Global Profit Split: An Evolutionary Approach to International Income Allocation

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PRÉCIS

La fiscalité internationale s'intéresse principalement à la ventilation équitable du revenu transfrontalier entre les pays où l'entreprise exerce ses activités génératrices de revenus. Traditionnellement, cette ventilation reposait sur le principe de pleine concurrence qu'on a toujours interprété comme exigeant une approche fondée sur un prix comparable. Selon cette approche, chaque membre d'un groupe multinational est une entité distincte et les opérations entre apparentés peuvent être isolées et comparées à des opérations de pleine concurrence. Il s'est toutefois avéré difficile d'appliquer cette approche aux entreprises intégrées à l'échelle mondiale, en particulier en ce qui a trait aux biens incorporels et aux services, et on a plutôt suggéré d'opter pour une répartition qui serait calculée selon une formule. Il s'agit essentiellement de considérer le groupe multinational comme une seule entité économique. Le bénéfice du groupe est partagé entre les membres selon une formule qui tient compte de l'apport du membre en particulier à la réalisation de ce bénéfice. De nombreux ouvrages ont été consacrés aux avantages et aux désavantages de cette approche. L'OCDE et des gouvernements nationaux l'ont cependant rejetée parce qu'elle était contraire au principe de pleine concurrence.

Le présent article propose une méthode de partage des bénéfices mondiaux (PBM) pour assurer la ventilation du revenu international. En vertu de cette méthode, une partie des bénéfices mondiaux d'une entreprise intégrée serait attribuée à chaque pays en fonction des apports économiques de l'entreprise de ce pays. L'attribution

serait fondée sur une formule qui tiendrait compte des facteurs économiques qui contribuent à la réalisation du bénéfice. La méthode du PBM s'inspire des méthodes traditionnelles de répartition du bénéfice calculée selon une formule et du partage des bénéfices, mais elle s'en écarte aussi. L'auteure traite en détail des principaux enjeux inhérents à la conception d'une méthode de PBM. Elle présente aussi et évalue la politique principale et les justifications pratiques de l'adoption de cette méthode innovatrice.

Selon elle, la méthode du PBM n'est pas seulement supérieure en théorie ou en pratique aux méthodes de partage du revenu, mais elle est également compatible avec le principe de pleine concurrence. Sur la base de l'évolution historique, de l'interprétation de l'article 9 de la convention modèle de l'OCDE et de considérations politiques fiscales internationales, l'auteure établit que la méthode du PBM n'est pas radicalement différente du principe de pleine concurrence mais elle est plutôt le résultat d'une évolution naturelle. Elle conclut que la loi de l'évolution milite en faveur d'une telle réforme parce que la méthode du PBM assure une ventilation juste et efficace du revenu tiré d'activités d'entreprises intégrées à l'échelle mondiale.

ABSTRACT

International taxation is concerned mainly with the equitable allocation of cross-border income between countries in which income-earning activities take place. Such allocation has traditionally been governed by the arm's-length principle, which has been interpreted as requiring a comparable transactional pricing approach. This approach assumes that each member of a multinational enterprise (MNE) group is a separate entity and that the transactions between related parties can be separated and compared with arm's-length transactions. It has, however, proved difficult to apply comparable transactional pricing to internationally integrated businesses, especially those involving intangibles and services, and formulary apportionment has been suggested as an alternative. Essentially, formulary apportionment treats the MNE group as a single economic entity. The group's profit is allocated to members according to a formula that reflects the particular member's contribution to the production of that profit. A rich academic literature exists which either defends or attacks this alternative approach. The OECD and national governments have rejected formulary apportionment mainly on the ground that it violates the arm's-length principle.

This article proposes a global profit split (GPS) method for allocating international income. The GPS would allocate the global profit of an integrated business to each country in accordance with the economic contributions made by components of the business located in that country. The allocation would be based on a formula that would reflect the economic factors that contribute to profit making. While the GPS draws on elements of the traditional formulary apportionment and profit split methods, it also differs from them. The author discusses in detail the key issues involved in designing the GPS. She also presents and evaluates the main policy and pragmatic justifications for the adoption of this innovative approach.

The author argues that the GPS is not only theoretically and practically superior to traditional income allocation methods, but also consistent with the arm's-length principle. On the basis of historical developments, interpretation of article 9 of the OECD model tax convention, and international tax policy considerations, the author establishes that the GPS is not a radical departure from the arm's-length principle, but rather a natural development in its evolution. She concludes that the law of evolution is

on the side of reform because the GPS would provide for a fair and effective allocation of income derived from globally integrated business activities.

INTRODUCTION

International income allocation deals with the allocation of income derived from cross-border related-party transactions between jurisdictions that have a legitimate claim to the taxation of that income. From an economic perspective, each sub-unit (subsidiary or branch) of a multinational enterprise (MNE) is part of the MNE group. When each jurisdiction in which an MNE carries on its activities has the right to tax the resulting income, the manner in which the income is to be allocated to each jurisdiction becomes a crucial issue to both the taxpayer and tax authorities. Ideally, the income allocated to each jurisdiction reflects the economic activities carried on in that jurisdiction, and there is no overtaxation or undertaxation of such income as compared with the situation where income is earned in a single jurisdiction.

There are two theoretical approaches to interjurisdictional income allocation. The separate entity approach treats each subsidiary as a separate entity that deals with its related parties on an arm's-length basis and charges fair market prices for its transactions with them. The formulary apportionment or unitary approach recognizes the fact that the MNE group is a single economic entity and allocates a portion of the group profit to each related party on the basis of a formula that reflects the economic contributions made by each party to the production of the profit.

Historically, and in current practice, international income allocation is based on the arm's-length principle articulated in article 9 of the OECD model tax convention.[1] This principle is recognized and endorsed by the international community. The OECD's transfer-pricing guidelines[2] set out five major transfer-pricing methods for the implementation of this principle. The OECD regards these methods as based on the separate entity approach and rejects the global formulary apportionment method.[3] Recently, however, in response to the rise of electronic commerce and further integration of MNEs' businesses, some proposals have been put forward to allocate international income on a formulary basis. Since the most recent proposal comes from the European Union (EU),[4] there may be a realistic chance that formulary apportionment will be adopted as a general method for international income allocation.

This article proposes a global profit split method for the allocation of international income. This approach combines elements of the existing profit split method and the traditional formulary allocation method currently used by a number of US states and Canadian provinces. The discussion that follows is divided into four main sections. The first section discusses the need and policy criteria for international income allocation. The second section describes the present system and highlights its advantages and problems. In particular, it is shown that the existing methods are fundamentally flawed in both theory and practice. The third section

presents the proposed global profit split method and argues that its advantages outweigh its disadvantages. Finally, the fourth section argues that adoption of the global profit split method is favoured by the law of evolution. A historical review demonstrates that as the so-called international norm based on the arm's-length principle has evolved over the past seven decades, there has been a steady drift toward the use of formulary allocation. A number of specific examples of such use are presented. As a further stage in the evolutionary process, the proposed method would be consistent with the arm's-length principle. It is argued that this and other factors support the probability that an international consensus can be reached on the implementation of the global profit split method.

INTERNATIONAL INCOME ALLOCATION

The Need

The need for an international policy on the allocation of income between jurisdictions arises from the fact that cross-border trade and investment have been dominated by MNEs. For example, the top 350 MNEs own about one-sixth of the world's productive assets,[5] and intrafirm trade already accounts for about 60 percent of world trade.[6] Intrafirm trade gives rise to international income allocation issues.

The need also arises from the fact that cross-border transactions are subject to divergent treatment under national tax laws. The highly integrated nature of MNEs gives them the potential to manipulate transfer prices so as to minimize their global tax liability.[7] The existence of tax havens has also provided ample opportunities for MNEs to shift profits to tax-favourable jurisdictions, again through strategic transfer pricing. In addition, the rise of telecommunications and related technologies, including the Internet and other networks, has made it easy for MNEs to relocate certain business operations in low-tax jurisdictions, particularly in the "soft service" areas, such as data processing, invoicing and credit control, and customer services, as well as Web-based businesses (such as online gambling).[8] The crown jewels of MNEs—intangibles—also can be located in tax havens. Some economists have argued that the opportunity to avoid tax through transfer-price manipulation is a major reason for the existence of MNEs.[9] Obviously, the ability of MNEs to engage in global income shifting has serious implications for tax policy.

Policy Criteria

There are several widely accepted criteria for the evaluation of international tax policy. They include the attainment of inter-nation equity, inter-taxpayer equity, neutrality, simplicity, and administrative efficiency. In the discussion that follows, these criteria will be applied in evaluating both the current approach to international income allocation and the proposed global profit split approach.

Inter-Nation Equity

Inter-nation equity refers to an equitable division of tax revenue between countries. "Fair shares" for all legitimate claimants to the international tax pie appears

to have been an essential element in the creation of the current international tax system.[10] Sharing the tax revenue is effectively a "zero-sum game" for countries, in the sense that one country's gain in tax revenue means another's loss. Consequently, it is argued, perceived "equity" or "fairness" in the allocation of tax revenue is necessary to the continued existence of the system.[11] In any event, it is now well accepted that equity is a fundamental requirement of international income taxation,[12] and it is "perhaps practically more significant" than other objectives.[13]

On the assumption that both residence and source countries contribute to the earning of income from international transactions, and thus both are entitled to share the tax revenue, the key question is how that tax revenue is to be shared. Equitable division of tax revenue depends on (1) the allocation of jurisdictional claims between the source and the residence countries (jurisdictional allocation), and (2) the allocation of income from intrafirm transactions (income allocation) among countries.

On the question of jurisdictional allocation, various theoretical criteria for achieving inter-nation equity have been proposed by a number of leading tax scholars;[14] however, none of these criteria has been universally accepted. Indeed, throughout the history of the international income tax system, scholars and policy makers have strongly disagreed over the policy framework that best meets the requirement of inter-nation equity. Some call for predominant residence taxation,[15] and others call for predominant or exclusive source taxation.[16]

On the question of income allocation, economic theories generally support the formulary allocation approach, whereas the power of precedence and pragmatic concerns favour the separate accounting approach. The latter has been viewed as the predominant approach and has often been equated (erroneously in this author's opinion)[17] with the arm's-length principle.

Inter-Taxpayer Equity

Unlike inter-nation equity, which is concerned with the allocation of tax revenue between countries, inter-taxpayer equity is concerned with the distribution of the tax burden among taxpayers of a particular country.[18] Inter-taxpayer equity based on ability-to-pay considerations is a fundamental principle of income taxation.[19] It is analyzed in terms of horizontal equity (similarly situated taxpayers should be taxed the same) and vertical equity (under a progressive tax system, taxpayers with higher incomes should pay higher taxes). This concept is more readily applied to individual taxpayers, but it can also be applied to corporations since a corporation is essentially a "halfway house" for income flowing to individual shareholders.[20]

To promote the objective of inter-taxpayer equity, a country should prevent both overtaxation and undertaxation of international income. International overtaxation (mainly caused by double taxation), as pointed out by Thomas Adams in 1918, violates inter-taxpayer equity.[21] Similarly, undertaxation of international income is unfair to honest taxpayers. Inter-taxpayer equity has been invoked to justify various anti-avoidance rules.[22] If certain taxpayers can reduce their tax burden by using tax-avoidance techniques, such as transfer-price manipulation or

the deferral of tax through the use of controlled foreign corporations located in low-tax countries, these taxpayers will not be paying their "fair share."[23] For example, former US President John F. Kennedy argued that "deferral [through the use of controlled foreign corporations] was akin to a special subsidy to US taxpayers that were sophisticated enough to conduct business abroad" and that the elimination of deferral was necessary to achieve greater equity.[24] A similar argument was advanced in Canada's Carter report, which called for the minimization of tax deferrals and tax havens.[25]

Furthermore, to achieve inter-taxpayer equity, a group of related corporations should be subject to the same burden that would be imposed on a single corporation engaging in comparable activities.[26]

Neutrality

Tax neutrality has been considered another major objective of international tax policy. It is an economic concept based on the assumption that productivity will be highest when income-producing factors are distributed by market mechanisms without government interference. Tax rules that do not interfere with factor distribution by market forces are considered "neutral." However, since taxation can never be completely neutral, the objective of international tax policy is to seek a high degree of tax neutrality.

Tax neutrality has two main dimensions: capital export neutrality (CEN) and capital import neutrality (CIN).[27] CEN is favoured by many economists as a prerequisite for worldwide economic efficiency.[28] According to CEN, the tax system should not distort the choice between investment at home and abroad. This principle has been invoked most frequently in the context of ending deferral through the use of controlled foreign corporations.[29] CIN is often favoured by business representatives on grounds of competitiveness. According to CIN, all business activity within a given jurisdiction should be subject to the same overall level of taxation. Therefore, a country should avoid tax rules that might cause its taxpayers to bear a higher effective tax burden in foreign markets than the burden borne by their competitors from other countries. To implement CIN, residence countries should either exempt all foreign income from domestic tax or at least allow the deferral of current domestic taxation on foreign income.

CEN and CIN have little application to the question of interjurisdictional income allocation. Many commentators do not view CEN or CIN as a viable policy objective. For example, Michael McIntyre writes, "None of the [tax] guidelines . . . relies on the so-called principles of capital export neutrality or capital import neutrality, notwithstanding the usual prominence of those principles in discussions of international tax regimes."[30]

Another aspect of tax neutrality is transactional neutrality, and it seems to have been widely accepted.[31] Transactional neutrality requires that similar economic transactions, irrespective of their form or means of implementation, should be taxed the same. This objective has been suggested as the main rationale for the adoption of the arm's-length principle—that associated enterprises and independent enterprises should be treated on an equal footing.[32]

Simplicity and Administrative Efficiency

The policy objective of simplicity and administrative efficiency is universally accepted. It often requires some sacrifice of equity and neutrality concerns. It requires that compliance costs for taxpayers and administrative costs for the tax authorities be minimized as far as possible. If a tax is difficult to administer or if compliance burdens are excessive, no matter how perfect it may appear in theory or design, the tax will fail to serve its intended function as a reliable source of revenue.

In practice, however, international tax rules—at least those legislated in Canada and the United States—are complex and difficult to understand. International tax rules are generally more complex than domestic rules because of the need to address jurisdictional issues, the interaction of different legal systems, and the inherent flexibility and complexity of global business transactions. The current transfer-pricing rules are among the most complex provisions in international taxation.

THE PRESENT SYSTEM

The arm's-length principle is embodied in tax treaties and in the domestic law of many countries (for example, section 247 of the Canadian Income Tax Act[33] and section 482 of the US Internal Revenue Code[34]). The application of this principle is guided by the OECD guidelines.

The OECD guidelines define the "arm's length principle" as the "international standard that OECD member countries have agreed should be used for determining transfer prices for tax purposes."[35] The most authoritative statement of the principle is found in paragraph 1 of article 9 of the OECD model, which provides:

> [When] conditions are made or imposed between . . . two [associated] enterprises in their commercial or financial relations which differ from those which would be made between independent enterprises, then any profits which would, but for those conditions, have accrued to one of the enterprises, but, by reason of those conditions, have not so accrued, may be included in the profits of that enterprise and taxed accordingly.

Although article 9 refers to "associated enterprises," the application of this rule is not confined to situations in which separate legal entities (that is, subsidiaries) are used. It also applies in principle to the allocation of profits to a permanent establishment.[36]

Current Transfer-Pricing Methods

As stated earlier, the OECD guidelines provide for five major transfer-pricing methods based on a comparable transactional pricing approach. These are

1. the comparable uncontrolled price (CUP) method,
2. the resale price method,
3. the cost plus method,
4. the profit split method, and
5. the transactional net margin method (TNMM).

The first three are viewed as traditional transaction methods, and the last two are profit-based methods. These methods are generally accepted by national tax authorities. The US regulations[37] provide for the use of additional methods, including the comparable profit method (CPM) (which is not very different from its international cousin, the TNMM).

Formulary apportionment is not a method recognized by the OECD guidelines. On the other hand, the US proposed global dealing regulations provide that, in appropriate circumstances, a multifactor formula may be used to determine whether an allocation in a global trading situation is at arm's length.[38]

Any one or more of the recognized transfer-pricing methods may be adopted in advance pricing agreements (APAs). An APA is an agreement between a taxpayer and the tax authorities whereby the parties agree on a particular transfer-pricing methodology to be applied to a specific set of transactions for a specified term.[39] An APA can be unilateral or multilateral. Unilateral APAs are agreements between a taxpayer and one tax authority; multilateral APAs are agreements between a taxpayer and several tax authorities. APAs are allowed by the OECD guidelines and are used in Canada, the United States, and many other countries.

It is beyond the scope of this article to describe the recognized transfer-pricing methods in detail.[40] For present purposes, it is sufficient to highlight three basic features of these methods that maintain conformity to the arm's-length principle: transaction-based pricing, arm's-length pricing, and comparability.

First, all of the transfer-pricing methods except the CPM under the US regulations are transaction-based, to varying degrees. Under the current application of the arm's-length principle, the OECD guidelines expressly require recognition of the actual transactions. The guidelines state that "[i]n other than exceptional cases, the tax administration should not disregard the actual transactions or substitute other transactions for them."[41] The guidelines recognize only two circumstances in which actual transactions can be ignored:

1. where the economic substance of a transaction differs from its form—for example, where an investment in an associated enterprise is structured as debt and the actual substance of the investment is a subscription of capital; and
2. "where the arrangements made in relation to the transaction, viewed in their totality, differ from those which would have been adopted by independent enterprises behaving in a commercially rational manner and the actual structure practically impedes the tax administration from determining an appropriate transfer price."[42]

Second, arm's-length prices are benchmarks for allocating profit from cross-border intrafirm transactions. For example, the CUP method forms the basis for determining the arm's-length price. In the case of the profit split method, arm's-length pricing is derived from both test parties by working back from profit to price arithmetically.[43] The resale price and cost plus methods and the TNMM all arrive at arm's-length pricing by establishing comparable net margins.

Third, the application of the arm's-length principle is based on comparability—a comparison of the conditions in a controlled transaction with the conditions in transactions between independent enterprises. Transactions are comparable if the economically relevant characteristics of the compared situations are sufficiently comparable. According to the OECD guidelines, a number of factors may influence the degree of comparability of transactions. These include the characteristics of the property or services being purchased or sold; the functions performed by the parties to the transactions (taking into account assets used and risks assumed); the terms and conditions of the contract; the economic circumstances of the parties; and the business strategies pursued by the parties.[44]

Generally speaking, the higher the degree of comparability, the more useful the price or margin comparison becomes. Identical transactions, if they can be found, provide the most reliable basis for establishing an arm's-length price. Short of that, the economically relevant characteristics of the transactions being compared must be at least sufficiently similar as to permit reasonably accurate adjustments to account for any differences. Transactions between other non-arm's-length parties cannot be used for purposes of these comparisons, since the terms and conditions may not have been at arm's length in the first place. A lack of reliable comparable data generally precludes the use of methods that totally depend on such data. For example, the US regulations exclude the use of CPM in global dealing operations because of the high variability in profits from company to company and year to year which results from differences in business strategies and fluctuations in financial markets.

