin payments.

**FIGURE 5**

The agreement value approach, the present market standard, presupposes that the parties will replace the revenues and liabilities of the terminated swap through a replacement swap. Thus, if Party B were in default, the termination amount payable to (or by) Party A would be the cost (or profit) to Party A in inducing a substantial and creditworthy third party to enter into a swap with Party A on substantially the same terms as those set forth in the agreement being terminated. If Party A were in default, the relevant termination amount would be the cost (or profit) of Party B in inducing such a third party to enter into such a fee. Such a cost or profit could be determined on the basis of the average of quotations from either a list of specified swap participants or entities which are described generally. If the event of termination were a neutral event, the parties could choose to average the two amounts.
The agreement value approach may be analyzed in the same terms as the formula approach except the agreement value approach utilizes current fixed rates in the swap market as the redeployment rate, rather than the investment or borrowing rate. This is illustrated in Figure 6. For instance, assume that quotations obtained in the swap market would currently result in a fixed rate of 9.3 percent against LIBOR and that an older swap with a fixed rate of 12 percent is being terminated. The current fixed rate in the swaps market is thirty basis points (0.3 percent) over the treasury rate (which is usually the investment rate in the formula approach). A strong corporation's borrowing rate may be approximately sixty basis points (0.6 percent) over the treasury rate. If the fixed rate payor was in default, a replacement fixed rate payor would price its fee for entering into a replacement swap with the floating rate payor as the present value of the difference between 12 percent and 9.3 percent, on the notional principal amount, using a treasury rate as the discount factor. Worded another way, the replacement rate payor would require an amount it could invest elsewhere (presumably in U.S. treasury securities) to yield 2.7 percent on the notional principal amount on each future payment date. It would apply each such amount to reduce its
fixed rate obligation under the replacement swap agreement to market levels in effect at termination of the defaulted agreement.

If the floating rate payor was in default, a replacement floating rate payor would be willing to pay an amount to the fixed rate payor which would result in the new floating rate payor earning an acceptable rate of return through receipt of the “extra” 2.7 percent on each future payment date. That rate of return, notionally, would be the rate of return it would require on a fixed rate loan to the fixed rate payor, and would represent a combination of current market fixed rates and an analysis of the creditworthiness of the fixed rate payor. Thus, implementing the agreement value approach results in a redeployment rate between the borrowing rate and the investment rate.

Most U.S. parties prefer a defined method of calculation over an indemnity because they are more readily able to monitor periodically their exposure (or gain) in each swap and in their aggregate swap portfolio. In addition, a defined method of determining compensation may make actual damages more predictable and recoverable since a general indemnity results in the agreement being less certain. Even if the right to be indemnified is not subject to defense, the amount claimable under the indemnity (since not specified) is. Generally, an indemnity is strictly construed against the party which drafted the indemnity. Thus, the benefit of any ambiguity or doubt accrues to the party not drafting the indemnity. It will not be enforced with respect to contingent losses, and the burden of proof is on the indemnified party to show actual losses. An indemnity is also subject to defenses such as failure to mitigate or avoid loss. While these may be desirable in principle, the effect is to raise potential defenses to an indemnity claim based both on questions of fact and law. These questions are not likely to be summarily disposed of at the early stages of litigation. Enforcement thus becomes less certain.

An indemnity, although difficult to enforce by the indemnified party, may result in an even larger claim than the parties had anticipated. The indemnified party, for example, could claim consequential damages or damages based on special circumstances which the indemnitor should or could have been aware.

Finally, the sharing of gains and losses on a neutral termination (resulting from a change in law, for example) is less “neat” using an

82 Id.
indemnity than a defined method, because an incentive exists for each side to inflate its claimable loss or reduce its admitted gain to the detriment of the other.

The defined damages approach, which rests on an expressly agreed contractual provision, is subject to fewer defenses and uncertainties than the indemnity approach. A theoretical risk exists that provisions based on defined damages would not be upheld if found to result in a “grossly disproportionate” or “unconscionable” recovery not related to actual damage.86 Parties attempt to limit this risk by characterizing the payments as liquidated damages. While helpful, such a characterization is not technically correct and, if the results are found to be “grossly disproportionate,” such characterization will not prevent a court from characterizing the payments as a penalty or contrary to public policy, and therefore unenforceable.87 Nevertheless, it would be highly unlikely for a characterization such as “grossly disproportionate” or “unconscionable” to apply, because the formulas and agreement values are based on actual market redeployment rates at the time of termination, and on redeployment steps generally regarded as reasonable.