Advantages

The comparable transactional pricing approach enjoys several advantages.

The first advantage is its longevity. As discussed further in the fourth section of this article, the international adoption of this approach began in the 1930s.[45]

The second advantage, related to the first, is that the arm's-length principle has been adopted worldwide, and many consider that it represents the international norm.[46] Although countries differ in their choice of methods of implementing this principle, they tend to agree on the comparable transactional pricing approach.

The third advantage, according to the OECD guidelines,[47] is that the comparable transactional pricing approach provides the most accurate measurement of the fair market value of the true economic contribution of members of an MNE group. It reflects the fundamental objective of article 9(1) of the OECD model: parties transacting at arm's length are expected to endeavour to make efficient use of their resources; in doing so, enterprises seek to earn a full return from their economic activities. The comparable transactional pricing approach uses the behaviour of an independent enterprise as the benchmark for what is expected of members of an MNE group. In theory, by applying this benchmark to transactions occurring within an MNE group, the arm's-length principle seeks to remove the effect of any ownership relationship between members of the group from the transfer prices established for those transactions. According to the comparable transactional pricing

approach, each member of the MNE group earns a return that is commensurate with its economic contribution and risk assumed.

Theoretical Problems

The comparable transactional pricing approach is problematic from both a theoretical and a practical perspective. It also represents a questionable interpretation of article 9 of the OECD model.

The transactional approach is conceptually inconsistent with the existence of residual profit and the economic purpose of MNEs.[48] One cannot assume that controlled parties conduct market-based transactions within an MNE group. Because an MNE will not act as if its parts are unrelated, it does not make sense to try to account for individual transactions in the way that unrelated parties subject to market forces would account for similar transactions.[49] The transactional approach seems to "operate in a universe of pretense"[50] and exist "in a world of smoke and mirrors."[51] As in *Alice's Adventures in Wonderland*, as Jerome Hellerstein observes, the market-based arm's-length approach "turns reality into fancy, and then pretends it is in the real world."[52] In fact, related and unrelated entities are economically different creatures.[53]

Theory of the Firm

"The firm" was originally defined as a system of production operating through internal coordination within an organization, under the direction of an entrepreneur coordinator, usually a parent corporation. It was thus distinguished from entities that operated through a complicated market structure and engaged in exchange transactions involving contracts with independent contractors.[54] More recently, the transnational corporation (or MNE) has been described as "the substitution of internal fiat, hierarchy, and bureaucracy for a network of contracts in the market."[55] The main features of an MNE's business are

1. that it is highly integrated;
2. that it is conducted predominantly through control rather than through contracts; and
3. that many costs and risks are internalized.[56]

These characteristics raise fundamental problems for the application of comparable transactional pricing to MNEs.

The first feature, as stated above, is that the business of an MNE is highly integrated, either vertically or horizontally. An integrated business offers the advantage of increased efficiency, through economies of scale, the internalization of transaction costs, or synergies that earn profits for the MNE that are greater than the aggregate profits earned by its separate enterprises. For example, the vertically integrated business achieves economies in transaction costs, logistics, brand development, risk management, and other functions or risks. Non-integrated businesses performing the same or similar functions and selling the same or similar products would have

either higher total costs, and thus higher profit margins with the same profitability as the integrated business, or the same gross margins with lower profitability.[57]

The most important economic reason for a company's preference for integration over a contractual relationship with third parties is the degree of exclusivity of intangible assets.[58] For example, intangible property has unique characteristics. "Its value for the purchaser is not known until he has the information, but then he has in effect acquired it without cost."[59] Its value lies in its proprietary nature. Intangibles tend to

- arise from risky and costly research and development (for trade intangibles) or long-term marketing expenditures (for marketing intangibles);
- result in a monopoly for a product manufactured under a patent or for other types of proprietary technology; and
- rely on legal protection for their value to a greater extent than tangible property.

For these reasons, the development and exploitation of intangibles are more likely to take place within a single MNE than through market transactions.

The second feature of an MNE's business is that relationships between members of the MNE group are governed predominantly by control, not by legal contracts. This characteristic mirrors the very nature of an MNE. Whereas a contract has real economic substance to independent parties who bargain for its terms, it may have no or insignificant meaning to related parties. Even if related parties have contracts with each other, the fact of their common control implies that those contracts will not be adversarially enforced and that they normally can be changed at the will of the parent company.[60] Consequently, a question arises as to the reliability of intercompany contracts (to document cost plus arrangements for the provision of intragroup services, licences of intangible property, and supply contracts between affiliated manufacturers and distributors) in applying the arm's-length principle.[61]

Both the OECD guidelines[62] and the domestic transfer-pricing rules of many countries (including section 247 of the Income Tax Act and US regulation section 1.482-1(d)(3)(iii)) provide scope for MNEs to use intercompany contracts. The OECD guidelines stress the importance of contractual terms being put in writing before the transactions take place and the need for the terms to be consistent with the economic substance of the transaction and the actual conduct of the parties. The rationale is that intercompany contracts indicate the allocation of risks among related parties and that ascertaining the bearing of risk is a starting point in a transfer-pricing analysis.

Acceptance of intercompany contracts (which, because of their limited relevance in a control environment, may bear no relation to unrelated-party agreements) seems to violate the arm's-length principle in that it forces the tested related party to become or to resemble an independent company that simply does not exist in the market economy.[63] One of the implications of this approach is that MNEs can use internal contracts to "book" profits to tax-favourable jurisdictions.

The third feature of MNEs is internalization of costs and risks. Internalization theory posits that an integrated enterprise is more efficient because it is able to execute an integrated economic activity at a lower cost than is the case for independent firms, whose joint efforts are necessary to execute the same series of transactions.[64] Internalization of transaction costs helps an MNE reduce its vulnerability to opportunistic behaviour by its members, as well as reduce the costs arising from limited information.[65] The very raison d'être of the multinational firm is that the whole is greater than the sum of its parts.[66]

Given these considerations, theoretically, there is no reason why comparable transactional pricing should even exist.[67] MNEs choose to operate through related parties rather than through unrelated distributors or licensees because the former are more efficient than the latter. Associated enterprises may engage in transactions that independent enterprises would not undertake or would have no opportunity to undertake. "If MNEs exist because of imperfections in the arm's length market, the implication is that comparable transactions will not be found when an MNE is successful because the MNE will have driven the arm's length competitors out of business."[68] Therefore, finding arm's-length comparable transactions is very difficult, if possible at all.

The Residual Profit Problem

The comparable transactional pricing approach isolates a controlled transaction from the myriad of complex supporting transactions arising from the integration of the firm. Even assuming that perfect comparable transactions can be found (for example, transactions involving commodities where there is a readily ascertainable market price), the CUP and other traditional transactional methods fail to assign the extra profit resulting from integration and internalization, since they are unable to account for these ancillary benefits. Such residual profit simply does not arise from uncontrolled transactions.

The only method that specifically allocates residual profit is the residual profit split method. This method first allocates a return to each party for the readily identifiable routine functions, based on standard returns established from comparable transactions, and then allocates residual profit based on a functional analysis. The use of traditional transactional methods to determine this standard return results in artificial or unfair allocation of profit. In addition, the OECD guidelines implicitly and US regulations[69] explicitly allow the allocation of residual profit to transactional intangibles and generally allocate the value of such intangibles to the parent. This approach is incorrect if one believes in the existence of organizational intangibles. According to economic theories, residual profit is produced not only from transactional intangibles (patents, trademarks, knowhow, etc.), but also from organizational intangibles, or, in other words, aspects of the transactional context in which integration occurs.[70]

Residual profit arising from "location savings" cannot be fairly allocated under the existing approach. Location savings are "the differences in production costs between the low-cost and high-cost locations."[71] They typically exist in cases

where a parent company based in a high-cost jurisdiction (such as Canada or the United States) establishes a manufacturing subsidiary in a low-cost location (for example, Mexico, China, or Ireland). The parent company provides not only product technology, but also marketing and distribution. The profit of the group increases as a result of location savings. The question then arises whether location savings should be allocated to the manufacturer or the distributor. Because the high-cost jurisdiction is often also the high-tax jurisdiction, taxpayers prefer to allocate the location savings to the manufacturer and argue that the CUP method should be used. On the other hand, the tax authorities of the high-cost jurisdiction prefer to allocate the location savings to the parent company under profit-based methods. They reason that minimal functions, risk, capital, and intangibles employed at the low-cost location mean that only minimal profit should be allocated to that location. The US experience indicates that in the end, the taxpayer and the tax authorities "may reach agreement at some middle point based largely on fuzzy notions of the relative market power of the arm's-length analogues of the parent and the subsidiary."[72]

Practical Difficulties

"A practical difficulty in applying the arm's length principle is that associated enterprises may engage in transactions that independent enterprises would not undertake."[73] This perhaps ranks as the "biggest understatement in the OECD Guidelines."[74] The guidelines also admit that "there are significant cases in which the arm's length principle is difficult and complicated to apply, for example, in MNE groups dealing in the integrated production of highly specialized goods, in unique intangibles, and/or in the provision of specialized services."[75] The development of intranets, private computer networks, and other communications technologies allows an MNE's businesses to be highly integrated. The OECD has recognized that electronic commerce may require special treatment because of the highly integrated nature of the activities. In its draft global trading report, the OECD notes that trading, marketing, management, and major supporting activities should share in global profits to the extent that they are regarded as integral to the realization of profits.[76] In one sense, this is an indication that the separate entity approach is no longer appropriate for highly integrated businesses.

Moreover, optimized global business models—galvanized by the global networks, integrated platforms, and developing technologies that make electronic commerce possible—are likely to increase the number and, possibly, the complexity of cross-border transactions within an MNE. The complexity of transfer-pricing transactions will intensify as a result of the increase in transactions involving services, intangibles, and unique property. Globally integrated businesses put pressure on the foundation stones of the existing approach, namely, the separate treatment of related entities, transactional pricing, and the comparability requirement.[77]

Both these practical difficulties and the theoretical problems discussed earlier will worsen when businesses of MNEs become more globally integrated. The following section will argue that the exclusive use of the comparable transactional

pricing approach in allocating international income is not even mandated by article 9(1) of the OECD model.

Questionable Interpretation of Article 9(1)

General Principles of Treaty Interpretation

The arm's-length principle as stated in article 9(1) of the OECD model has been incorporated in bilateral tax treaties.[78] Therefore, the meaning of this principle must be interpreted in accordance with the general principles of treaty interpretation. Tax treaties are international treaties and are therefore governed by the provisions of the Vienna Convention on the Law of Treaties ("the VCLT").[79] Article 31(1) of the VCLT requires that treaties be interpreted in good faith (the principle of *pacta sunt servanda*) in accordance with the "ordinary meaning" of terms used in the treaty in their context and in light of the treaty's object and purpose. Article 31(2) of the VCLT sets out certain items that are considered part of the context of the treaty. These include not only the treaty itself (including any preamble and protocols), but also any agreements made by the parties or instruments accepted by the parties made "in connection with the conclusion of the treaty." Some commentators have suggested that the OECD model and commentaries can be considered part of the context of the treaty under this provision.[80]

The commentary on the OECD model is an important interpretive aid,[81] but it is not omnipotent.[82] There is some concern that the commentary is largely self-serving. Given the volume of bilateral tax treaties currently in force and the difficulty and time-consuming nature of their renegotiation, there is an understandable antipathy on the part of the OECD to amend the terms of the model itself. Instead, amendments are made to the commentary with retrospective effect. It is not surprising, then, that the OECD suggests that the commentary should be applied in an ambulatory manner.[83] The OECD guidelines are specifically incorporated into the commentary on article 9 and thus have the same legal status as the commentary. In practice, however, both taxpayers and tax administrators appear to make reference to the current version of the guidelines.

Object and Purpose

As noted above, article 31(1) of the VCLT provides that a treaty provision must be interpreted in such a manner as to reflect its "object and purpose." The object and purpose of a treaty is not necessarily synonymous with the intentions of the contracting parties; rather, the object and purpose can be described as the goal of the treaty, as determined objectively by examining the treaty as a whole.

The main objective of article 9(1) of the OECD model is to allocate the income of an MNE among countries in which the MNE conducts its business operations. The real problem to be solved is to establish rules for answering the question "Is this the tax that is owed?"[84] The arm's-length principle was considered to provide the most accurate measurement of the fair market value of the true economic contribution of members of an MNE group.[85] Countries originally adopted the

arm's-length principle in order to prevent MNEs from shifting income away from a taxing jurisdiction. Other purposes of article 9 include the avoidance of economic double taxation (as clarified by article 9(2), which requires corresponding adjustments) and equal treatment of independent taxpayers and members of a multinational group.

The comparable transactional pricing approach fails to meet the above objectives. Arm's-length prices are tools for carrying out the task of determining the appropriate amount of profit to be allocated to a particular jurisdiction. At the time that article 9 was first introduced, economic value was largely attributable to factors of production. It was assumed that an MNE was organized as a group in which geographical divisions tended to correspond to functional divisions.[86] A typical scenario would be the manufacturing of products by the parent in one country and the distribution of those products in another country through a subsidiary. Intangibles would be owned by the parent and licensed to subsidiaries. Therefore, the expectation would be that intrafirm transfer prices would reflect the sales of products to the subsidiary distributor and the payment of royalties to the parent for licensed intangibles. In such a scenario, it was a natural reaction to use comparable uncontrolled prices as benchmarks in allocating income from intragroup transactions.[87] Thus, the primacy of applying the comparable uncontrolled price to an intrafirm transaction is a relic from a mercantile age.[88] It was questionable whether the comparable transactional pricing approach ever reflected economic reality,[89] but it is clear that this approach is just a means of achieving the end of article 9, not the end in itself.

Ordinary Meaning

The current interpretation of article 9, requiring strict use of the comparable transactional pricing approach, is not warranted by the wording of this provision. Article 9 does not require *pricing*; it addresses the allocation of *profit* in situations where the commercial and financial relations between associated enterprises differ from those that would exist between independent enterprises. It is not limited to transactions, or revenue and expenses, or, more generally, pricing.

Price and profit are obviously not the same and should not be confused with one another; although an arm's-length price is one means of satisfying an arm's-length principle, it is not the only means. Constructing a hypothetical price for a related-party transaction is very different from determining and allocating the group's profit or loss on the basis of arm's-length market transactions with uncontrolled parties. And it is the latter, not the former, that determines the income tax payable to each of the countries asserting jurisdiction to tax the MNE's income. Consequently, asking "What price is right for controlled transactions?" is an incorrect approach. The right question is "What portion of the combined profit or loss derived by all participating units of an enterprise from an international transaction should be geographically sourced to each of the countries claiming jurisdiction to tax part of that income?"[90]

The OECD guidelines insist on establishing arm's-length "pricing" and explain the rationale as follows:

> The most direct way to establish whether the conditions made or imposed between associated enterprises are arm's length is to compare the prices charged in controlled transactions undertaken between those enterprises with prices charged in comparable transactions undertaken between independent enterprises. This approach is the most direct because any difference in the price of a controlled transaction from the price in a comparable uncontrolled transaction can normally be traced directly to the commercial and financial relations made or imposed between the enterprises, and the arm's length conditions can be established by directly substituting the price in the comparable uncontrolled transaction for the price of the controlled transaction.[91]

Even this statement does not seem to preclude the use of other methods, since arm's-length price is just the "most direct way" of establishing whether the conditions made between associated enterprises are arm's length. Implicitly, there are other "direct" and indirect methods that could accomplish the same objective.

Does article 9 mandate the "transactional" approach? Interestingly, the word "transaction" is not found in article 9. Article 9 speaks of "conditions" between associated enterprises in their commercial or financial relations which differ from those that would be made between independent enterprises, and allows the adjustment of any "profits" that would, if not for those "conditions," have accrued to one of the associated enterprises, but, by reason of those "conditions," have not so accrued. Thus, article 9 does not expressly require any specific transactions; it requires only commercial or financial relations between the associated enterprises.

Transactions may be a useful basis for assessing the "conditions" or "relationships," but arguably they are not the only one. Faced with the difficulty of strictly applying the transactional approach to highly integrated business operations, the OECD guidelines allow closely related transactions to be evaluated together.[92] This compromise indicates that the OECD recognizes that article 9(1) does not always require a transaction-by-transaction analysis.[93]

A strong argument can be made that article 9 does not compel or plainly imply the required use of comparable pricing methodologies to the exclusion of formula-based methods. There is reported agreement among tax experts that the arm's-length principle and formulary apportionment should not be viewed as polar extremes; rather, they should be viewed as a part of a continuum of methods, ranging from CUP to predetermined formulas.[94]

Failure To Meet Policy Criteria

How satisfactory is the current approach in meeting the policy criteria identified earlier in this article? Unfortunately, it does not succeed in attaining any of these objectives.

Inter-Nation Equity

The current transfer-pricing approach is "unfair" in allocating income in favour of capital-exporting countries, by design as well as by default. Because the current

approach is incapable of fairly allocating residual profit, such profit is often allocated to the parent's country of residence.[95] Also, the existing methods are designed on the basis of conventional microeconomic models of the production process. These models suggest that all income of an MNE must be "attributable" to some function or factor, or, if that is absolutely impossible, that residual income has to be allocated among components on the basis of criteria that are determined ultimately by reference to production inputs.[96] Thus, residual income is often attributed to "intangibles." Intangibles are often created and owned by the parent company, which is commonly located in a major capital-exporting country.

Furthermore, the uncertainty created by the arm's-length principle often benefits a country that has a relatively sophisticated and more aggressive tax administration. Some commentators, such as Charles Irish, call this "the other harmful tax competition."[97] Irish argues that aggressive US transfer-pricing practices often hurt opposing governments. The result is a troubling erosion of the tax base of weaker countries. In practice, MNEs would be more willing to enter into APAs with a dominant tax administration in order to avoid onerous penalties or adverse transfer-pricing adjustments. The US Internal Revenue Service (IRS) is perhaps the most aggressive tax administration in the world. The reaction of tax officials of other jurisdictions has been noted by Joseph Guttentag, former deputy assistant secretary for International Tax Affairs, US Department of the Treasury: "In my experience, I have found that some treaty partners have been intimidated by even the thought of meeting with a US competent authority team with its purportedly vast array of experts and experience."[98]

As a group, other capital-exporting countries often fare better in the transfer-pricing game because they can reduce the adverse impact of aggressive US transfer-pricing initiatives through imitation. For example, when the IRS, armed with the superroyalty rule and the 1994 transfer-pricing regulations,[99] beefed up its transfer-pricing regime, the tax authorities of Canada, Japan, and other OECD countries responded by revamping their own rules.

Developing countries (generally net capital-importing countries), on the other hand, are generally less capable of defending their tax base, not least because their tax authorities lack the administrative and technological means to enforce competitive transfer-pricing rules. Stanley Surrey notes that there is a "persistent feeling among tax administrators in developing countries that their tax systems are being imposed upon by the intra-group allocations"[100] resulting from the application of the current transfer-pricing approach. At the same time, it is common practice for foreign parents to overcharge subsidiaries in developing countries.[101] Again, the allocation of income tends to favour developed countries.[102] At best, developing countries may receive an allocation of income attributable to factors of production or specific functions performed by a subsidiary, while residual profit will be allocated to the parent's country of residence (a developed country). Given their administrative constraints, developing countries may not even be able to collect tax on the income allocable to their jurisdiction.

Inter-Taxpayer Equity

Broadly speaking, inter-taxpayer equity is violated if there is overtaxation or undertaxation of cross-border income. A fundamental issue underlying the whole international tax system is that taxpayers operate on a global basis, whereas tax authorities operate on a national basis. The reality of the contemporary world is that separate national governments are not in a position to adequately monitor intrafirm transactions.[103] When tax administrators everywhere are striving to get a "fair" share from taxpayers' global income,[104] the absence of effective international coordination is bound to give rise to overtaxation or undertaxation of an MNE's income.

Overtaxation may result from uncertain and inconsistent application of the transfer-pricing rules. For example, if one country increases the amount of income from a cross-border transaction by increasing the transfer price and there is no corresponding downward adjustment in the income of the related party in the other country, economic double taxation will occur.[105] Overtaxation also may occur because the traditional transfer-pricing approach determines "prices," not "profit." Where certain transactions generate profit and others generate loss, income is allocated and taxed, but losses are not offset. In other words, there is no global consolidation of income or losses to participants in an integrated business. Income or loss is computed and allocated on an "entity" basis. The consequence of this separate entity approach is that an MNE may be taxed on more income than it actually earns in a particular year.[106]

International undertaxation occurs where international income is not taxed anywhere in the world or is not fully taxed. Existing transfer-pricing methods contribute to this problem. Separate accounting provides leeway for global tax minimization through transfer-pricing and cost-allocation manoeuvring.[107] The potential for tax avoidance is exacerbated by the fact that a corporation can move an electronic commerce business to a tax haven without having to relocate personnel or incur other significant transaction costs.

Neutrality

The principle of neutrality is violated where

- MNEs are treated differently from independent enterprises,
- similar transactions are treated differently, or
- branches are treated differently from subsidiaries.

Non-neutrality is the result of the subjectivity and uncertainty inherent in the comparable transactional pricing approach. Because of the special features of intrafirm transactions and the lack of comparable uncontrolled transactions in applying the accepted transfer-pricing methods, it is highly doubtful whether it is possible to achieve actual parity of tax treatment of MNEs and independent enterprises. More important, there is a real potential for disparate tax treatment of business competitors because of the element of subjectivity and the use of APAs.[108]

SUBJECTIVITY

The existing transfer-pricing methods are applied on a case-by-case, subjective basis.[109] The application of these methods varies from country to country. For example, one report notes that Australia, China, Japan, Korea, and the United States would each apply a different method to the following case:

> A U.S. wholesale company distributes a valuable branded product, widely known in the company's industry segment. The company's parent (a foreign company) granted the company the right to distribute the product. The parent owns the legal rights to the product trademark and trade name, and the product trademark is embedded in the transfer price of intercompany sales, which are in U.S. dollars. Other key facts:
>
> ▪ the parent owns most of the subsidiary's assets and bears most of the risk in the transactions;
>
> ▪ it is assumed there are no comparables;
>
> ▪ the best transfer pricing method is presumed to be the comparable profit method—which is the same, for this case, as the OECD's transactional net margin method (TNMM); and
>
> ▪ the audit period involved is 1996-1998.[110]

According to the report, the Australian Tax Office (ATO) would determine what is the best transfer-pricing method in the particular case, and taxpayers would then have the burden of proving the ATO wrong. China would probably apply the cost plus method but may also consider the resale price method. Japan would first try the resale price method and next examine the profit split method; it would use the TNMM only under unusual circumstances. Korea may prefer the resale price method but would not seem to object to the use of the TNMM. The United States would use the CPM. Extending the example to Canada, the Canada Customs and Revenue Agency (CCRA) would likely first apply the transaction-based method, although this would probably fail since there are no comparables in the case. It would then apply the profit split method.

Even if the transfer-pricing methodology were the same in all jurisdictions, the inherent subjectivity in applying the methods could still produce different transfer-pricing results. However, the concept of "arm's length range" in the OECD guidelines[111] recognizes that in the real world, even unrelated parties rarely negotiate the same price for the same item.[112] Therefore, only occasionally will a single, exactly comparable uncontrolled transaction be available. If this occurs, the arm's-length result is a single price. In most situations, however, where the most appropriate transfer-pricing method is applied to multiple comparable uncontrolled transactions, there is a range of results (prices or profit margins). All the results in the range are regarded as being arm's length.

The application of transfer-pricing methods is inherently subjective because of the requirement that a hypothetical, arm's-length "price" be constructed for controlled transactions for which there are no real prices set in the marketplace.[113] In the search for the arm's-length price, comparable transactions must be found; however, in reality, seldom can identical comparisons be drawn. Taxpayers and tax

authorities have to settle for comparisons being made with closely similar transactions by closely similar entities in closely similar circumstances—with appropriate adjustments. In the case of unique transactions undertaken only by multinationals, even approximately similar transactions are hard to find. Thus, any method used in establishing the arm's-length price is only a "best-guess method"[114] or "the least unaccepted methodology."[115] In such circumstances, transactions that appear to be similar may well be treated differently.

APAs

The APA process has been described as the "most successful approach to the transfer pricing problem."[116] However, there is potential for the disparate treatment of business competitors as a result of certain aggravating features of the APA process. In particular, APAs are negotiated on a case-by-case basis, they are costly and time-consuming, and the agreements are confidential. The second factor may discourage some taxpayers, especially small and medium-sized firms, from pursuing APAs. As well, the confidential nature and case-by-case approach of APAs raise the possibility that some taxpayers may obtain preferential treatment that could give them an advantage over competing enterprises.

Recent Proposals on Formulary Allocation

As discussed above, the comparable transactional pricing approach suffers from both practical and theoretical problems. It is also a questionable interpretation of article 9 of the OECD model. Defenders of this approach often cite as support its longevity and universal acceptance. To cope with economic reality, they allow the use of the profit split method and APAs as departures from the traditional approach. Ultimately, the hard question must be answered: how much of an MNE's cross-border profit should be allocated to each jurisdiction? Many commentators argue that the best answer is provided by formulary allocation.

A formulary allocation method allocates profit from intrafirm transactions on the basis of a formula that reflects contributions made by each sub-unit (member) to the overall profit of the firm (MNE group). Those who favour formulary allocation based on criteria such as property, payroll, and sales might suggest that the wisdom of such an approach is made more obvious by the rise of intrafirm electronic commerce.[117]

One proposal is to have tax authorities negotiate APAs that apply to specific types of operations by specific taxpayers.[118] Such a multilateral APA may be possible, since there is a limited number of very large multinationals. A concurrent default rule would apply to taxpayers that chose not to enter the APA program, either because of its cost or because litigation offers a better prospect of success. This rule would allocate profits equally between the location of production (based on property and payroll) and the location of consumption (based on sales).[119]

Another proposal is to adopt formulary allocation on a regional basis—for example, among signatory countries to the North American free trade agreement

(NAFTA) or within the EU. For example, Paul McDaniel proposed a method that would require combined reporting and apportionment of income for each unitary business that has cross-border operations in the NAFTA area.[120] Any group of affiliated companies with unitary business activities in Canada, Mexico, and the United States would be treated by each tax jurisdiction as a single entity by combining the corporate incomes and apportionment factors. The apportionable income (that is, the tax base) would be the NAFTA-wide income of the unitary business, after eliminating intercompany transactions. That tax base, as separately determined by each country, would be apportioned under that country's apportionment formula, which was expected to be a common formula adopted by all three jurisdictions.

A study released by the EU Commission in October 2001[121] suggests that the use of formulary allocation is key to the achievement of tax consolidation within the EU. The study notes that the lack of a single corporate tax base for EU companies may be the most important tax obstacle remaining in the internal market. Therefore, it suggests that the elimination of that obstacle is a primary goal of both EU policy makers and EU businesses. The study presents a number of comprehensive solutions that might help move the EU toward a true single market for EU companies. It examines four possible approaches:

1. home state taxation,
2. a common tax base or common base taxation,
3. European Union company tax, and
4. a single compulsory harmonized tax base.

All four methods would consolidate company income on an EU-wide basis and would use a formula to apportion the income of the corporate group among member states. The study is not specific about the details of the formula. To gain insight into how the formulary apportionment system would operate in practice, the study examines the experience in the United States and Canada, where subnational governments have used a formula in allocating corporate income. The study also mentions an alternative basis of apportionment—to apportion the tax base according to the (adjusted) value-added tax base of the companies involved. Under the proposal, once the EU-wide tax base is divided among member states, each state is free to apply its national tax rate to that share.

Jacques Sasseville of the OECD expressed doubt that the EU proposals would be consistent with the arm's-length principle included in the treaties concluded by EU member countries.[122] Other opponents of formulary apportionment worry about transitional issues.[123] Some commentators, such as Stanley Katz, argue that formulary apportionment would be too "radical" since it is very different from the comparable transactional pricing approach.[124]

The real world of international income allocation is not pure black or white. The range of methodologies, from CUP to formulary allocation, is sometimes referred to as a continuum of methods or a rainbow of colours.[125] As Bird observes, "in

practice, there is much less difference between the way the arm's length approach actually works and how a reasonable formulary system would work than between the two idealized conceptions that so often are opposed in the literature."[126]

GLOBAL PROFIT SPLIT: A PROPOSAL

This section of the article proposes a global profit split (GPS) method based on the existing profit split method and some elements of the traditional formulary apportionment method used by a number of US states and Canadian provinces.[127] The proposed GPS would allocate an MNE's global active income to members of the MNE group by applying predetermined criteria.[128]

Basic Features

The proposed GPS method treats an economically integrated business as a single entity for tax purposes. In this sense, it is similar to the "unitary system" used in California and some other US states. Under the unitary system, related members of a corporate group are regarded as a single unit for income tax purposes. The GPS would differ from the unitary system in the design of factors used to determine the profit split. Another difference relates to semantics. The unitary system has a bad international reputation, largely for political reasons.[129] It does not illustrate the inadequacy of the worldwide allocation approach, but rather the non-viability of any approach that increases taxes on internationally mobile capital and is applied in only a few jurisdictions.[130] However, because the "word [unitary] alone makes other countries apoplectic,"[131] its use is deliberately avoided in this proposal.

The proposed GPS differs from the existing profit split method in several ways.

First, the GPS would use an explicit fractional apportionment method, rather than a case-by-case functional analysis approach. Although arbitrary, the GPS would be more certain. The factors chosen would represent the economic factors that contribute to the production of profit.

Second, the GPS would not be a transaction-based method, as that term is used in the OECD guidelines, and thus would avoid the problems associated with the transactional approach. It would be necessary to define "integrated business," but arriving at a definition would likely be no more difficult than finding the often non-existent "comparable transactions."

Third, the firm's total profit would be directly allocated, as opposed to the current use of the profit split to establish arm's-length prices, which are in turn used to determine profit. The proposed method would thus reflect the purpose of article 9(1) of the OECD model in allocating profit among countries.

Fourth, the GPS would not require that an integrated business be compared with that of independent firms. Consequently, the proposed method would reflect the unique nature of intrafirm transactions and would eliminate the practical difficulties of finding comparables. Profit would be allocated on the basis of contributions made internally by each participant in the business. The base of the allocation would be the total profit from the globally integrated business.

Finally, the GPS would apply equally to branches and subsidiaries, since all participants would be treated the same.

Description

Scope of Application: "Integrated Business"

The definition of "integrated business" is critical to the proposed GPS method since it provides the parameters around the total profit to be split. Bearing in mind that the main objective of the GPS is to ensure a fair allocation of global profit from an MNE's integrated business, the definition of "business" and "integrated business" should capture the economic value of integration and allocate it according to the formula. As in the case of "global dealing operations" in the proposed US regulations, what matters is an entity's participation in the integrated business, not the legal form or the geographic location of the entity.

The term "business" may be defined on the basis of standard industrial classification categories or by reference to recognized lines of business. In defining the term "integrated business," some useful lessons may be learned from the tests used for defining "unitary business" for the purposes of US state corporate income taxation.[132] These tests include the control test, the flow-of-value test, and the operational interdependence test.

The test of control could be based on legal ownership of equity or de facto control of the business operations of a controlled entity. A bright-line legal ownership test is perhaps easier to administer.[133] The control test may be used as the sole test since once an entity is considered to be under common control, all of its active income is deemed to be income from an integrated business. This test is arguably justified on the ground that unless an entity benefits from economies of scale or contributes to the synergy of the whole MNE, it will likely be spun off and replaced by an outside supplier. Alternatively, the control test could be used in combination with the flow-of-value test or the operational interdependence test.

Under the flow-of-value test, a business is integrated if there is a flow of value among the units under common control.[134] Under the operational interdependence test, a business is integrated if interdependent basic operations are carried on to a substantial extent in different jurisdictions by the branches or subsidiaries that constitute the controlled enterprise.[135] "Interdependence" is determined by the flow of tangible goods, services, and, in some cases, intangibles. This test reflects the interdependence of the basic operations of units of an MNE. For administrative ease in implementing this test, a threshold could be required—say, one-third or one-half of the value of the flow of goods, services, or intangibles among units.[136]

Both the flow-of-value test and the operational interdependence test would involve a high degree of factual determination. MNEs typically are engaged in a variety of activities, some of which are part of an integrated business and some of which are not. Caution needs to be exercised in defining which activities are part of an integrated business. Guidance may be drawn from countries' experience in defining qualifying "cost contribution arrangements," "global trading," or even the businesses covered by APAs.

"Global Profit"

The definition of "global profit" determines the size of the pie to be divided among the participants in an integrated business, and hence the countries involved. Currently, there is no international agreement on the computation of profit. However, in general, global profit from each integrated business would be the excess of revenues over expenses allocable to the business. The measurement of the global tax base is not a problem unique to global formulary apportionment. Miller notes that it also exists under a residence-based taxation system, particularly in the implementation of the tax credit regime.[137]

Global profit could be defined on the basis of financial accounting. MNEs that have their shares listed in multiple jurisdictions must now comply with financial reporting requirements in the listing jurisdictions. Current practices may provide guidance for the definition of global profit for GPS purposes. The definition might also be developed from certain principles that are commonly applied in the taxation of business income.[138] For example, generally, revenues from the sale of goods and services are recognized on an accrued basis, and business expenditures, such as labour compensation, depreciation, interest, and purchased goods and services, are deductible in the computation of taxable income.

In computing the amount of revenues for purposes of the global profit definition, only receipts from independent third parties in respect of the sale of goods or services, or royalties from licences, should be included; intrafirm transactions should be ignored. With respect to expenditures, it would be necessary to decide whether all operating expenses incurred by all participants in carrying on the integrated business should be aggregated and deducted, or whether instead certain expenses should be dealt with separately. If all expenses are aggregated, the effect is that global expenses are divided under the profit split formula. While this approach is simple to administer, it may force one country to allow deductions for local day-to-day operating expenses incurred by a related party in another country, and some tax authorities may find this practice unacceptable.[139] Alternatively, "local expenses" might be excluded from the aggregate calculation and deducted by the relevant entity once global profit has been allocated to each location. Local expenses could be defined as those expenses that are incurred locally and are not fungible. One example is rent for office space.

Interest expenses are difficult to deal with because the existing rules on interest deduction vary from country to country, and the treatment for a branch may differ from that for a subsidiary. To allow for such differential treatment, interest expenses would be excluded from the computation of global profit and the subsequent allocation among participating entities. The disadvantage of this approach, of course, is that it would encourage MNEs to book interest in high-tax countries.

Finally, global profit would include not only business income derived from the integrated business, but also investment income that is attributable to the activities of that business. Article 7 of the OECD model allows such investment income to be taxed as business profits.

The Formula

Once global profit from a globally integrated business has been determined, the next step is to allocate the profit to each participant in the business. Factors in the formula may include payroll, sales, tangible assets, and intangibles. These factors have been used, to varying degrees, in traditional formulary allocation methods (discussed below).[140] In addition, they are implicitly recognized in articles 5 and 7 of the OECD model. In article 5, the notion of permanent establishment is essentially defined as a place of business consisting of human capital and capital assets.[141] In article 7, the attribution of profit is generally based on the revenue (from sales of goods or services) and expenses arising from the business activities of the permanent establishment. The factors of human capital (indicated by payroll), assets (tangible and intangible), and revenue from sales thus underlie the current regime of taxing business profit earned through a permanent establishment.

Each participant in an integrated business would be allocated an appropriate percentage of the global profit. The appropriate percentage would be calculated as *the aggregate* of payroll, sales, tangible property, and intangibles (if applicable) *in the participant's taxing jurisdiction* divided by the MNE's worldwide payroll, sales, tangible property, and intangibles.[142]

These factors could be equally weighted, or perhaps more weight could be given to some factors than to others. For example, it may be considered that sales deserve more weight. (Currently, some US states that apply formulary apportionment use sales as a single factor in the formula.)[143] It has been suggested that, economically speaking, "sales, if anything, are the more or most important factor in indicating the 'relative contribution' of a component to an enterprise's group profit."[144] A modified formula may apply to specified industries, such as financial services and transportation, among others.

The Factors

The design of the formula raises serious technical challenges. Each factor needs to be defined and sourced to a particular jurisdiction. Ideally, each factor should be readily quantifiable and locatable, economically justifiable as a determinant of tax liability, and not subject to artificial manipulation.

Payroll

The payroll factor would reflect the cost of labour compensation. The formula could use total cost of labour compensation irrespective of form (for example, employer-provided insurance, pensions, and other social benefits, as well as contract employment).

The physical location of this factor could be the place where a worker works or has his or her base of operations. If a worker has no particular base of operations, the worker's country of residence could be used as the location of the payroll factor. If a worker has a base of operations in more than one country, payroll expense

would be allocated to each country on the basis of the time spent in each country. For purposes of the formula, the location of the employer is irrelevant because all workers work for the integrated business.[145]

SALES

The sales factor would reflect the sales of products or services to parties that are not participants in the integrated business. It would also include transfers of property or services from an integrated business to non-integrated units of the same MNE. Such transfers would be treated as deemed sales at fair market value. In the case of intangibles (discussed further below), valuation may be very difficult. A "profit-sharing" or "superroyalty" type of rule may be necessary to ensure that research and development businesses fully participate in sharing the economic benefits resulting from the research and development.