VI. Current Key Issues

As previously discussed, the volume of swaps has grown dramatically. Several institutions claim to enter into swap agreements with an aggregate of twenty billion dollars of notional principal amounts annually. The broad issue currently addressed by swaps specialists is the means of removing, or otherwise reducing, swap exposure in portfolios in order to enable a gain in swaps business in the aggregate and to conduct more business with particular counterparties. Viewing their primary function as dealers, swaps institutions must be able to move in and out of positions and view removal or reduction of swap exposure as a means of facilitating trading. Commercial banks are concerned that swap transactions utilize credit lines with particular counterparties, and may view removal or reduction of risk as eliminating restrictions on the amount of other credit which they are prudently able to extend to such counterparties.

A. Removal of Exposure

Swaps exposure can be eliminated either through cancellation (or “unwinding”) of agreements or by assignment. In a simple unwinding, the parties cancel the agreement, usually with one paying a fee for the cancellation to the other. This fee represents the accumulated loss to the second party and the gain to the first party in the

86 Truck Rent-a-Center, Inc., 41 N.Y.2d at 426, 361 N.E.2d at 1018, 393 N.Y.S.2d at 369.
87 Id.
transaction. If the agreement is one which contains a defined method of calculating damages (either by a formula or an agreement value concept), that calculated gain or loss is often the fee.

Alternatively, the parties could enter into—at current rates—a reverse “mirror” swap between the parties with all amounts payable under one agreement being applied against amounts receivable under the other. There would only be actual payment of the ultimate difference (resulting from the current fixed rate differing from the original fixed rate). This leaves the risk, which can be minimized but never totally eliminated, that payments under the two agreements might fail to cancel each other out. Acceptance of this continued risk is typically based on either tax or accounting analysis, since a simple unwinding with the payment of a fee could result in a taxable or reportable event at that time. A reverse mirror swap between the parties will spread the loss or gain over the remaining life of the transaction.

A mirror swap may also be written with a new counterparty. Although the original swap may be viewed as cancelled out, the aggregate credit risk has been doubled. This last approach is thus only feasible if the intent of the mirror swap is to reduce the risk of rate fluctuation, or speculation on rate fluctuation, on a portfolio basis, and not to reduce credit exposure.

Another straightforward way of removing swap exposure is through assignment and release. In addressing this issue, many parties ignore the fact that in a swap transaction obligations are mutual, rather than one-sided payment obligations as in a loan or tradeable security. While this distinction may appear obvious, it is often overlooked and many agreements do not, in their assignment clauses, include provisions addressing mutuality. For instance, many agreements refer only to the assignment of rights, which reference ignores the issue of assumption of liability by the assignee and release of the assignor’s obligation. Others refer to the assignment of rights and obligations, which is technically inaccurate since rights are assigned but obligations are assumed. More importantly, this misleading reference distorts perceptions of what is actually occurring, since the most significant issue is not just the assignment of rights, but the assumption by a third party of the original counterparty’s liabilities to the remaining party and the consequent release of the original counterparty’s liabilities. In short, the most significant issues in discussing assignment of a swap is the incurrence of exposure by the remaining party to a new counterparty.

Traditionally, swap agreements have provided that neither party could assign its rights (nor, implicitly, effect assumption of its obligations and be released) without the consent of the remaining party. An additional provision often provides that such consent shall not be
unreasonably held. Such a provision is unlikely to provide the desired freedom of maneuver to a party desiring a tradeable swap, since it must request the remaining party's consent. Another impediment is the fact that the provision is silent as to the assignor's release from liability. The provision, if it includes the requirement that consent not be unreasonably withheld, may also be unsatisfactory to a party desiring to restrict assignments for the following reasons: its definition of a good credit risk might be different than that of the assignor; it may desire to keep available credit lines for other types of more profitable financial transactions with the proposed assignee; or, perhaps due to institutional problems in the past or disputes over other credit relationships, the remaining party simply does not wish to have further credit relationships with the proposed assignee. The remaining party may not wish to be required to prove reasonableness, nor even to disclose to the proposing assignor the reasons for its withholding consent.

Those parties most interested in tradeable swaps have attempted forms of relatively free assignability to, and of course assumption by (with the release of the assignor), any of a list of permitted assignees. These clauses are sometimes followed by a generic description of other permitted assignees. Most financial institutions, however, generally must approve either individual credits with a given entity, or credit lines in an aggregate amount which can be utilized in a number of different fashions. Questions of prudence would arise if an institution entered, or was obligated to enter, financial transactions with entities for which it had not undergone its customary credit analysis.