The location of sales may be

- for sales of goods, the place of "origin" (the seller) or the place of "destination" (the customer);
- for services, the place of the customer or the place where services are rendered; and
- for intangibles, the place of origin or the place of the payer.

In light of the threat to source-based taxation and contributions made by market jurisdictions to the earning of global profit, the use of place of origin as a sole test is not recommended. The place of destination may be used either as a sole test or in combination with the place of origin test. In the latter case, sales will be apportioned between the place of the customer and the place of the seller or provider.

TANGIBLE PROPERTY

Tangible property is probably the most reliable factor. It is reasonably easy to quantify and to locate geographically. The jurisdiction where tangible assets are located generally provides legal protection and infrastructure and is thus entitled to tax a portion of the income derived through the use of these assets.

INTANGIBLES

Intangible assets are often difficult to quantify, much less value, and they are also very slippery to locate.[146] At the same time, much of the residual profit of integrated businesses may be derived from intangibles. They are the "crown jewels" of MNEs. Therefore, the treatment of intangibles is crucial to the design of the proposed GPS method. Intangibles are not identified as a separate factor under traditional formulary apportionment.

The definition of "intangibles" for purposes of the proposed GPS method could be based on the existing definition in chapter VI of the OECD guidelines.[147] Thus,

the term would include commercial intangibles, such as patents, copyrights, etc., and marketing intangibles, such as trademarks and trade names.

Both commercial intangibles and marketing intangibles may be measured by cost.[148] For commercial intangibles, cost would include expenditures on research and development and the cost of obtaining legal protection of the intangibles. For marketing intangibles, it would include the cost of advertising and marketing. However, using cost as a measurement of intangibles may be problematic for two reasons. First, there is no necessary link between cost and value.[149] Second, historic costs may be difficult to determine since valuable intangibles (especially marketing intangibles) may be created over a period of years.[150] While the value of intangibles may alternatively be based on fair market value, this is difficult to establish on an annual basis.

The cost method has the virtue of being simple to apply. To some extent, the fair value of intangibles is expected to be reflected in the sales factor. Proprietary technology used for the production of a product or the creation of a valuable trademark will be reflected in market prices fetched by the product made with such technology or bearing the trademark. Thus, it is arguable that using both the sales factor and the cost of intangibles factor in the formula would account for the lion's share of the contribution of intangibles to the profitability of the integrated business. It would also attribute this profitability to both the "production" jurisdiction (where cost is incurred) and the "destination" jurisdiction (where products or services are sold).

With respect to the location of intangibles, commercial intangibles could be sited to the country where research and development occurred, and marketing intangibles could be sited to the country where products or services are marketed. In many cases, the site will be the country where the cost is incurred and recognized for tax purposes. Therefore, the country where research or marketing is performed would receive some taxing capacity because that jurisdiction supported the people and property that produced the resulting intangible assets. Also, for the same reason, countries that grant intellectual property protection to those assets should receive taxing capacity.

In some cases, it would be very difficult to locate research and development cost when it is embodied in human capital or mobile assets. Consider, for example, the following case.[151] X corp. does research in the United States, where a Hungarian immigrant has a bright idea, and in China, where Chinese scientists turn this idea into something potentially useful. Development is done in India, where computer whizzes and "cheap" engineers manage to develop a marketable product. The design is then sent to a Thai factory for further development by process engineers (who come from several different countries), and the final product is "developed" by Thai workers and managers. Finally, the product is manufactured in Nicaraguan and Moroccan factories for eventual sales in NAFTA and EU countries. What portion of the research and development cost should be allocated to each jurisdiction?

Similar difficulties exist with respect to locating the cost of marketing intangibles. Charles McLure explains the problem as follows:

> Consider, for example, the value of intangibles such as the trademarks for a soft drink or the endorsement of sporting equipment by an American sports star. Should these intangible assets be attributed to (for purposes of calculating the property factor), primarily, the country in which the trademark was originally developed or in which the athlete performed, and not to the place where products are sold? Does it matter how much advertising is conducted in the market country? Does it matter that the product enjoys a monopoly position in the local market, perhaps because of government policy? In other words, is there a difference between intangibles based on R & D and those based simply on reputation and advertising (or on monopoly power)?[152]

Because of these difficulties, some proponents of formulary apportionment, such as McLure, conclude that since it is impossible to determine the situs of intangibles, perhaps intangibles should be ignored as a factor.[153] Otherwise, "if one wants to determine the location, as well as the value of intangible assets, one is likely to be forced into analysis similar to that under the separate accounting standard."[154] Hellerstein also has argued against including intangibles in the formula, for two reasons: first, because intangibles are nebulous, with respect to location, benefits and protections furnished by the state, and social costs incurred; and second, because their inclusion could prove highly distorting. [155]

If intangibles were not a separate factor in the formula, the value of intangibles would be allocated on the basis of payroll, sales, and tangible property. This approach is still an improvement over the current system, since the residual profit would not be assigned to the "owner" of intangibles alone, but also to jurisdictions where payroll cost is incurred, sales are made, and tangible property is located. Often, commercial intangibles have only a notional existence, as ideas in people's heads, or they are inherent in the capabilities of machines.[156] To some extent, the cost of research and development would be reflected in the salaries paid to engineers, scientists, managers, and workers who participated in the research and development, as well as in expenditures on equipment purchased to carry out the research and development or the value of products produced with the intangibles. In the case of marketing intangibles, the cost would be reflected through increased sales.

Obviously, the treatment of intangibles is worthy of more study. At present, this author leans toward the inclusion of intangibles as a factor in the formula for the main reason that it would give technology-exporting countries specific recognition. As discussed in a later section below, the current use of cost-sharing arrangements by some MNEs may offer practical assistance in tracing and valuing the cost of intangibles. Intangibles would be valued on the basis of cost and sited to the location where research and development activities occur. The market value of intangibles would be included in the sales factor. Possibly, the mobility issue mentioned earlier could be partially addressed by the payroll and property factors.

"THROWOUT" FACTORS

In cases where factors are located in countries that have no jurisdiction to tax the global profit of an integrated business, or in countries that do not impose any income

tax (such as traditional tax havens), these factors could be thrown out (omitted) from the formula.[157] The profit that would otherwise be attributable to these jurisdictions would be captured by the formula and allocated to other participants.

Jurisdiction To Tax Global Profit

The proposed GPS method aims to allocate income from an integrated business between taxing jurisdictions that have a connection with the earning of the income. In other words, income is earned in a jurisdiction because some or all factors are located in that jurisdiction. In a treaty context, the threshold of a permanent establishment can be retained. However, in order to enable market countries to tax profits from the electronic sale of goods or services to domestic customers, the concept of permanent establishment would be redefined to include not only a "physical presence," but also an "economic presence" based on the level of sales (for example, $1 million or some other amount agreed to by treaty partners).

Advantages

The GPS method described above draws ideas from existing profit split and traditional formulary apportionment methods. It is aimed at achieving "rough approximation, not precision."[158] It is recognized that further study is required to make the GPS workable in the real world. Nevertheless, the proposed GPS is superior to the existing system in the following ways:

- it promotes inter-nation equity;
- it is consistent with economic theories;
- it can overcome the tax haven problem; and
- it respects the principle of simplicity.

Inter-Nation Equity

The proposed GPS method would achieve a more equitable allocation of income among jurisdictions. Market countries that provide a consumer base and countries that provide a manufacturing base, as well as capital-exporting and technologically advanced countries, could all share in the taxation of the global profit (including the residual profit) of MNEs. The factors of the GPS formula could be designed to recognize the contributions made by all these countries. Residual profit would not be allocated solely to the country where intangibles are "owned" (often a tax haven) or to a developed country.[159]

Moreover, developing countries that typically have limited resources to apply the existing transfer-pricing methods could receive a share of global profit without incurring extra expenses. They could rely on the tax base computed by another country and compute an appropriate percentage based on the information available locally. This approach is not perfect, but it would be an improvement over current practice.

Theoretical Correctness

The main advantage of the proposed GPS over the existing arm's-length methods is that it is economically logical. It would be a conceptual improvement over the status quo since it recognizes economic reality: MNEs' businesses are globally integrated, and the whole is greater than the sum of its parts. The proposed method can fairly allocate the residual profit of an MNE to all participants in an integrated business. It is thus superior to existing methods, which either cannot account for residual profit (in the case of transactional methods) or cannot fairly allocate it. Even the OECD guidelines, while rejecting "global formulary apportionment" as an alternative to the arm's-length principle on mainly political and pragmatic grounds, seem to admit that formulary allocation is more in keeping with economic reality.[160]

The proposed GPS would also be justified on the ground of economic allegiance or benefit theory. The idea of "formula split" was raised by Georg von Schanz in 1892, when he suggested a 75:25 split between source and residence countries on the basis of benefit theory.[161] Thirty years later, economists at the League of Nations suggested that two countries might agree by treaty to develop reciprocal rules of origin or source for specific classes of income and to reciprocally apply only a percentage of their normal rates of tax to such income.[162] The goal of this proposal was to effect a division of the tax revenue from international income approximating that which would occur if each country's economic interest in the income could be quantified using an economic allegiance analysis. Subsequent developments under the auspices of the League of Nations and the OECD were essentially an attempt to find conceptual and pragmatic hooks upon which to hang what the participants recognized to be an acceptably fair split along these lines.[163] The proposed GPS seeks to apportion the taxpayer's income from an integrated business among jurisdictions according to a formula designed to measure the substantiality of the connection between the income and each jurisdiction with a legitimate claim to tax that income. It is thus supported by well-accepted theories of international taxation.

Overcoming the Tax Haven Problem

The proposed GPS method would eliminate the attractiveness of traditional tax havens, since no profit would be allocated to them. This feature of the GPS is particularly important in an electronic commerce context. In an electronic commerce environment, not only are the existing transfer-pricing methods inadequate to prevent the shifting of income to tax haven entities, but existing anti-tax-haven legislation (such as the US subpart F rules and the Canadian foreign accrual property income rules)[164] also is ineffective. The main reason is that the character of electronic commerce transactions blurs the distinction between "active business income," which is not subject to the anti-tax-haven measures, and "passive income" or "base company income," which is the target of such measures.[165] Under the GPS method, income from integrated business activities would be allocated in accordance with the formula. Because traditional tax havens typically have no

consumer base, manufacturing facility, or research and development activities, no profit would be allocated to entities in these countries. Even if sales or other factors could be sited to tax havens, the throwout rule would exclude tax haven entities from the allocation of global profit.

In the case of the so-called production havens where the corporate tax rate is low (for example, China, Singapore, and Ireland), the GPS would allocate a portion of the global profit to such jurisdictions. This result would be consistent with benefit theory and the principle of inter-nation fairness, since there are genuine economic connections between these jurisdictions and the earning of the global profit. It would also respect the sovereign rights of these jurisdictions to impose tax on income earned within their borders, at whatever rates they choose to adopt.

The GPS would effect a significant improvement over the existing system, which allows MNEs to channel most, if not all, profits to low-tax jurisdictions.[166] The following example illustrates the advantage of the proposed method. An MNE transfers an intangible asset to a subsidiary in a low-tax jurisdiction for a nominal payment; the subsidiary then uses the intangible asset in manufacturing products for export to the country of residence of the parent or to other countries, thus lodging profits in the low-tax jurisdiction. Under the existing transfer-pricing system, residual profit is either unaccounted for by the traditional transaction methods or allocated solely to intangibles (located in the low-tax jurisdiction) under the profit split method; consequently, such profit is sheltered in the low-tax jurisdiction. The GPS would allocate residual profit to the factors of payroll, sales, and tangible property, as well as intangibles, for all participants in the integrated business. Therefore, residual profit would not be retained exclusively in the low-tax jurisdiction.

Simplification

Adoption of the GPS would greatly simplify the international tax system, for the following reasons:

1. The GPS would replace the existing complex transfer-pricing methods and eliminate the subjectivity and the case-by-case approach required by those methods.
2. The GPS would not require a determination of the residence of MNEs. Because the concept of corporate residence is elusive, taxing the income of MNEs under the GPS would provide more certainty and simplicity.
3. The built-in anti-tax-haven mechanism of the GPS would eliminate the need for controlled foreign corporation rules. Since these rules are a main cause of complexity, their removal would undoubtedly simplify the tax system.
4. The GPS would eliminate the distinction between business and investment income within the integrated business by ignoring all intrafirm payments.
5. The calculation of income for an integrated business would eliminate the need for a foreign tax credit or other methods of relieving double taxation. The reason is that such income would be taxable only in the country where

it is earned (as allocated under the formula), and there would be no residual taxation in the country of residence.

In addition, the proposed GPS would simplify the determination of permanent establishment and the attribution of profit to a permanent establishment. Once a permanent establishment was found to exist, the amount of income allocated to it would be determined in accordance with the formula. From a policy perspective, this is the correct approach since both the permanent establishment concept and the arm's-length principle aim at measuring and allocating income among jurisdictions.[167] The GPS would also address the concern raised by David Ward that the permanent establishment definitional issue and the profit attribution issue should be considered together.[168]

A further advantage of the GPS is that the consequent simplification of transfer-pricing methodology would likely reduce compliance costs. This feature should make the GPS attractive to MNEs. While the GPS may impose significant reporting requirements on integrated businesses, these requirements may be less onerous than those imposed under the existing methodologies. For example, the traditional arm's-length methods require the derivation of hypothetical prices for each of perhaps a multitude of cross-border transactions, assuming that these are the "right" prices and then assuming that the reported taxable income in each country as adjusted for these prices constitutes the correct amount of taxable income for that country. Even aside from the problem of determining the "right" price for each transaction, the focus on the propriety of individual transactions, as opposed to the proper amount of taxable income, multiplies substantially the number of questions that must be answered and, correspondingly, the resources required to determine the ultimate result. By contrast, the GPS method directly allocates global income among the jurisdictions in which an integrated business operates, on the basis of objective factors that each enterprise could ascertain for itself. Finally, as regards the expense of maintaining records for the proposed method, with the increasing capacity of computer technology and of the worldwide accounting firms that service MNEs, and the computerization of accounting records, compliance with fractional apportionment requirements on a worldwide basis is not the formidable task it once was.

Summary

To conclude, the proposed GPS method enjoys several advantages over the existing system for allocating international income. The GPS would be more equitable in allocating income among jurisdictions and be more consistent with both economic theory and the economic reality of how MNEs conduct their business. It could also help reduce tax incentives for shifting profit to tax havens. In terms of the overall structure of the international tax system, the GPS could simplify the system by reducing the need for other anti-avoidance rules that were designed to deal with problems unresolved by the transfer-pricing approach. As Alex Easson has noted, there are only two major issues in international taxation: transfer pricing and the

rest.[169] However, as discussed below, the GPS has some disadvantages that must be thoroughly examined and, it is hoped, overcome before the method is adopted.

Disadvantages

Formulary apportionment has been criticized as being arbitrary on the ground that predetermined formulas cannot reflect the particular circumstances of each MNE.[170] The OECD guidelines list the following reasons for rejecting global formulary apportionment as an "alternative" to the arm's-length principle:[171]

- It is difficult to implement in a manner that both protects against double taxation and ensures single taxation.
- The transition to a global formulary apportionment system would present enormous political and administrative complexity and require a level of international cooperation that is unrealistic in the field of international taxation.
- Predetermined formulas are arbitrary and disregard market conditions.
- The formula cannot adequately deal with the movement of exchange rates.
- Compliance costs would be intolerably high.
- Valuation of assets would be difficult, especially the valuation of intangible property.
- Formulary apportionment does not provide a complete solution to the allocation of profits of an MNE group unless it is applied on the basis of the whole enterprise.

The main arguments against formulary allocation will be analyzed below.

Potential Double Taxation

In theory, under the proposed GPS method, there is a mathematical certainty of no double taxation.[172] In practice, double taxation could occur if countries could not reach a consensus on the definition of "integrated business" and "global profit," or on the measurement and location of the factors in the formula. Even in such cases, the problem could be dealt with by improving uniformity, whereas the double taxation that is inherent under existing methods cannot be eliminated through uniformity in implementation. The purported current international consensus on the implementation of the arm's-length principle is very superficial. In fact, countries may apply different methods to a transaction, producing different results and causing double taxation of income.[173]

Arbitrary Allocation

It has been argued that the use of predetermined factors makes formulary apportionment inconsistent with article 9 of the OECD model, since it may result in the allocation of profits to a country in which profits were not earned.[174]

Although this objective is valid, it is hardly persuasive. A thoughtful design of the formula will ensure at least a fairer and more accurate allocation of profits,

whereas the present methods are inherently inadequate since they allow profits that should be attributed to be sheltered from full taxation. As Richard Caves notes,[175] MNEs have an incentive to use transfer prices to a maximum extent in order to place profits in low-tax jurisdictions, and their use of transfer pricing is limited only by the detection skills of tax collectors.

Moreover, opponents of formulary apportionment assume that the existing arm's-length methods "correctly" allocate profits from integrated businesses. As discussed above, this assumption is incorrect.[176] Benjamin Miller writes:

> Both the OECD and [opponents of global formulary apportionment] hold global formulary apportionment to the standards of a theoretical world while absolving the arm's length method from not only a perfect world, but also a real world, evaluation. In their eyes, it is apparently enough that most nations pay lip service to the existence of an arm's length standard.[177]

Transitional Difficulties

The key to any satisfactory solution to the problem of international taxation is international consensus. The proposed GPS method is unlikely to be adopted as an international norm unless it is accepted by both capital-exporting and capital-importing countries.[178]

First of all, there must be sufficient political will among participating countries to make the transition. Countries will move to the new system only if they think that it will bring better results. Obtaining broad acceptance of the GPS method would be a major task, especially given that, as stated earlier, international taxation is a zero sum game. The GPS will not be accepted if countries perceive that its adoption will put them in a losing position. This problem is even more significant if the United States and the EU countries are likely to be worse off under the GPS. MNEs that stand to lose under the GPS also would oppose it, and they often have significant lobbying power. The present system allows MNEs to manipulate transfer prices to reduce their international tax liabilities. These taxpayers, who may see their scope to avoid tax reduced by the GPS, would need to be persuaded of the overriding benefits of the new system (such as simplification, certainty, and lower compliance costs). This would not be an easy task.

Assuming that international consensus could be achieved, making the transition from the current system to the proposed GPS would involve some difficulties. Both domestic legislation and treaty provisions would need to be amended. The question of national fiscal sovereignty and the legal mechanism for countries to cooperate must be addressed.[179] In addition, the accounting and reporting systems of MNEs would need to be modified. Nevertheless, there are several factors that would help smooth the transition.

First, the profit split method and other current applications of formulary allocation should provide some precedents. Countries that impose income tax on the worldwide income of domestic corporations and provide relief for foreign income tax have experience with the translation of currencies and conversion of accounting conventions. Such experience is directly applicable to the proposed GPS method.

More important, the implementation of formulary apportionment by subnational governments in the United States and Canada may provide some useful experience in designing and administering such a system.

A second factor is the trend toward global harmonization of accounting standards. Profit from integrated businesses can be computed with a high degree of uniformity among jurisdictions. Before the advent of electronic commerce, the harmonization of accounting standards had already become an important factor in the capital market decisions of many companies. The boards of the International Accounting Standards Committee and the International Organisation of Securities Commissions had agreed to develop common accounting standards by 1998.[180] Accounting conventions in the EU are standardized. In addition, the Financial Accounting Standards Board is exploring areas in which Canada, Mexico, Chile, and the United States can harmonize their accounting standards.[181] In terms of accounting for financial products, the rules have become more or less global.[182] It is clear that globalization in capital markets has encouraged the internationalization of accounting rules.

Finally, the fact that the proposed GPS method enhances inter-nation fairness and represents incremental changes from existing methods should help build up international support for its adoption. If formulary apportionment were adopted EU-wide,[183] other countries would certainly be more likely to adopt it. This said, forging a worldwide consensus on the use of GPS would be a formidable task. Fortunately, to the optimists at least, the time has come for the next advance in the search for the optimal method of allocating international income.

GLOBAL PROFIT SPLIT: AN EVOLUTIONARY APPROACH

This section of the article argues that the proposed GPS method can be implemented on the basis that the law of evolution is on its side. Reflecting the aphorism *natura non facit saltum*—nature makes no sudden leaps[184]—the GPS represents incremental changes to the existing system. The discussion that follows shows that the proposed method evolves from the historical development of the arm's-length principle and from current applications of formulary allocation in various circumstances. As will be explained, these and other factors support the possibility that an international consensus can be developed on implementation of the GPS.

Historical Movement Toward Formulary Allocation

The interpretation that article 9 is not restricted to requiring an arm's-length price on a transactional basis is borne out by its historical development and by the gradual movement toward formulary allocation.[185]

The Early Years

At the beginning of the 20th century, few countries had introduced rules for the allocation of cross-border corporate income.[186] In the 1920s, the League of Nations appointed expert groups to study the problem of double taxation and allocation of

income. In 1927, a committee of technical experts drafted a convention for the prevention of double taxation,[187] which was intended as a model bilateral treaty. Article 5 of the 1927 model convention provided principles for allocating income of a corporation among permanent establishments in different countries but did not recommend a specific allocation method. In 1928, the United States enacted the predecessor of current section 482 of the Internal Revenue Code. The original section provided no particular method for determining the permitted allocation of income.

In 1933, the League of Nations commissioned a study to survey the methods of allocation of income used in various countries. The study was begun by Thomas S. Adams of Yale University[188] and completed by his assistant, Mitchell Carroll, after Adams's death.[189] Carroll visited 27 countries (including Canada) and made an extended study of their tax systems.[190]

The Carroll report stated that there was "little legislation or jurisprudence concerning the allocation of income" and it was necessary "to study carefully the practices followed by the various administrations in allocating income to national or foreign sources."[191] Carroll described three common methods for allocating profits to permanent establishments:

1. The method of separate accounting—"taking the declaration of income, supported by the accounts of the local branch, as a basis of assessment"[192]— was used in a number of countries, such as the United Kingdom, the United States, and Japan.
2. Empirical methods were frequently used by tax administrators when they had reason to believe that the declaration of income based on the accounts of the enterprise was insufficient or false. The tax administrators attempted to estimate income by comparing the given enterprise with similar enterprises, or taking into account turnover, assets, and other readily ascertainable factors. This method was used in the United Kingdom, the United States, and continental Europe.[193]
3. The method of fractional apportionment—involving "the determination of the income of one establishment of an enterprise by dividing total net income in the ratio of certain factors—for example, assets, turnover, payroll, or a fixed percentage"[194]—was the primary method under the tax laws of Spain and Switzerland.[195]

Carroll characterized the typical practice of countries as "complete liberty of methods of assessment, but recourse in the first instance to the declaration and separate accounts; subject to verification and adjustments, or, if this is impossible, to the making of an assessment by employing empirical methods or the method of fractional apportionment."[196] Although his review of state practice regarding allocation of income between associated enterprises expressed no conclusion as to preferred methods,[197] Carroll indicated a strong preference for the separate accounting method for allocating profits to permanent establishments and the "independent

person" approach for allocating profits to associated enterprises.[198] He rejected the fractional apportionment method on several grounds, including the following: first, states would likely choose formulas that would allocate more income to their tax jurisdiction, thereby violating the principle that a state should have only the authority to tax income from sources within its own territory; and second, the separate accounting method was "preferred by the great majority of Governments, and business enterprises represented in the International Chamber of Commerce, as well as by other authoritative groups."[199] Carroll recommended the arm's-length approach and contended that the "conduct of business between a corporation and its subsidiaries on the basis of dealings with an independent enterprise obviates all problems of allocation."[200]

Carroll's recommendation was adopted in article VI of the 1933 draft convention,[201] which was revised in 1935.[202] Article VI formed the basis of current article 9(1) of the OECD model. Carroll's approach could be traced to article IV of the 1932 US-France treaty,[203] which in turn was modelled on the statutory predecessor of section 482 of the Internal Revenue Code.[204] That was the beginning of the United States' influence on the development of international transfer-pricing rules.

The Formative Years

The United States first adopted the arm's-length standard in 1935 by introducing regulations under the predecessor of Code section 482. The standard was very simple: in determining the "true net income of each controlled taxpayer . . . [t]he standard to be applied in every case is that of an uncontrolled taxpayer dealing at arm's length with another uncontrolled taxpayer."[205]

From 1935 to the mid-1960s, the number of multinational corporations was small. Consequently, the arm's-length principle had little international impact. It was not until 1968 that specific transfer-pricing methods were introduced.[206] In 1968, the US Treasury began refining and elaborating on the section 482 regulations, a process that has continued to the present day. The 1968 regulations attempted, for the first time, to establish rules for applying the arm's-length standard to specific types of transactions, but with sufficient flexibility to accommodate the unique character of multinational business. The determination of a fair arm's-length price for intercompany sales of tangible property was a central issue. The regulations recognized three methods that could be used in valuing the property, as well as an unspecified default method.[207] The preferred choice was the CUP method. Since it required the availability of comparable transactions, where these could not be found, prices could be determined by applying either the resale price method or the cost plus method. Where none of these methods could reasonably be applied under the facts and circumstances of a particular case, some other appropriate method was to be used. No specific method was identified for the pricing of services.[208] In respect of intangibles, the regulations anticipated the lack of comparables; instead of setting forth any specific method, they listed 12 factors to be taken into account, without establishing any priority or relative weight among the factors.[209] Overall, legislative guidance on transfer pricing under the 1968

regulations focused on a transactional approach that relied heavily on comparability with dealings—whether actual or hypothesized—between independent parties.

The OECD commenced a study of transfer pricing in 1976, which culminated in the 1979 report of the Fiscal Committee, proposing detailed transfer-pricing guidelines for adoption by OECD member governments.[210] Drawing heavily on the US regulations, the OECD report reflected a broadly similar approach to the use of transfer-pricing methods. Like the United States, the OECD favoured the CUP method as best reflecting the arm's-length principle. The OECD also agreed with the use of the resale price and cost plus methods where comparables were not available. Overall, the 1979 OECD report was substantially the same as the US regulations.

As multinational businesses evolved, it became apparent that the transfer-pricing methods set out in the 1968 US regulations and the 1979 OECD report were inadequate to deal with many intrafirm transactions. Specifically, comparables were either difficult to find or non-existent for transactions involving intangible property and/or services. Although national tax authorities and the OECD have been generally steadfast in their commitment to the arm's-length principle, major modifications have been made to the manner in which that principle is applied. Again, the United States has taken the lead in reformulating the rules.

Recent Modifications

The main trend of the modifications was the gradual weakening of the traditional arm's-length methods. The trend began with the 1986 amendment to Code section 482. The revised section 482 requires that the income recognized by a transferor of an intangible be "commensurate with the income attributable to the intangible." In passing this amendment, the US Congress noted[211] that the legislation still left many important and difficult transfer-pricing issues unresolved. It instructed the IRS to undertake a comprehensive study of the issues and to consider carefully whether the regulations should be modified in any respect. The IRS responded by issuing a white paper in 1988,[212] proposed regulations in 1992, temporary regulations in 1993, and final regulations in 1994.

The 1992 proposed regulations recognized transfer-pricing methods (profit comparison and profit split) that were radically different from those in the earlier regulations and the 1979 OECD report. Under the traditional transactional approach, transfer prices were set solely on the basis of the facts and circumstances relating to individual transactions, without regard for the profit position of the parties. The proposed profit comparison and profit split methods established prices by working backward from the relative profits that taxpayers earned from intrafirm transactions. These proposed methods relied much less heavily on comparables and focused more on achieving arm's-length results by adopting profit split methodology applied where functions were highly interrelated and could not be readily evaluated on a separate or an independent basis.

The OECD and foreign governments vigorously opposed the US proposals, initially on the ground that they were inconsistent with the arm's-length principle.

The OECD went so far as to issue two reports that strongly criticized various aspects of the proposals.[213] The OECD particularly commented on issues arising from the dominant role given to the CPM as a basis for determining transfer prices.[214]

Both the OECD and the US government were, however, well aware of the vital importance of being more or less in step. The subsequent release of the US final regulations (1994) and the OECD guidelines (1995), and their similar approaches to transfer-pricing methodologies, suggest that the OECD and the United States negotiated a compromise position. The United States reduced its emphasis on the use of profit-based methodologies and agreed that traditional transaction-based methods would continue to be important techniques for setting transfer prices. While still according the traditional methods priority, the OECD agreed that profit-based approaches could be useful in certain circumstances. Furthermore, the OECD, with the apparent support of the United States, firmly rejected formulary apportionment as a valid method of determining income in an international setting.

Nevertheless, there are signs that national tax authorities are no longer convinced that article 9(1) of the OECD model requires exclusive use of the comparable transactional pricing approach. As discussed below, while national governments recite their conceptual opposition to formulary apportionment, they allow its use in practice. Moreover, a joint communiqué issued in 1992 by the IRS and the tax authorities of France, Germany, and the United Kingdom endorsed the arm's-length principle in general but also conceded the applicability of formulary apportionment in appropriate cases.[215]

Current Uses of Formulary Allocation

As discussed earlier, while the wording of article 9 of the OECD model has remained largely unchanged since its inception, the OECD has given this provision an ambulatory interpretation.[216] As governments have endeavoured to come to terms with the complexities of international taxation, there has been a steady drift toward formulary allocation. In this sense, the proposed GPS method is not a "radical" or "revolutionary" idea. Current uses of formulary allocation methods are surveyed below.

APAs

Some APAs that are now accepted by the OECD and many of its member countries are based on formulary apportionment. An example is the use of global apportionment in the context of APAs involving global trading of commodities and financial products.[217] In other contexts, the profit split method used in APAs relies on allocation factors such as expenses and fixed assets to determine how the profits should be split, and thus would be an application of formulary apportionment. Some commentators suggest a wider use of multilateral APAs as a step toward greater emphasis on profit split techniques.[218]

According to the annual APA report released by the US Treasury department, a wide range of pricing methods was used in the APAs executed in 2000 in the United States.[219] The CPM was used in virtually all of them, either as the primary method

or as a means of testing the results obtained under other methods. The profit-level indicators used, in accordance with the CPM, included the following: return on assets or capital employed, operating margin, gross margin, the Berry ratio (the ratio of gross profit to operating expenses), markup on total costs, and net margin. These indicators can be interpreted as single-factor formulas.

An interesting aspect of the US APA program is that foreign-owned US subsidiaries accounted for the large majority (74.6 percent) of the APAs approved in 2000. There are good practical reasons for this: for the past several years, the IRS has specifically targeted such entities under its audit program. These companies use APAs as a way of avoiding contentious audits or, perhaps more important, of settling these audits in a forward-looking manner to cover "open tax years."[220] The parent of these US subsidiaries is often located in a US treaty country. These companies presumably did not invoke article 9 of the applicable treaty to contest the use of CPM, possibly for reasons of expediency or, more significantly, because of implicit acceptance of the compatibility of CPM and the arm's-length approach.

Profit Split in Global Trading

Profit split is the preferred method for allocating profit from global trading operations under both the OECD draft global trading report[221] and the US proposed regulations.[222] It is possible to use a three-factor approach to the splitting of profit, referring to trader compensation, back-office compensation, and risk.[223] It is also possible to use trader compensation as the sole factor.[224] The use of a single-factor formula in allocating combined income may lack economic validity in most cases; but since many taxpayers are more concerned with a predictable outcome than with economic purity, a single-factor approach may well suit their purposes.[225]

Cost Contribution Arrangements

Formulary allocation is often used in cost contribution arrangements (the term used in the OECD guidelines and by many OECD member countries) or cost-sharing arrangements (the term used in the United States) in respect of research and development and other activities.[226] A qualified cost contribution arrangement is not subject to transfer-pricing adjustment.

The arm's-length principle requires that each participant's contribution be consistent with that which an arm's-length party would have agreed to contribute under comparable circumstances, given the benefit it would have reasonably expected to derive from the arrangement. Various approaches may be used to estimate the benefits expected to be obtained by each participant. They include

- estimation based on anticipated additional income that will be generated or costs that will be saved as a result of entering into the arrangement; and
- the use of an appropriate allocation key, perhaps based on sales; units used, produced, or sold; gross or operating profits; number of employees; capital invested; or alternative factors.[227]

In essence, this is a formulary allocation approach.

Thin Capitalization

Canada, Japan, the United States, and many other countries have enacted thin capitalization rules that deny the deduction of interest on "excessive" debt.[228] Some countries use a fixed debt-to-equity ratio in determining the amount of excessive debt (hence excessive interest).[229] Article 9 of the OECD model arguably does not apply to thin capitalization situations but applies only to the rate of related-party loans.[230] However, the OECD's position is that thin capitalization rules are consistent with the arm's-length principle "insofar as their effect is to assimilate the profits of the borrower to an amount corresponding to the profit which would have accrued in an arm's length situation."[231]

It is naïve to argue that the fixed ratio always represents the arm's-length ratio of debt to equity from industry to industry. However, there have been no cases in Canada in which a taxpayer has challenged the validity of the thin capitalization rules on this basis.[232] There seems to be an implicit acceptance of the use of such fixed ratio.

Attributing Profit to a Permanent Establishment

Formulary allocation has been applied in attributing profit to a permanent establishment under both treaties and domestic law. Under treaty law, article 7(4) of the OECD model specifically permits countries to attribute profit to a permanent establishment on the basis of an apportionment of the total profits of the enterprise to its various parts. The OECD commentary on article 7(4) lists three factors that may be used in determining the allocation:[233]

1. *Turnover or receipts*. This factor can be used by enterprises providing services or producing proprietary articles. For example, an insurance enterprise may make an apportionment of total profits by reference to premiums received from policyholders in each of the countries concerned.
2. *Expenses*. This factor can be used by enterprises that manufacture goods with a high raw material cost or high labour content.
3. *Capital structure*. This factor can be used by banking and other financial enterprises.

Thus, according to the OECD commentary, the use of formulary apportionment in the context of a branch is not always inconsistent with the arm's-length principle.[234] The recent OECD discussion draft on the attribution of profit to a permanent establishment suggests, however, that article 7(4) is fundamentally inconsistent with the arm's-length principle and should be disregarded for purposes of the proposed working hypothesis.[235] This is an astonishing suggestion, since it questions the integrity of the OECD model in upholding the arm's-length principle.[236] Meanwhile, the proposed working hypothesis in the discussion draft[237] has itself been criticized as a departure from the arm's-length principle.[238]

In addition, as Scott Wilkie argues, when the definition of "permanent establishment" under article 5 and the profit attribution rules under article 7 are examined together, it is apparent that "the OECD model has always reflected a formulaic aspect that effectively frames an allocative approach to measuring and attributing enterprise income."[239] He notes that "a typical treaty may be analyzed to reflect a kind of simple three-factor formula—namely, plant and equipment, salaries and wages (or people), and revenue, which establish the principal touchstones of income measurement in relation to a jurisdiction."[240] This view is historically correct, since formulary apportionment was used concurrently with the separate accounting approach in attributing profits to permanent establishments, and had been suggested as a backup method in earlier model tax conventions.

Finally, the domestic law of Canada and the United States also allows the use of formulas in allocating interest deductions to branches of foreign corporations. In respect of a Canadian branch of a foreign bank, the Income Tax Act has been amended to apportion the amount of deductible interest expense on the basis of a formula.[241] A foreign bank is permitted to deduct interest both in respect of money borrowed directly from third parties (direct debt) and on account of money borrowed indirectly through its home office (allocated debt), with an overall limitation of a debt-to-equity ratio of 19:1. This ratio is based on the total value of the assets used in connection with the bank's business carried on in Canada.

In the United States, under section 864(e) of the Internal Revenue Code, in computing taxable income for US tax purposes, where money is borrowed for general business purposes the interest paid is apportioned between US and foreign sources according to the basis of all of the taxpayer's assets. Regulation section 1.882-5 governs the determination of the US interest expense deduction allowed to a foreign corporation in a US trade or business. This determination is based on the fungibility principle: a foreign corporation's interest expense deduction is calculated by apportioning the corporation's aggregate worldwide interest expense to the US branch on the basis of the ratio of US to total assets. The three-step process in applying this formula has been described as follows:

> [A] foreign corporation first determines the value of US assets that generate US effectively connected income. Next the foreign corporation determines its US connected liabilities by multiplying its US assets by a specified fixed ratio of 50 percent (93 percent for a bank) or by the actual ratio of worldwide liabilities to worldwide assets. In the third step, the foreign corporation determines the interest allocable to the US connected liabilities under the adjusted US-booked liabilities method (ABLM) or the separate currency pools method (SCPM), which is more sensitive to currency fluctuation.[242]

Taxpayers have successfully challenged such domestic law as contrary to the arm's-length principle.[243] In *Natl. Westminster Bank v. US*,[244] the US Court of Federal Claims held that US regulations requiring the allocation of interest based on a formula are inconsistent with the "separate enterprise" requirements of article 7 of the US-UK tax treaty, because the regulations rely on a formula and are not based

on a deemed arm's-length relationship between the US branch and the UK head office. The US-UK treaty was subsequently amended to adopt the approach recommended in the OECD discussion draft.[245]

Formulary Allocation of Global Profit

As discussed above, the taxable profit of a permanent establishment is determined, at least in some cases, by apportioning the total profits of the enterprise on the basis of factors such as turnover, cost, etc. In the extreme situation where an enterprise carries on business activities outside its home jurisdiction solely in the form of branches, the formulary allocation method would be applied to its global income. This is particularly true if a corporation carries on business activities in the form of a branch in a foreign jurisdiction where formulary allocation is used customarily. In addition, formulary apportionment is already being practised with respect to the taxation of internal trading in financial flows—the most mobile of all factors—within multinational banks that span the whole world and all time zones.[246]

Safe Harbours

Formulary apportionment may be used in the calculation of amounts eligible for "safe harbour" treatment under the domestic law of certain countries. For example, the US regulations provide safe harbours for a few types of payments, including interest,[247] payments for certain services,[248] and certain rents. In respect of payments for services, the safe harbour allows a charge limited to the fully accounted cost of providing the service and is available if the service does not constitute an integral part of the business activity of either the supplier or the recipient. This "cost chargeback" safe harbour includes all direct and indirect costs of providing such services, and taxpayers may use any reasonable method of allocating and apportioning these expenses (for example, allocation formulas or analysis of time spent).