A corporation may also have an interest in retaining control over the financial institutions with which it conducts business. The corporation may have a list of approved banks, and the requirement for compliance with internal procedures for transactions with banks not on the list. The corporation may derive comfort from having a variety of transactions with a given bank so that, if credit difficulties arise in the future, it can rely on that bank to resolve the problems rather than having to take precipitous action. Such reliance may be illusory if that bank has assigned the swap agreement and been released. Finally, for tax or other legal reasons, a party may not wish to deal with institutions from particular jurisdictions.

Free assignability may also create other credit concerns. For instance, if one party has a series of swaps with another, certain of those swaps would be favorable to the first party (it is owed money on a netted basis at that time) and certain of the swaps would be favorable to the second party. If the latter swaps were assigned by the second party, the first party could be left with a number of agreements under which it was owed money by the second party but
against which it had no rights of set-off. Contractual preservation of these rights of set-off would, of course, be unacceptable to an assignee.

Finally, permissive assignment clauses often do not include provisions for receipt of closing documents and warranties from the assignee as required by the assignor when it entered the agreement. An institution which customarily obtains closing documents and warranties in swap transactions in order to assure that its counterparty has due authority to enter into the transaction would generally desire similar documents from its new counterparty. To the extent that the remaining party must consent to the assignment or to the form of the documentation, it may be able to impose reasonable requirements in connection with the assignment. If a party does not have a right of consent, it may wish to specify as a condition to assignment additional objective criteria in the assignment clause. Obviously, a provision for closing documents would detract from the ease of assignability.

Swaps can also be transferred on a silent basis through means analogous to loan participations. Assume that Party A and Party B have a standard interest rate swap agreement: LIBOR against fixed, as illustrated in Figure 1. Party B enters into a swap agreement with Party C on precisely the same cash flow terms (retaining a margin) as in the agreement with Party A, except that its obligation to pay amounts to Party C only arise to the extent that it receives corresponding funds from Party A. This does not constitute an assignment of Party B's rights under the first swap agreement, nor does Party C have any rights against Party A. Party C is obligated to pay to Party B the amounts payable by Party B under the swap agreement with Party A, but Party B is not released from its direct obligations to Party A. On a termination of the agreement by reason of a default by Party A, the swap agreement with Party C terminates and Party B will be obligated to pay to Party C all of the amounts it recovers from Party A on termination.

Party B has thus passed on the credit risk (the risk that Party A will fail to perform) to Party C, since Party A's failure to perform reduces pro tanto Party B's obligation to Party C. Were the first swap agreement to be terminated by Party A by reason of a default by Party B, Party B would, of course, be obligated to pay a termination amount to Party C. Party C incurs the credit risk of both Party A and Party B, since if the former defaults, Party B has no obligation to pay Party C and if Party B defaults, Party C has no recourse against Party A. Party B, of course, is not without any credit exposure since, if Party C should breach its agreement with Party B, Party B still has its obligations to Party A on an unmatched basis.
B. Credit Enhancement

If swaps risk cannot be totally removed, at least it can be reduced through traditional means of credit enhancement such as collateralization and guarantees. Many swaps have been written on a collateralized basis and, as the swaps market expands, an increasing number of swap agreements may be secured. Questions of collateralization applicable to swaps are similar to those applicable to other executory agreements. The primary risk, as discussed above, is that a swap agreement cannot be terminated by reason of the bankruptcy of a counterparty or by general equitable or contractual considerations. Generally speaking, collateralization can take one of three forms: collateralization on demand on a mark-to-market basis; collateralization automatically on a mark-to-market basis; or collateralization at the inception of the agreement.

Until the required collateral is delivered, it does not provide any actual security. An agreement to give collateral is simply an unsecured obligation which is unlikely to be specifically enforceable. Failure to deliver collateral is likely to constitute a breach of the agreement thereby permitting, subject to the restrictions discussed above, termination.

If the collateral was delivered to the secured party at the inception of the agreement or at a later date as a condition to the effectiveness of the agreement, delivery of the collateral is unlikely to be subject to avoidance under the Bankruptcy Code. If the delivery of the collateral occurred after the agreement became effective and pursuant to a contractual obligation to deliver collateral, whether on demand or automatically as a result of market rate movements, the pledged collateral would likely be avoided as a preference if it was delivered within ninety days before the debtor's bankruptcy petition was filed; or, if the solvent party was an "insider" of the debtor the preference would likely be avoided if the collateral was delivered between ninety days and one year prior to the bankruptcy filing and the debtor was insolvent at the time the collateral was delivered.