Formulary Determination of "Cost"

Defining cost base for purposes of the cost plus method is crucial. Cost is identified directly if a direct charge exists, or indirectly using an appropriate allocation formula. The OECD guidelines identify several factors on which the allocation may be based, including turnover, staff employed, capital applied, time spent to perform a task, and income-producing unit.[249] Some national tax authorities allow the use of a global formula to apportion costs on the basis of gross turnover of the worldwide group.[250]

Other Uses Under Domestic Law

Formulary allocation is currently used at different stages in determining a taxpayer's income tax liability under domestic law.

First, formulary allocation is used to define the source of income. For example, for Canadian income tax purposes, income from employment services rendered both inside and outside Canada may be apportioned between Canada and the other

jurisdiction on the basis of the time spent in each jurisdiction.[251] For US tax purposes, Code section 863 authorizes the formulary determination of the source of specified types of taxable income in order to allocate that income partly to the United States and partly to foreign jurisdictions. Examples are income from the sale of goods produced in the United States and sold abroad, and vice versa; income from transportation; and income from communications.

Second, formulary allocation is used to determine the amount of deductions to be included in the computation of taxable income. Examples (discussed above) are the limitation of interest expense deductions in the case of thin capitalization and branch interest allocation rules in Canada and the United States.

Third, in Canada, formulary allocation is also used to determine the amount of the manufacturing and processing tax credit.[252] In many countries, the limitation on the amount of foreign tax credit is generally determined by a formula.[253]

Finally, formulary allocation is used to allocate the overall profit of a taxpayer to various subnational jurisdictions.[254]

Developing an International Consensus

As is the case for the existing arm's-length methods, implementation of the proposed GPS method requires a strong international consensus. At present, such a consensus does not exist. However, there is no reason to believe that international agreement could not be secured and maintained. On the contrary, as discussed below, there seem to be sufficient political, technical, and institutional conditions to foster such consensus.

The GPS is not radically different from the current profit split method. The only major differences are that the former is an explicit formulary allocation method, which uses defined factors, whereas the latter is implicit and uses flexible factors. The profit split method has been accepted and applied in Canada, the United States, and other countries. There is also evidence that competent authorities are actually using profit split procedures with some frequency and success in resolving transfer-pricing disputes.[255] These precedents bode well for the eventual international acceptance of the proposed GPS method.

Both developed and developing countries will likely accept the proposed method. Under the GPS method, residual profit would be allocated to the country where intangibles are developed (usually capital-exporting countries) as well as to the country where products and services are sold (capital-importing countries). By comparison, the existing methods allocate residual profit mainly to capital-exporting countries. Therefore, the GPS favours destination-based taxation by allocating a portion of residual profit to countries of sale. As noted by Reuven Avi-Yonah, a rule that favours destination-based taxation is the most likely candidate to gain international acceptance.[256]

Capital- and technology-exporting countries would also obtain a fair share of residual profit.[257] In theory, they may not get as much as under the existing system, since a portion of the profit would be allocated to market countries and production countries. However, the GPS would allocate income that is currently artificially

shifted to tax havens back to the countries where income-earning activities occur. The recovered income would be allocated, at least substantially, to countries where intangibles are developed and produced.

There has been a gradual and steady movement toward greater international cooperation on taxation issues. The need for it has been well identified and appreciated. Some commentators (including the authors of a UN report) have called for the establishment of a multinational tax organization.[258] The OECD has assumed the role of an international tax body, especially in the areas of transfer pricing and electronic commerce. It has also recently invited non-members to participate in its work. The OECD might be persuaded to change its current stance on transfer pricing and take the initiative in exploring the implementation of the GPS.

The historical development of the arm's-length principle suggests a path toward achieving consensus on this issue: the United States takes the lead, the OECD and its members reach a compromise, and the rest of the world follows the OECD. At the risk of exaggeration, the United States may have already taken the lead by introducing the global dealing regulations. The EU has also opened the debate on the use of formulary allocation as a means of eliminating tax obstacles for EU-based companies. If the United States and the EU were in agreement, the OECD would soon follow. It is only hoped that the world of international taxation will not have to wait too long to catch up with the world of international business.

CONCLUSION

The beginning of the 21st century, with an increasingly global economy facilitated by the Internet and other technologies, offers a golden opportunity for rethinking the transactional approach to international income allocation. That approach emerged from the industrial age at the beginning of the 20th century, and it is of questionable relevance to the realities of contemporary global business activities.

This article has proposed a GPS method as a viable alternative to the comparable transactional pricing approach. The GPS is a superior method in terms of the economic theory of MNEs, as well as benefit theory and/or economic allegiance theory in justifying a country's claim to the taxation of cross-border income. More important, the GPS is a logical extension of the historical evolution of the arm's-length principle. Consequently, its adoption may be not only desirable but inevitable.

NOTES

1 Organisation for Economic Co-operation and Development, *Model Tax Convention on Income and on Capital* (Paris: OECD) (looseleaf) (herein referred to as "the OECD model"). Article 9 of the OECD model is also included in the UN model tax convention: United Nations, Department of Economic and Social Affairs, *Tax Treaties Between Developed and Developing Countries*, third report, ST/ECA/166 (New York: United Nations, 1972) (herein referred to as "the UN model").

2 Organisation for Economic Co-operation and Development, *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations* (Paris: OECD) (looseleaf) (herein referred to as "the OECD guidelines"). The OECD guidelines were first published on July 13, 1995 and have been subsequently supplemented.

3 Ibid., at paragraphs 3.58 to 3.74.

4 See infra note 121.

5 United Nations, *World Investment Report 1996* (New York: United Nations, 1996), 1.

6 See Peyton H. Robinson, "The Globally Integrated Multinational, the Arm's Length Standard, and the Continuum Price Problem" (2000) vol. 9, no. 13 *Tax Management Transfer Pricing Special Report* 1-24, at 12.

7 Transfer-pricing manipulation is one of the most common techniques of tax avoidance. See Reuven S. Avi-Yonah, "The Rise and Fall of Arm's Length: A Study in the Evolution of U.S. International Taxation" (1995) vol. 15, no. 1 *Virginia Tax Review* 89-159, at 90.

8 For an overview of transfer-pricing issues in the context of electronic commerce, see Jinyan Li, "Slicing the Digital Pie with a Traditional Knife—The Effectiveness of the Arm's-Length Principle in the Age of E-Commerce" (2001) vol. 24, no. 8 *Tax Notes International* 775-816; and Richard L. Doernberg, Luc Hinnekens, Walter Hellerstein, and Jinyan Li, *Electronic Commerce and Multijurisdictional Taxation* (The Hague: Kluwer Law International, 2001), chapter 4.

9 See, for example, Mark Casson, *Alternatives to the Multinational Enterprise* (London: Macmillan, 1979).

10 Richard Bird and Jack Mintz, "Sharing the International Tax Base in a Changing World" (draft on file with the present author, not yet published at the end of June 2002), 14.

11 This argument is similar to the rationalization for equity in a domestic context. For example, Rosenbloom writes that a tax system depends, to a large extent, upon the (sometimes grudging) consent of taxpayers. If the system does not operate in an equitable way, that consent is difficult to acquire and more difficult to retain, and those subject to the system will devote greater energy to frustrating, avoiding, or evading it. See H. David Rosenbloom, "From the Bottom Up: Taxing the Income of Foreign Controlled Corporations" (2001) vol. 26, no. 4 *Brooklyn Journal of International Law* 1525-54, at 1527.

12 See Michael J. Graetz, "Taxing International Income: Inadequate Principles, Outdated Concepts, and Unsatisfactory Policies" (2001) vol. 26, no. 4 *Brooklyn Journal of International Law* 1357-1448, at 1359 (noting that early scholars, such as Thomas Adams and Edwin Seligman, disagreed vigorously about what policy best satisfies the requirement of fairness, but they did not disagree that fairness was an essential attribute of international income taxation).

13 Mitsuo Sato and Richard M. Bird, "International Aspects of the Taxation of Corporations and Shareholders" (1975) vol. 22, no. 2 *International Monetary Fund Staff Papers* 384-455, at 421.

14 See Richard A. Musgrave and Peggy B. Musgrave, "Inter-nation Equity," in Richard M. Bird and John G. Head, eds., *Modern Fiscal Issues: Essays in Honor of Carl S. Shoup* (Toronto: University of Toronto Press, 1972), 63-85, at 68; Peggy B. Musgrave, "Interjurisdictional Equity in Company Taxation: Principles and Applications to the European Union," in Sijbren Cnossen, ed., *Taxing Capital Income in the European Union: Issues and Options for Reform* (New York: Oxford University Press, 2000), 46-78; and Peggy B. Musgrave, "Sovereignty, Entitlement, and Cooperation in International Taxation" (2001) vol. 26, no. 4 *Brooklyn Journal of International Law* 1335-56.

15 This is the position of Edwin Seligman and his colleagues on the Committee of Economists appointed by the League of Nations, as set out in *Report on Double Taxation Submitted to the Financial Committee by Professors Bruins, Einaudi, Seligman, and Sir Josiah Stamp*, League of Nations Doc. E.F.S.73.F.19 (Geneva: League of Nations, 1923) (herein referred to as "the 1923 League of Nations report"). It is also the position taken more recently by the United States, Department of the Treasury in *Selected Tax Policy Implications of Global Electronic Commerce* (Washington, DC: Department of the Treasury, November 1996).

16 See, for example, Klaus Vogel, "Worldwide vs. Source Taxation of Income—A Review and Re-evaluation of Arguments (Part I)" (1988) vol. 16, nos. 8-9 *Intertax* 216-29, at 219, reviewing

Georg von Schanz's work in international taxation theories. According to Vogel, Schanz used the "economic allegiance" theory to support predominant source taxation (¾ of total income). Vogel agreed with Schanz.

17 See the discussion below under the heading "Global Profit Split: An Evolutionary Approach."

18 For further review, see Nancy H. Kaufman, "Fairness and the Taxation of International Income" (1998) vol. 29, no. 2 *Law and Policy in International Business* 145-203; and Lorraine Eden, "Equity and Neutrality in the International Taxation of Capital" (1988) vol. 26, no. 2 *Osgoode Hall Law Journal* 367-408.

19 Ontario, *Fair Taxation in a Changing World: Report of the Ontario Fair Tax Commission* (Toronto: University of Toronto Press in cooperation with the Ontario Fair Tax Commission, 1993), 7-11.

20 Musgrave, "Sovereignty, Entitlement, and Cooperation," supra note 14, at 1339. See also Graetz, supra note 12, at 1401-3.

21 See Thomas S. Adams, "International and Interstate Aspects of Double Taxation," in *Proceedings of the Twenty-Second Annual Conference on Taxation* (Columbia, SC: National Tax Association, 1930), 193-98, at 198; and Michael J. Graetz and Michael M. O'Hear, "The 'Original Intent' of U.S. International Taxation" (1997) vol. 46, no. 5 *Duke Law Journal* 1021-1108, at 1043-44 (reviewing Adams's contributions to the development of the US international tax system). See also Thomas S. Adams, "Interstate and International Double Taxation," in Ross Magill, ed., *Lectures on Taxation* (Chicago: CCH, 1932), 101-27.

22 Doernberg et al., supra note 8, at 69.

23 Musgrave, "Sovereignty, Entitlement, and Cooperation," supra note 14, at 1339.

24 United States, Department of the Treasury, *The Deferral of Income Earned Through U.S. Controlled Foreign Corporations: A Policy Study* (Washington, DC: Department of the Treasury, Office of Tax Policy, December 2000) (herein referred to as "the US CFC study"), 15.

25 Canada, *Report of the Royal Commission on Taxation*, vol. 4 (Ottawa: Queen's Printer, 1966), 483-84.

26 Doernberg et al., supra note 8, at 69.

27 For a recent and excellent review of tax neutrality, see the US CFC study, supra note 24, at chapter 3.

28 Ibid.

29 See, for example, ibid.; and National Foreign Trade Council, *The National Foreign Trade Council Foreign Income Project: International Tax Policy for the 21st Century* (Washington, DC: National Foreign Trade Council, 1999).

30 Michael J. McIntyre, "Guidelines for Taxing International Capital Flows: The Legal Perspective" (1993) vol. 46, no. 3 *National Tax Journal* 315-21, at 315. See also David P. Hariton, "Commentary: International Tax Policy: Capital vs. Labor" (2001) vol. 26, no. 4 *Brooklyn Journal of International Law* 1471-75; and Graetz, supra note 12, at 1370-95.

31 Doernberg et al., supra note 8, at 67-68.

32 OECD guidelines, supra note 2, at paragraph 1.7.

33 RSC 1985, c. 1 (5th Supp.), as amended.

34 Internal Revenue Code of 1986, as amended (herein referred to as "the Code").

35 OECD guidelines, supra note 2, glossary.

36 See, for example, Canada Customs and Revenue Agency (CCRA), *Information Circular* 87-2R, "International Transfer Pricing," September 27, 1999, paragraph 5. See also Organisation for Economic Co-operation and Development, *Discussion Draft on the Attribution of Profits to Permanent Establishment* (Paris: OECD, February 2001) (herein referred to as "the OECD discussion draft"), paragraph 3.

37 Treas. reg. sections 1.482-1 to 8.

38 Treas. reg. section 1.482-8(e)(2).

39 CCRA, *Information Circular* 94-4R, "International Transfer Pricing: Advance Pricing Agreements," March 16, 2001.

40 There is a rich body of literature on transfer-pricing issues. For an overview of these methods, see Li, supra note 8.

41 OECD guidelines, supra note 2, at paragraph 1.36.

42 Ibid., at paragraph 1.37.

43 This is made very clear in IC 87-2R, supra note 36, at paragraph 102.

44 OECD guidelines, supra note 2, at paragraphs 1.19 to 1.35.

45 It is perceived to have served the world community well. See, for example, Jeffrey Owens, "The Tax Men Cometh to Cyberspace" (1997) vol. 14, no. 22 *Tax Notes International* 1833-52, at 1847. For further discussion, see the section below entitled "Global Profit Split: An Evolutionary Approach."

46 A large number of countries have adopted rules based on the arm's-length principle. It has been argued that the arm's-length standard is customary international law: see Chantal Thomas, "Customary International Law and State Taxation of Corporate Income: The Case for the Separate Accounting Method" (1996) vol. 14, no. 1 *Berkeley Journal of International Law* 99-136. However, it has also been argued that the arm's-length standard is not an international norm to any meaningful extent: see Stanley I. Langbein, "The Unitary Method and the Myth of Arm's Length" (1986) vol. 30, no. 7 *Tax Notes* 625-81, at 654. Others argue that the arm's-length standard should be regarded as having strong persuasive legal authority under tax treaties, but not binding legal authority: see Brian D. Lepard, "Is the United States Obligated To Drive on the Right? A Multidisciplinary Inquiry into the Normative Authority of Contemporary International Law Using the Arm's Length Standard as a Case Study" (1999) vol. 10, no. 1 *Duke Journal of Comparative & International Law* 43-190.

47 OECD guidelines, supra note 2, at paragraph 1.6.

48 This problem is referred to as "the continuum price problem." See Langbein, supra note 46; and United States, Department of the Treasury and Internal Revenue Service, *A Study of Intercompany Pricing Under Section 482 of the Code*, Notice 88-123, 1988-2 CB 458 (herein referred to as "the US 1988 white paper"), 81. The problem arises where the aggregate returns from remuneration for services are less than the actual combined return to the integrated group.

49 For a summary of the criticism, see the US 1988 white paper, supra note 48, at chapter 10.

50 Jerome R. Hellerstein, "Federal Income Taxation of Multinationals: Replacement of Separate Accounting with Formulary Apportionment" (1993) vol. 60, no. 10 *Tax Notes* 1131-45, at 1136.

51 Dale W. Wickham and Charles J. Kerester, "New Directions Needed for Solution of the International Transfer Pricing Tax Puzzle: Internationally Agreed Rules or Tax Warfare?" (1992) vol. 56, no. 3 *Tax Notes* 339-61, at 346.

52 Hellerstein, supra note 50, at 1136.

53 See Brian E. Lebowitz, "Transfer Pricing and the End of International Taxation" (1999) vol. 19, no. 3 *Tax Notes International* 1201-9, at 1202.

54 R.H. Coase, "The Nature of the Firm" (1937) vol. 4 *Economica* 386-405; and R.H. Coase, "Lectures on the Firm" (1988) vol. 4, no. 1 *Journal of Law, Economics, & Organization* 3-47.

55 Phillip I. Blumberg, *The Multinational Challenge to Corporation Law: The Search for a New Corporate Personality* (New York: Oxford University Press, 1993), 233. For further discussion of transnational companies, see Peter J. Buckley, "The Role of Management in International Business Theory: A Meta-Analysis and Integration of the Literature on International Business and International Management" (1996) vol. 36, special issue 1 *Management International Review*

7-54; and Christopher Bartlett and Sumantra Ghoshal, *The Transnational Solution* (Boston: Harvard Business School Press, 1989).

56 For further discussion of the theory of the MNE and its implications for transfer pricing, see Harlow N. Higinbotham and Marc M. Levey, "When Arm's Length Isn't Really Arm's Length: Issues in the Application of the Arm's Length Standard" (1998) vol. 7, no. 6 *Tax Management Transfer Pricing Report* 243-52; Bengt Holstrom and Jean Tirole, "Transfer Pricing and Organizational Form" (1991) vol. 7, special issue *Journal of Law, Economics, & Organization* 201-28; Stanley I. Langbein, "Transaction Cost, Production Cost, and Tax Transfer Pricing" (1989) vol. 44, no. 12 *Tax Notes* 1391-1413; and Stanley I. Langbein, "A Modified Fractional Apportionment Proposal for Tax Transfer Pricing" (1992) vol. 54, no. 6 *Tax Notes* 719-30.

57 Higinbotham and Levey, supra note 56, at 244.

58 Toru Nakamura, "Profit Theories in Transfer Pricing: Abuses by Proxy" (1998) vol. 6, no. 22 *Tax Management Transfer Pricing Report* 763-69, at 767. See also Richard E. Caves, *Multinational Enterprise and Economic Analysis*, 2d ed. (New York: Cambridge University Press, 1996), 60.