Assuming a party having valid, enforceable, and non-preferential collateral terminates a swap agreement pursuant to the provisions of the swap agreement, and its counterparty is not in insolvency proceedings, it would generally be able to realize on the

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88 Collateralization on a mark-to-market basis means that a party must deliver collateral to the other party in an amount determined by periodically valuing the swap agreement, usually through either a formula or agreement value method.
89 See 11 U.S.C. § 547(b)(2) (1982) (preference section; applies only to property transferred "for or on account of an antecedent debt") Id. § 548(a)(2)(A) (fraudulent transfer section; applies only where debtor "received less than a reasonably equivalent value in exchange for such transfer or obligation").
90 Id. § 547(b)(4)(A).
91 Id. § 547(b)(4)(B).
collateral. If its right to terminate is questionable (as in the Beverly Hills case), its right to realize on the collateral will probably also be enjoined.

If the counterparty has entered insolvency proceedings under the Bankruptcy Code, and the solvent party's right to terminate is permitted by the court, or if the agreement is rejected by the trustee, enforcement of the solvent party's rights in the collateral is still subject to the limitations on the rights of secured parties in bankruptcy proceedings. The right to proceed against the collateral would be subject to the automatic stay and the solvent party must make a motion in the bankruptcy court to lift the stay. If the trustee objects to the solvent party's motion, the trustee must provide adequate protection of the solvent party's interest in the collateral. The extent of the adequate protection will be determined on the facts of the individual case, and the legal parameters of adequate protection are the subject of continuing litigation in the U.S. courts. If the collateral constitutes "cash collateral" within the meaning of section 363 of the Bankruptcy Code, the trustee will have to apply to the bankruptcy court before it will be able to use that cash collateral to fund its reorganization. If the solvent party's claim is undersecured, that claim will be treated as a secured claim to the extent of the collateral and the remainder of the claim will be treated as an unsecured claim, regardless of any future appreciation in the value of the collateral. If the solvent party's claim is oversecured, the claim will be treated as secured, and the solvent party will be entitled to recover therefrom costs and expenses and interest on its claim to the extent provided in the solvent party's agreement with the debtor.

If the right to terminate is not permitted by the court or the trustee assumes, or assumes and assigns, the swap agreement, the trustee or assignee, as the case may be, remains subject to any provisions in the agreement which require the maintenance of the collateral. If, however, the collateral has been delivered to the solvent party outside of the swap agreement, and any agreement explicitly related to the swap agreement, the trustee would be entitled, as discussed above, to assume and assign the swap to a third party as long as the third party cures all existing defaults under the swap agreement and provides "adequate assurances of future performance" under the swap agreement. Again, determination of what consti-

92 Id. § 362.
95 Id. § 365(b)(1).
tutes adequate assurances will be made on a case by case basis.

A final means of reducing swap risk is to obtain the credit backing of a third party to the counterparty's obligations. This can be accomplished either through a guarantee, letter of credit, or a “wrap around” agreement which becomes effective on termination of the relevant agreement. If a guarantee is obtained, Party G, for example, would guarantee all obligations of Party A to Party B under the swap agreement. This, however, might be unacceptable to Party G, particularly if it is not a parent or affiliate of Party A.

For instance, if Party A were to fail to make a payment when due and Party B were to claim under its guarantee, Party G would be obligated to make the payment to Party B. Subsequent payments, if any, by Party B to Party A would be payable to Party A. Thus, the obligation of Party G could be relatively open-ended. Unless it is satisfied that it has sufficient control over Party A and its affairs and is able to derive economic benefits from payments to Party A, Party G may wish only to guarantee any termination amount or damages payable by Party A on termination of the agreement by Party B.

An alternative structure, economically similar to a guarantee, would be that, if Party A were to default, Party B by notice to Party G could automatically assign the agreement to Party G. Party B would be released from its liabilities to Party A, and Party G would in effect become the direct counterparty of Party A. In either the basic agreement or a separate agreement, Party G would have agreed to pay to Party B the termination amount, if any, which would have been payable by Party A on termination of the agreement if it had been terminated on the date of assignment. The assignment and release, with the irrevocable prior consent of Party A, would be set forth in the basic agreement.