59 Charles E. McLure Jr., "U.S. Federal Use of Formula Apportionment To Tax Income from Intangibles" (1997) vol. 14, no. 10 *Tax Notes International* 859-71, at 861-62, quoting from Kenneth J. Arrow, "Economic Welfare and the Allocation of Resources for Invention," in *The Rate and Direction of Inventive Activity: Economic and Social Factors* (Princeton: Princeton University Press, 1962), 615.

60 Lebowitz, supra note 53.

61 Michael C. Durst, "The Role of Intercompany Contracts in the Transfer Pricing System" (2000) vol. 21, no. 26 *Tax Notes International* 2933-37, at 2934.

62 OECD guidelines, supra note 2, at paragraph 1.36.

63 Lebowitz, supra note 53, at 1202; and Nakamura, supra note 58, at 764.

64 US 1988 white paper, supra note 48, at 81. For an excellent explanation of internalization theory and other theories of MNEs, see Langbein, "Transaction Cost," supra note 56, and Langbein, "A Modified Fractional Apportionment Proposal," ibid.

65 Blumberg, supra note 55, at 234.

66 R.M. Bird and D.J.S. Brean, "The Interjurisdictional Allocation of Income and the Unitary Taxation Debate" (1986) vol. 34, no. 6 *Canadian Tax Journal* 1377-1416, at 1388.

67 Reuven S. Avi-Yonah, "The Structure of International Taxation: A Proposal for Simplification" (1996) vol. 74, no. 6 *Texas Law Review* 1301-59, at 1342-44.

68 Ibid., at 1343.

69 Treas. reg. section 1.482-6(c)(3)(i)(B). Steven C. Wrappe and Kerwin Chung, "The Second Annual APA Report: Reading the Tea Leaves" (2001) vol. 10, no. 2 *Tax Management Transfer Pricing Report* 55-62; and Mitchell J. Tropin, "IRS Using Residual Approach to Value Intangibles in Difficult Cases, APA Chief Says," *Daily Tax Report*, November 4, 1999.

70 For example, the "transaction cost" theory does not allocate the residual profit to intangibles, but rather to the organizational structure of the business or entrepreneurial services. See Langbein, "Transaction Cost," supra note 56, at 1392.

71 Michael McKee and Michael McDonald, "Location Savings in Competitive Markets" (2001) vol. 9, no. 19 *Tax Management Transfer Pricing Report* 700-5, at 702.

72 Ibid., at 701. The US transfer-pricing regulations specifically mandate the use of the profit comparison method: Treas. reg. section 1.482-1(d)(4)(ii)(D) (Ex.). See also Treas. reg. section 1.482-1(d)(4)(ii)(C). In the context of global dealing in financial instruments, the taxpayer's position is further weakened since the profit split method under the US proposed regulations effectively allocates location savings among jurisdictions. See Kathleen Matthews, "U.S. Treasury's Brown Discusses Global Dealing Regs. at International Banker's Seminar" (1998)

vol. 16, no. 10 *Tax Notes International* 742-44. The profit split method allocates operating profits so that costs and expenses are split out under other transfer-pricing methods, with the result that net income is allocated.

73 OECD guidelines, supra note 2, at paragraph 1.10.

74 Terry A. Symons and David Roach, "Profit-Oriented Versus Transaction-Based Methods" (1997) vol. 4, no. 3 *International Transfer Pricing Journal* 126-32, at 129.

75 OECD guidelines, supra note 2, at paragraph 1.8.

76 Organisation for Economic Co-operation and Development, *The Taxation of Global Trading of Financial Instruments: A Discussion Draft* (Paris: OECD, 1997) (herein referred to as "the OECD draft global trading report"), paragraph 209.

77 See Li, supra note 8.

78 There are minor variations in the language used in treaties, but according to the underlying technical explanation, these differences are not substantive. See Louis M. Kauder, "The Unspecific Federal Tax Policy of Arm's Length: A Comment on the Continuing Vitality of Formulary Apportionment at the Federal Level" (1993) vol. 60, no. 10 *Tax Notes* 1147-55, at 1149. See also David A. Ward, "Canada's Tax Treaties" (1995) vol. 43, no. 5 *Canadian Tax Journal* 1719-58 (surveying the major provisions of Canada's tax treaties with various countries).

79 The Vienna Convention on the Law of Treaties, UN Doc. A/Conf. 39/27, signed at Vienna on May 23, 1969. The interpretive rules in the VCLT are binding not only on countries that are parties to the convention, but also on other countries where these longstanding rules reflect customary international law. See Klaus Vogel and Rainer G. Prokisch, "General Report," in International Fiscal Association, *Cahiers de droit fiscal international*, vol. 78a, *Interpretation of Double Taxation Conventions* (Deventer, the Netherlands: Kluwer Law and Taxation, 1993), 55-85, at 66; and Michael Edwardes-Ker, *Tax Treaty Interpretation* (London: In-Depth Publishing) (looseleaf).

80 See Hugh J. Ault, "The Role of the OECD Commentaries in the Interpretation of Tax Treaties," in Herbert H. Alpert and Kees van Raad, eds., *Essays on International Taxation* (Deventer, the Netherlands: Kluwer Law and Taxation, 1993), 61-68. See also John F. Avery Jones et al., "The Interpretation of Tax Treaties with Particular Reference to Article 3(2) of the OECD Model—I" [1984] no. 1 *British Tax Review* 14-54 and ". . . II" [1984] no. 2 *British Tax Review* 90-108.

81 The OECD Council has made recommendations on the OECD model and commentary on five occasions (July 30, 1963, April 11, 1977, July 23, 1992, March 31, 1994, and September 21, 1995) and has urged the governments of member states to follow the model when concluding new bilateral conventions or revising existing conventions between them, to conform with the model convention as interpreted by the commentaries.

82 For example, Ault and Tillinghast have suggested that "substantial weight" should be given to the commentary, the same weight that is given to published bilateral administrative agreements. American Law Institute, *International Aspects of United States Taxation II: Proposals on United States Income Tax Treaties*, Hugh J. Ault and David R. Tillinghast, reporters (Philadelphia: American Law Institute, 1992).

83 Paragraphs 33 to 36 of the introduction to the OECD model.

84 This is a paraphrase of Stanley S. Surrey, "Reflections on the Allocation of Income and Expenses Among National Tax Jurisdictions" (1978) vol. 10, no. 3 *Law and Policy in International Business* 409-60, at 413.

85 OECD guidelines, supra note 2, at paragraph 1.13.

86 Valerie Amerkhail, "Arm's Length or Formulary Apportionment? Sometimes the Best Choice Is Both" (1999) vol. 8, no. 3 *Tax Management Transfer Pricing Report* 94-104.

87 Surrey, supra note 84, at 413.

88 Louis M. Kauder, "Intercompany Pricing and Section 482: A Proposal To Shift from Uncontrolled Comparables to Formulary Apportionment Now" (1993) vol. 58, no. 4 *Tax Notes* 485-93, at 487.

89 See, for example, Richard M. Bird, "Shaping a New International Tax Order" (1988) vol. 42, no. 7 *Bulletin for International Fiscal Documentation* 292-99, at 296.

90 Wickham and Kerester, supra note 51, at 345.

91 OECD guidelines, supra note 2, at paragraph 2.5.

92 Ibid., at paragraph 1.42.

93 The United States' CPM allows reference to the operating profits earned by other enterprises engaged in similar activities. For comment on this issue, see Frances M. Horner, "International Cooperation and Understanding: What's New About the OECD's Transfer Pricing Guidelines" (1996) vol. 50, no. 2 *University of Miami Law Review* 577-95, at 578-79.

94 See Brian J. Arnold and Thomas E. McDonnell, "Report on the Invitational Conference on Transfer Pricing: The Allocation of Income and Expenses Among Countries" (1993) vol. 41, no. 5 *Canadian Tax Journal* 899-922, at 907.

95 It may also be possible for this residual value to be allocated to a holding entity located in a tax haven. In that case, anti-tax-haven legislation (for example, the foreign accrual property income rules in sections 91 to 95 of the Canadian Income Tax Act or the subpart F rules in the US Internal Revenue Code) may attribute this income to the parent company.

96 Langbein, "Transaction Cost," supra note 56, at 1392.

97 Charles R. Irish, "The Other Harmful Tax Competition: Why a Few Countries Have Expanding Tax Bases, While Most Have Eroding Tax Bases" (2001) vol. 24, no. 9 *Tax Notes International* 901-9.

98 Joseph H. Guttentag, "Key Issues and Options in International Taxation: Taxation in an Interdependent World" (2001) vol. 55, no. 11 *Bulletin for International Fiscal Documentation* 546-56, at 550 (noting that such concerns are misplaced).

99 See the discussion below under the headings "Global Profit Split: An Evolutionary Approach—Historical Movement Toward Formulary Allocation" and ". . . Current Uses of Formulary Allocation."

100 Surrey, supra note 84, at 432.

101 Ibid., at 433.

102 See Chang Hee Lee, "A Strategic Tax Approach for Capital-Importing Countries Under the Arm's-Length Constraint" (1999) vol. 18, no. 7 *Tax Notes International* 677-89.

103 Bird and Brean, supra note 66, at 1411.

104 Ordinarily, the national tax authority is concerned with the taxation of corporate units located within its jurisdiction and does not take into consideration the fact that the unit's income may also be taxable in another jurisdiction.

105 See Charles H. Berry, David F. Bradford, and James R. Hines Jr., "Arm's-Length Pricing: Some Economic Perspectives" (1992) vol. 54, no. 6 *Tax Notes* 731-40, at 737; and Marc M. Levey and Steven C. Wrappe, "The Future of Transfer Pricing Disputes: All Roads Lead to Competent Authority" (1998) vol. 27, no. 8 *Tax Management International Journal* 379-93.

106 Miller provides the following simple example. MNE earns 100 worldwide income. By country, it earns and pays tax in A on 35, in B on 40, in C on 50, and in D on (25). It is taxed on income of 125, even though it earns only 100 of income. It is also possible that the MNE group as a whole will be in a consolidated loss position when some subsidiaries are considered to have income under the separate entity approach. Benjamin F. Miller, "None Are So Blind as Those Who Will Not See" (1995) vol. 66, no. 7 *Tax Notes* 1023-35, at 1025, footnote 14.

107 Bird and Brean, supra note 66, at 1409.

108 Wickham and Kerester, supra note 51, at 353.

109 Arnold and McDonnell, supra note 94, at 907.

110 Jacqueline B. Manasterli, "Will Successful U.S. Transfer Pricing Case Work in Asian Pacific Countries?" (2000) vol. 21, no. 24 *Tax Notes International* 2662-63, at 2662.

111 OECD guidelines, supra note 2, glossary, defines "arm's length range" as follows: "A range of figures that are acceptable for establishing whether the conditions of a controlled transaction are arm's length and that are derived either from applying the same transfer pricing method to multiple comparable data or from applying different transfer pricing methods."

112 Mary Ann Ekman, "Mogle Discusses New Temporary and Proposed Section 482 Regulations at California State Bar Conference" (1993) vol. 6, no. 5 *Tax Notes International* 243-48, at 245.

113 Wickham and Kerester, supra note 51, at 345.

114 Avi-Yonah, supra note 67, at 1344-45; and Robinson, supra note 6, at 15.

115 Remark made by a judge in *National Semiconductor Corp.*, 67 TCM 2849, at 2874 (1994).

116 Lawrence Lokken, "Marking Up the Blueprint" (2001) vol. 26, no. 4 *Brooklyn Journal of International Law* 1493-1508, at 1503-4.

117 Doernberg et al., supra note 8, at chapter 4.

118 See, for example, Reuven S. Avi-Yonah, "International Taxation of Electronic Commerce" (1997) vol. 52, no. 3 *Tax Law Review* 507-55; and Reuven S. Avi-Yonah, "Making Sense of U.S. International Taxation: Six Steps Toward Simplification" (2001) vol. 55, no. 9/10 *Bulletin for International Fiscal Documentation* 493-97, at 495-96.

119 Doernberg et al., supra note 8, at 381.

120 Paul R. McDaniel, "Formulary Taxation in the North American Free Trade Zone" (1995) vol. 49, no. 4 *Tax Law Review* 691-744.

121 Commission of the European Communities, Communication from the Commission to the Council, the European Parliament and the Economic and Social Committee, *Towards an Internal Market Without Tax Obstacles: A Strategy for Providing Companies with a Consolidated Corporate Tax Base for Their EU-Wide Activities*, COM (2001) 582 final (Brussels: Commission of the European Communities, 2001), and an accompanying study entitled "Company Taxation in the Internal Market." For comments on the EU study, see Joann M. Weiner, "EU Commission Study on Company Taxation and the Internal Market Considers Comprehensive Company Tax Reform" (2001) vol. 24, no. 5 *Tax Notes International* 511-18.

122 Tax Analysts, "eForum: Company Taxation in the European Union" (2002) vol. 25, no. 2 *Tax Notes International* 153-74.

123 For example, see the OECD guidelines, supra note 2, at paragraphs 3.64 to 3.73.

124 Stanley I. Katz, "Commentary: International Taxation of Electronic Commerce: Evolution Not Revolution" (1997) vol. 52, no. 4 *Tax Law Review* 655-72.

125 See Avi-Yonah, supra note 7, and Arnold and McDonnell, supra note 94, at 907-8.

126 Richard Bird, "A View from the North" (1994) vol. 49, no. 4 *Tax Law Review* 745-57, at 752.

127 For a brief description of the Canadian system, see infra note 254. In the United States, all states that levy corporate taxes adopt the formulary apportionment method. This method applies to income of a "unitary business." The three-factor formula (payroll, property, and sales) adopted by the Uniform Division of Income for Tax Purposes Act (UDITPA) is adopted by many states. UDITPA is a model statute adopted in 1957 by the National Conference of Commissioners of Uniform State Laws, incorporated into the Multistate Tax Compact, and substantially adopted by over 25 states.

128 This proposal is influenced by Langbein, "A Modified Fractional Apportionment Proposal," supra note 56; Avi-Yonah, "International Taxation of Electronic Commerce," supra note 118;

and Charles McLure Jr., "Taxation of Electronic Commerce: Economic Objectives, Technological Constraints, and Tax Laws" (1997) vol. 52, no. 3 *Tax Law Review* 269-423, at 418.

129 When California and other US states applied "unitary taxation" to MNEs, major trading partners of the United States, such as Canada, Japan, and EU countries, filed complaints to the US government. The United Kingdom even threatened to retaliate. The "Grylls clause," adopted by the British Parliament in the 1985 Finance Bill, generally authorized the UK Treasury to deny advance corporation tax credits on dividends paid by UK subsidiaries to MNEs having significant activity in states that used the worldwide unitary method. The main international objections to unitary taxation include the following: worldwide unitary taxation is unconstitutional because it violates the due process and commerce clauses of the US constitution; it is contrary to international law (that is, the arm's-length principle embodied in tax treaties); it leads to international double taxation and imposes an unfair reporting burden on taxpayers; the formula used is not uniform in every jurisdiction; and the formula is thought to favour rich countries since wages and prices of property tend to be higher in rich countries than in less developed countries. For further discussion, see Joanna C. Wheeler and Daniel P. Shepherson, "United Kingdom: Retaliation Against Unitary Tax Prompts Federal Response" (1986) vol. 26, no. 1 *European Taxation* 5-8; Note, "European Communities: Action Against Unitary Taxation" (1984) vol. 38, no. 10 *Bulletin for International Fiscal Documentation* 464; R.N. Mattson, "Setting Straight the Unitary Working Group Record" (1986) vol. 30, no. 1 *Tax Notes* 57-61; and Daniel Sandler, "Slicing the Shadow—The Continuing Debate Over Unitary Taxation and Worldwide Combined Reporting" [1994] no. 6 *British Tax Review* 572-97, at 592.

130 Bird, supra note 89, at 297.

131 Charles I. Kingson, "Taxing the Future" (1996) vol. 51, no. 4 *Tax Law Review* 641-62, at 658.

132 For a summary of the tests used under the traditional formulary method, see Joann M. Weiner, *Using the Experience in the U.S. States To Evaluate Issues in Implementing Formula Apportionment at the International Level*, OTA Paper 83 (Washington, DC: Department of the Treasury, Office of Tax Analysis, April 1999), 29-34.

133 Miller, supra note 106, at 1025-27.

134 The flow-of-value test was recommended by Charles McLure Jr.: "Defining a Unitary Business: An Economist's View," in *Economic Perspectives on State Taxation of Multijurisdictional Corporations* (Arlington, VA: Tax Analysts, 1986), 47-90. This test has been accepted by US courts. See, for example, *Container Corp. v. Franchise Tax Bd.*, 463 US 159 (1983).

135 The operational interdependence test is based on the approach suggested by Jerome R. Hellerstein, "Allocation and Apportionment of Dividends and the Delineation of the Unitary Business" (1982) vol. 14, no. 4 *Tax Notes* 155-68. When Hellerstein first proposed this test in 1968, he defined it in terms of a substantial flow of goods: see Jerome R. Hellerstein, "Recent Developments in State Tax Apportionment and the Circumscription of Unitary Business" (1968) vol. 21, no. 4 *National Tax Journal* 487-503, at 501-2. At that time, a flow-of-goods requirement provided a reasonable and workable bright-line test for unitary business. Now, both Hellerstein and his co-author Walter Hellerstein believe that a "definition of a unitary business based on flows of 'tangible' products is too confining": *State Taxation*, 3d ed. (Boston: Warren, Gorham & Lamont) (looseleaf), section 8.09[4][b], at 8-121. They write, ibid., "While we do not mean to suggest that we embrace all the expansive holdings of courts— including the holding in *Container* itself—which have found businesses to be unitary under an unrestrained 'flow of value' standard, we do acknowledge that there are many businesses which should be characterized as unitary based on the interdependence of basic operations, even though that interdependence may be reflected in the flow of services or intangible values rather than a flow of goods."

136 Walter Hellerstein, "State Taxation of Corporate Income from Intangibles: Allied Signal and Beyond" (1993) vol. 48, no. 4 *Tax Law Review* 739-879.

137 Miller, supra note 106, at 1031.

138 Jack M. Mintz, "Globalization of the Corporate Income Tax: The Role of Allocation" *Finanz Archiv* (Neue Fulge, Band 56, 199, Heft 3/4), 389-423, at 409-10.

139 See Joseph L. Andrus and Robert H. Dilworth, "Proposed Transfer Pricing and Source of Income Regulations Applicable to Global Trading in Financial Markets" (1998) vol. 27, no. 6 *Tax Management International Journal* 267-78, at 271.