Party G may prefer not to be required to make a direct payment to Party B, under a guarantee, a letter of credit or an automatic assignment. Instead, it may prefer to step into the place of Party A under the agreement, particularly where the basic agreement could be terminated under circumstances where a defined method of damages would show an amount payable by Party B, but under the terms of the swap agreement, the default of Party A excused Party B from making such payment. Thus, Party G might require that if the agreement is terminated, it would enter into a swap agreement on essentially the same terms as the defaulted agreement, in place of Party A. Party B will want this agreement to be signed immediately (with effectiveness delayed until termination of the basic agreement). Therefore, Party B and Party G would, at the time that Party A entered into the agreement with Party B, enter into an agreement on the same commercial terms, but commencing on termination of the Party A agreement. Party B, of course, would desire that Party G
also agree to indemnify Party B in the event that termination of the basic agreement was not permitted for any reason.

It is not necessary that a guarantor be related to a counterparty or that the counterparty even be aware of the existence of the guarantee. The guarantee may not even be characterized as such. For instance, a program has been devised between one of the major end users of swaps and an insurance company pursuant to which the insurance company would create a master policy covering the exposure of the end user under specified agreements. A counterparty, such as a single A-rated U.S. corporate counterparty, would typically be "found" by a swaps broker or other swaps institution. The end user would not make its own credit analysis of the counterparty but would give the insurance company notice of the proposed counterparty and the terms of the transaction.

The insurance company would have the option to agree to the addition to the policy of the relevant swap agreement. If it approved the credit, the rider to the policy would be amended by setting forth the name of the counterparty and the terms of the agreement. The end user would periodically pay a premium to the insurance company calculated on the aggregate market risk of all agreements subject to the policy. This risk would be calculated for each agreement on the basis of an agreement value defined method of calculating exposure. Agreements, using an agreement value calculation at a given time, indicating that the end user had no risk (i.e., calculating the agreement value would result in an amount payable by the end user to the counterparty) would not be deducted from the aggregate agreement values on which the premium was paid. This type of procedure could, of course, be applied to an outstanding portfolio of swap agreements as well as to new agreements.

C. Securitization of Swaps

Exposure can be removed through unwinding, assignment, or participation. All three of these methods require negotiation and delay which is not fully satisfactory to dealers. Swap exposure can be reduced through credit enhancement. Nevertheless, as long as swaps remain mutual obligations, it can be expected that they will not be tradeable and hence fully transferable. Several possible solutions which would alter the traditional view of swaps are currently being discussed.

First, if a clearing house were established, swaps might indeed be tradeable in a manner similar to options and futures on the regulated exchanges. Thus, a swap would in effect be written with the clearing house. The total positions of individual counterparties could be netted out with any remaining net exposure being collater-
alized. The credit of the clearing house would in effect be the sum total of that collateralization.

Second, swaps may become securitized on a basis similar to that of recent “cap” and “floor” agreements. A cap is the obligation of a party to pay the excess of a floating rate (LIBOR, for example, over an agreed fixed rate). To date, caps have generally been written on the basis of capped floating rate note or variable certificate of deposit issues, and the cap “strike” price is usually in excess of the current market fixed rate at the time the cap is issued.

For example, an issuer issues floating rate notes at a rate of LIBOR + 1/4 percent, provided that if LIBOR were to exceed 13 percent in any period the rate would be fixed at 13 percent for that period. A capped floating rate note appeals to an investor which is willing to receive a present higher return (1/4 percent margin as opposed to 1/16 percent) and is willing to take the risk that short-term rates will not exceed 13 percent during the term of the note or until a date sufficiently in the future that it would have been compensated for its then rate exposure. The issuer then enters into a cap agreement with another party or parties pursuant to which it agrees to pay to such party or parties an amount equal to the product of the principal amount of the note issue (the excess of LIBOR over 13 percent), and a fraction representing the number of days in the relevant period over 360.

The purchaser of a cap may be an institution which is concerned about future increases in interest rates beyond “unacceptable” levels, such as a savings and loan association with a portfolio of fixed rate loans, but interest sensitive funding sources. In return for this protection, the purchaser of the cap may agree to pay the issuer 1/4 percent per annum of the principal amount semi-annually on the payment dates corresponding to those of the floating rate notes. The issuer has then effectively obtained funds at LIBOR flat, a savings of 1/16 percent per annum. Such a transaction is illustrated in Figure 7.

**FIGURE 7**
Alternatively, the purchaser could pay an amount to the issuer which, if invested by the issuer, would yield 1/4 percent on each of those payment dates. This transaction is illustrated in Figure 8.

**FIGURE 8**

<table>
<thead>
<tr>
<th>ISSUER</th>
<th>LIBOR - 13%</th>
<th>CAP PURCHASER</th>
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<td></td>
<td>Semi-annually</td>
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Initial Fee or Purchase Price (P.V. of 1/4% per annum)

In the latter example, viewed from the perspective of both the issuer and the purchaser of the cap, a one-sided obligation is created. Although such an instrument can be traded, it is subject to concerns about taxes (if such an instrument were to fall into the hands of a party outside the jurisdiction of the issuer), compliance with securities laws (since such an instrument might be regarded as a security), compliance with restrictive laws applicable to futures and options, and an institution's policy on the amount of outstanding tradeable paper it desires to issue.

In addition, "floors" can be created. A floor is an obligation to pay the excess of an agreed fixed rate over LIBOR. The type of institution interested in purchasing a floor would be one concerned that short-term rates might drop in the future. For example, an insurance company which requires maintenance of a high rate income will be interested in purchasing a floor.

Carrying this analysis one step further, the swap agreement described at the beginning of this article can be re-characterized as simply a cap and a floor based on the current fixed rate rather than an "out-of-the-money" rate as found in caps and floors. If each party were prepared to surrender various rights of set-off against the other, Party A could deliver a negotiable cap (excess of LIBOR over the fixed rate) to Party B and Party B could deliver a negotiable floor (excess of the fixed rate over LIBOR) to Party A. Either party would be permitted to sell the instrument which it received.

Alternatively, since in the first example the cap and the floors were both out the money (assuming a current fixed rate of 9 percent), means could be devised to generate income through a trust arrangement which would bring the respective instruments within marketable ranges.
Swap results can also be achieved in a tradeable form through the issuance of bearer securities in which a swap is implicit, or "embedded," in the security issued. As illustrated in Figure 9, for instance, an issuer may issue notes carrying a coupon payable at a fixed rate (18 percent) minus LIBOR. This note would appeal to an investor interested in purchasing a floor, such as an insurance company concerned about a decline in interest rates. The cash flows under this note can be notionally restructured as if a fixed rate note were issued at current fixed rates coupled with a swap with the investor. It is understood that any excess of LIBOR over the fixed rate in the notional swap with the investor is payable out of the notional fixed rate interest amounts received by the investor on the note. The issuer can then, through two other swaps, effectively incur a financing cost of below LIBOR.

Other issuances have been structured to include implicit medium term currency options. In Figure 10, for instance, an issuer issues 100 million dollars principal amount of notes at LIBOR plus 3/8 percent per annum. Its normal borrowing rate would be at LIBOR plus 1/4 percent. On maturity, it pays to the investor the lesser of 100 million dollars or a reduced amount based on appreciation of the yen against the dollar. If the yen appreciates to a certain point, no principal would be repaid. The investor may well be a Japanese company which desires higher than normal current income but is not concerned about (or does not believe that there will occur) significant appreciation of the yen. This transaction can also be restructured as if it were a standard floating rate note coupled with a currency option written by the investor. The issuer is thus able to sell, either for 3/8 percent per annum payable annually or the present value of that stream of payments as of the commencement of the transaction, a currency option to a purchaser. This type of option, if the premium is paid at the commencement of the transaction, is potentially tradeable with caps and floors discussed above.
(a) Note

![Diagram of note restructuring with LIBOR at 18.0%](image)

(b) Reorganization of Note

![Diagram of note restructuring with a 9.1% swap](image)

(c) Full Transaction

![Diagram of full transaction with LIBOR at 8.9%](image)
(a) Note

<table>
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<th>INVESTOR</th>
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<td></td>
<td>$100 mm - Yen appreciation at maturity</td>
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(b) Recharacterization

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<tr>
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<td>$100 mm at maturity</td>
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Option

Yen appreciation (capped at $100 mm at maturity)

(c) Full transaction

Purchase Price
(P.V. of 3/8% per annum)

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<th>ISSUER</th>
<th>INVESTOR</th>
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<tr>
<td></td>
<td>$100 mm at maturity</td>
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Yen appreciation (capped at $100 mm at maturity)
VII. Conclusion

The swaps market continues to grow and evolve. While many swaps transactions can be characterized as routine, the higher volume of swaps continues to focus attention on the unresolved legal and tax issues of even the simplest transaction. In addition, the fertile imaginations of swaps specialists continue to devise novel and creative structures which go far beyond the development of the legal context in which swaps operate.