140 The traditional formulary apportionment method used by subnational governments in Canada and the United States relies only on the factors of assets, payroll, and sales. For further discussion, see Brian J. Isaac, "State Taxation of Multinationals and the Unitary Business Concept: A Contemporary View" (1984) vol. 10, no. 1 *Brooklyn Journal of International Law* 115-56; Walter Hellerstein, "State Income Taxation of Multijurisdictional Corporations: Reflections on Mobil, Exxon, and H.R. 5076" (1980) vol. 79, no. 1 *Michigan Law Review* 113-71; Walter Hellerstein, "State Taxation of Electronic Commerce" (1997) vol. 52, no. 3 *Tax Law Review* 425-505; McLure, supra note 128, at 335-50; Ernest H. Smith, "Allocating to Provinces the Taxable Income of Corporations: How the Federal-Provincial Allocation Rules Evolved" (1976) vol. 24, no. 5 *Canadian Tax Journal* 545-71; and Jeffrey S. Turner, "Interprovincial Income Allocation: The Permanent Establishment Threshold in the E-commerce World," paper given at a Strategy Institute Conference entitled Taxing Electronic Commerce, December 1, 1998.

141 See J. Scott Wilkie, "A Canadian Perspective on Related-Party Transactions," in *Report of Proceedings of the First World Tax Conference: Taxes Without Borders*, 2000 World Tax Conference Report (Toronto: Canadian Tax Foundation, 2001), 12:1-34.

142 The calculation is expressed as

$$\frac{\text{in-country payroll}}{\text{total payroll}} + \frac{\text{in-country sales}}{\text{total sales}} + \frac{\text{in-country tangible property}}{\text{total tangible property}} + \frac{\text{in-country intangibles}}{\text{total intangibles}}$$

The intangible element may or may not be included.

143 Both Langbein, "A Modified Fractional Apportionment Proposal," supra note 56, and Avi-Yonah, "International Taxation of Electronic Commerce," supra note 118, at 549, seem to support this position. Avi-Yonah has suggested a single sales factor in splitting residual profit: Reuven S. Avi-Yonah, "Slicing the Shadow: A Proposal for Updating U.S. International Taxation" (1993) vol. 58, no. 11 *Tax Notes* 1511-37.

144 Langbein, "A Modified Fractional Apportionment Proposal," supra note 56, at 729.

145 In most cases, a worker works in the country where the employer is resident. In the case of telecommuters who live in one country and work "remote" via the Internet on a foreign employer's computer network, the base of operations may be different from the location of the employer. See Doernberg et al., supra note 8, at 302.

146 Hellerstein, supra note 50, at 1142, argues that intangibles are far more nebulous than tangible assets, as to both "locus" and benefits and protections furnished by the state and social costs incurred. Miller, supra note 106, at 1030, also acknowledges these difficulties: "[I]ntangible property obviously presents some special, nagging problems both as to valuation and location for property-factor and receipts-factor purposes." For a thorough discussion of the treatment of intangibles for US state corporate tax purposes, see Hellerstein, supra note 136.

147 OECD guidelines, supra note 2, at paragraph 6.2.

148 Cost is used as a factor under US transfer-pricing rules. See Joger J. Mentz and Linda E. Arlisle, "The Tax Ownership of Intangibles Under the Arm's-Length Principle" (1997) vol. 15, no. 18 *Tax Notes International* 1495; and Elizabeth King and Scott D. Newman, "Taxonomy of Pricing Problems Involving Intangibles and Their Treatment Under the Old and New §482 Regulations" (1994) vol. 9, no. 24 *Tax Notes International* 1851-60.

149 OECD guidelines, supra note 2, at paragraph 6.72.

150 Eric J. Coffill and Prentiss Willson Jr., "Federal Formulary Apportionment as an Alternative to Arm's Length Pricing: From the Frying Pan to the Fire?" (1993) vol. 59, no. 8 *Tax Notes* 1103-17, at 1109, where the authors note, "Historic costs often would be impossible to determine in any meaningful way, and the difficulty of determining the present fair market value of intangibles is apparently one of the driving forces behind seeking an alternative to the present federal approach under section 482."

151 This example was suggested by Richard Bird when he commented on an earlier draft of this article.

152 McLure, supra note 59, at 867.

153 McLure, supra note 128, at 417.

154 McLure, supra note 59, at 868.

155 Hellerstein, supra note 50, at 1141-42.

156 Lebowitz, supra note 53, at 1208.

157 This suggestion is based on the "throwout" solution proposed by Michael J. McIntyre, "Design of a National Formulary Apportionment Tax System," in *Proceedings of the Eighty-Fourth Annual Conference on Taxation* (Columbus, OH: National Tax Association, 1992), 118-24.

158 This is the "controlling score" of the US apportionment system. See Hellerstein, supra note 136, at 751.

159 As pointed out by Peggy Musgrave and others, the principle of inter-nation equity demands "common source rules employing consistent methods of unitary combination and uniform formulary apportionment." Musgrave, "Sovereignty, Entitlement, and Cooperation," supra note 14, at 1345. See also Musgrave, "Interjurisdictional Equity," supra note 14; and Nancy H. Kaufman, "Equity Considerations in International Taxation" (2001) vol. 26, no. 4 *Brooklyn Journal of International Law* 1465-70, at 1465.

160 OECD guidelines, supra note 2, at paragraph 3.61.

161 Vogel, supra note 16, at 216.

162 1923 League of Nations report, supra note 15.

163 Bird and Mintz, supra note 10, at 22.

164 For a survey of these rules, see Brian J. Arnold and Patrick Dibout, "General Report," in International Fiscal Association, *Cahiers de droit fiscal international*, vol. 86b, *Limits on the Use of Low-Tax Regimes by Multinational Businesses: Current Measures and Emerging Trends* (The Hague: Kluwer Law International, 2001), 21-89.

165 See Doernberg et al., supra note 8, at 320-36.

166 Michael McIntyre wrote in 1994, "The arm's-length/source-rule methodology works particularly badly when a business enterprise has shifted ownership of valuable intangible property to a related offshore tax haven corporation": Michael J. McIntyre, "Contracting Methodologies: A Systematic Presentation of the Differences Between an Arm's-Length/Source-Rule System and a Combined-Reporting/Formulary Apportionment System," in *Proceedings of the Eighty-Sixth Annual Conference on Taxation* (Columbus, OH: National Tax Association, 1995), 226-35, at 232.

167 See Wilkie, supra note 141, at 12:14-15.

168 David A. Ward, "Dependent Agency Permanent Establishments," in the 2000 World Tax Conference Report, supra note 141, 4:1-11.

169 Alex Easson, "The Importance of Transfer Pricing" (1998) vol. 8, no. 8 *Canadian Current Tax* 80-81.

170 For comments on the difficulties with formulary apportionment, see Frank Church and Richard D. Pomp, "The Unitary Method: Thirteen Questions and Answers" (1980) vol. 10, no. 24 *Tax Notes* 891-97; and William J. Wilkins and Kenneth W. Gideon, "Memorandum to

Congress: You Wouldn't Like Worldwide Formula Apportionment" (1994) vol. 65, no. 10 *Tax Notes* 1259-65.

171 OECD guidelines, supra note 2, at paragraphs 3.58 to 3.73.

172 Miller, supra note 106, at 1026.

173 It is noteworthy that Stanley Surrey highlighted the problems stemming from the general lack of clear international norms of any sort, not the particular shortcomings of formulary apportionment or other allocation methods. See Langbein, supra note 46, at 643. See also William Hellmuth and Oliver Oldman, eds., *Tax Policy and Tax Report: 1961-1969: Selected Speeches and Testimony of Stanley S. Surrey* (Chicago: CCH, 1973), 380-88.

174 This is one of the reasons raised in Commission of the European Communities, *Report of the Committee of Independent Experts on Company Taxation* (Luxembourg: Office for Official Publications for the European Communities, 1992) (the Ruding report), 130.

175 Richard E. Caves, *Multinational Enterprise and Economic Analysis* (New York: Cambridge University Press, 1982), 229-31.

176 Bird, supra note 126, at 752.

177 Miller, supra note 106, at 1023.

178 The possibility of achieving international acceptance of the GPS will be discussed further below under the heading "Global Profit Split: An Evolutionary Approach—Developing an International Consensus."

179 See infra note 258.

180 Weiner, supra note 132, at 26-27.

181 Ibid.

182 Shawn D. Porter and Kenneth J.A. Vallilee, "Tax and Accounting Aspects of Treasury Operations," in *Report of Proceedings of the Fifty-Second Tax Conference*, 2000 Conference Report (Toronto: Canadian Tax Foundation, 2001), 20:1-51.

183 While the EU is working on a move toward formulary allocation, it still has the significant task of convincing member countries to accept the proposal.

184 This phrase is used by Guttentag, supra note 98, at 551.

185 This broadly worded provision has been flexibly interpreted to deal with "all the dramatic changes we have experienced in the 20th Century." Jeffrey Owens, "Tax Administrations in the New Millennium" (2000) vol. 20, no. 1 *Tax Notes International* 95-105, at 99. However, Owens, who is with the OECD, defends the arm's-length principle and challenges proponents of alternatives to it to show that those alternatives are not only better in theory but also capable of achieving an international consensus.

186 Lepard, supra note 46, at 60.

187 League of Nations, *Double Taxation and Tax Evasion: Report Presented by the Committee of Technical Experts on Double Taxation and Tax Evasion*, League of Nations Doc. C.216.M.85.1927.II (Geneva: League of Nations, 1927).

188 In 1929, a newly constituted Fiscal Committee of the League of Nations began to consider how to deal with rules for income allocation and asked Adams to prepare a study on the practice in various countries. League of Nations, *Report Presented by the Fiscal Committee to the Council on the Work of the First Session of the Committee*, League of Nations Doc. C.516.M.175.1929.II (Geneva: League of Nations, 1929) and *Report Presented by the Fiscal Committee to the Council on the Work of the Second Session of the Committee*, League of Nations Doc. C.340.M.140.1930.II (Geneva: League of Nations, 1930).

189 On the basis of chapter 12 of the Carroll report, infra note 190, a convention was formulated first at meetings of a subcommittee held in New York and Washington under the auspices of

the American Section of the International Chamber of Commerce, and then at the full meeting of the Fiscal Committee in June 1933. The 1933 draft later became the 1935 draft convention.

190 Mitchell B. Carroll described his travels and meetings with local tax officials in his memoir, *Global Perspective of an International Tax Lawyer* (Hicksville, NY: Exposition Press, 1978). The results of the study were summarized in a series of valuable reports entitled *Taxation of Foreign and National Enterprises* published by the league. Of particular interest in the present context are Mitchell B. Carroll, *Taxation of Foreign and National Enterprises*, vol. 4, *Methods of Allocating Taxable Income*, League of Nations Doc. C.425(b).M.2176(b).1933.II.A (Geneva: League of Nations, 1933) (herein referred to as "the Carroll report"); and Ralph Coughenour Jones, *Taxation of Foreign and National Enterprises*, vol. 5, *Allocation Accounting for the Taxable Income of Industrial Enterprises*, League of Nations Doc. C.425(c).M.217(c).1933.II.A (Geneva: League of Nations, 1933) (herein referred to as "the Jones report").

191 Carroll report, supra note 190, at 45. See also Mitchell B. Carroll, "International Allocation of Income," in *Lectures on Taxation*, supra note 21, 131-75.

192 Carroll report, supra note 190, at 87.

193 Ibid.

194 Ibid., at 46.

195 Ibid., at 88.

196 Ibid., at 87.

197 Ibid., at 109-15.

198 The Jones report, supra note 190, at 8-9, also summarizes reasons for rejecting formulary apportionment that are not dissimilar to those set out in the OECD guidelines, supra note 2.

199 Carroll report, supra note 190, at 189.

200 Ibid., at 177. An American legal scholar, Langbein, supra note 46, criticized the Carroll report for being biased in favour of the arm's-length principle and dismissing the statutory imposition of fractional apportionment methods in Spain, Switzerland, and certain other states. Langbein wrote, ibid., at 637-38, that "Carroll conceived his role to be one of developing an international approach which would truncate any movement of the international community to the development, on a general scale, of working rules of fractional apportionment, rather than one of evaluating, in an unbiased way, alternative approaches to the problem."

201 Fiscal Committee of the League of Nations, "Draft Convention Adopted for the Allocation of Business Income Between States for the Purposes of Taxation," in League of Nations, *Report Presented by the Fiscal Committee to the Council on the Work of the Fourth Session of the Committee*, League of Nations Doc. C.399.M.204.1933.II.A (Geneva: League of Nations, 1933).

202 Fiscal Committee of the League of Nations, "Draft Convention for the Allocation of Business Income Between States for the Purposes of Taxation," in League of Nations, *Report Presented by the Fiscal Committee to the Council on the Work of the Fifth Session of the Committee*, League of Nations Doc. C.252.M.124.1935.II.A (Geneva: League of Nations, 1935) (herein referred to as "the 1935 draft convention").

203 Convention Concerning Double Taxation, signed April 27, 1932, 49 Stat. 3145, 3146-47 (1935). Article IV of the treaty provided, "When an American enterprise, by reason of its participation in the management or capital of a French enterprise, makes or imposes on the latter, in their commercial or financial relations, conditions different from those which would be made with a third enterprise, any profits which should normally have appeared in the balance sheet of the French enterprise, but which have been in this manner, diverted to the American enterprise, are, subject to the measures of appeal applicable in the case of the tax on industrial and commercial profits, incorporated in the taxable profits of the French enterprise." The same principle applied in the case of profits similarly diverted from an American

enterprise to a French enterprise. For a detailed discussion of US treaties concluded before 1947, see Mitchell B. Carroll, "Double Taxation Conventions Concluded by the United States Since 1939," 5 *Studies in International Tax Law* (International Fiscal Association, 1947), 25.

204 See Mitchell B. Carroll, "Evolution of U.S. Treaties To Avoid Double Taxation of Income Part II" (1968) vol. 3, no. 1 *The International Lawyer* 129-72, at 150.

205 Article 45-1(c) of reg. 86 (1935) (Revenue Act of 1934).

206 Langbein, supra note 46, at 643-44.

207 Treas. reg. section 1.482-2(e).

208 Treas. reg. section 1.482-2(b)(3). For services, the regulations simply required application of the arm's-length standard.

209 Treas. reg. section 1.482-2(d)(2).

210 Organisation for Economic Co-operation and Development, *Transfer Pricing and Multinational Enterprises* (Paris: OECD, 1979). This report has been supplemented by Organisation for Economic Co-operation and Development, *Transfer Pricing and Multinational Enterprises: Three Taxation Issues* (Paris: OECD, 1984), and by the current OECD guidelines, supra note 2.

211 HR rep. no. 841, 99th Cong., 2d sess. II-638 (1986).

212 US 1988 white paper, supra note 48, at 458.

213 Organisation for Economic Co-operation and Development, *Tax Aspects of Transfer Pricing Within Multinational Enterprises: The United States Proposed Regulations* (Paris: OECD, 1993), and *Intercompany Transfer Pricing Regulations Under US Section 482 Temporary and Proposed Regulations* (Paris: OECD, 1993).

214 The OECD also expressed strong reservations on provisions for periodic adjustments under the commensurate-with-income test in respect of intangible property.

215 The communiqué stated, "The use of formulae should not, however, be entirely ruled out. In some industries and in some circumstances the use of a formula might be appropriate assuming that the formula attempted to approximate an arm's-length result. . . . Each one of us has expressed varying levels of support for using carefully tailored formulae in specific situations. The United States sees considerable advantages in this approach in particular cases. Germany and the United Kingdom have agreed to consider the use of such formulae in those cases where they are involved as Competent Authorities." See "Report of Agreed Discussions Between the Tax Administrations of France, Germany, the United Kingdom, and the United States," in United States, Internal Revenue Service, *Report on the Application and Administration of Section 482* (Washington, DC: Internal Revenue Service, April 1992), appendix E, 7.

216 OECD model, article 3(2), and paragraph 11 of the commentary on article 3.

217 See IRS Notice 94-40, 1994-1 CB 351. See also Jerome B. Libin, "Formulary Apportionment for 'Global Trading' in the Manufacturing Industry: Can It Work?" (1995) vol. 11, no. 21 *Tax Notes International* 1375-78; and Robert S. Ackerman, "Negotiating Advance Pricing Agreements for Financial Institutions" (1998) vol. 16, no. 22 *Tax Notes International* 1713-24.

218 Avi-Yonah, "International Taxation of Electronic Commerce," supra note 118; and David Noren, "The U.S. National Interest in International Tax Policy" (2001) vol. 54, no. 3 *Tax Law Review* 337-51, at 348-49.

219 Announcement 2000-35, 2000-16 IRB 922.

220 Deloris R. Wright, "Transfer Pricing in the United States: Recent Events and Expectations for the Future" (2001) vol. 55, no. 9/10 *Bulletin for International Fiscal Documentation* 417-26, at 421-22.

221 Supra note 76.

222 Prop. Treas. reg. section 1.482-8. For a discussion of this method, see Li, supra note 8.

223 Ibid. These regulations do not prescribe specific factors to be used in the formula since the appropriateness of any one factor will depend on all the facts and circumstances associated with the global dealing operation. The regulations require that the multifactor formula take into account all of the functions performed and risks assumed by a participant, and attribute the appropriate amount of income or loss to each function. The OECD draft global trading report, supra note 76, uses the factors of compensation for marketers, risk, and support in the profit split formula. Presumably, this approach was influenced by IRS Notice 94-40, supra note 217.

224 A single-factor profit split formula based exclusively on trader or front office compensation is acceptable in at least some situations. Prop. Treas. reg. section 1.482-8(e)(8), example 1.

225 Andrus and Dilworth, supra note 139, at 273.

226 The OECD guidelines, supra note 2, at paragraphs 8.6 and 8.7, suggest that cost contribution arrangements will most likely arise in respect of the development of intangible property. They also may occur in the context of centralized management services or the development of campaigns common to the participants' markets.

227 Ibid., at paragraph 8.19; and IC 87-2R, supra note 36.

228 Detlev J. Piltz, "General Report," in International Fiscal Association, *Cahiers de droit fiscal international*, vol. 81b, *International Aspects of Thin Capitalisation* (The Hague: Kluwer Law International, 1996), 83-139.

229 For example, the Canadian thin capitalization rules adopt a fixed-ratio approach. Where the debt-to-equity ratio of a Canadian corporation is more than 2:1, subsection 18(4) of the Income Tax Act denies the deduction of interest paid on the excessive debt.

230 Jinyan Li and Daniel Sandler, "The Relationship Between Domestic Anti-Avoidance Legislation and Tax Treaties" (1997) vol. 45, no. 4 *Canadian Tax Journal* 891-958, at 929.

231 Paragraph 3(a) of the commentary on article 9 of the OECD model.

232 Li and Sandler, supra note 230, at 930.

233 See Organisation for Economic Co-operation and Development, *Attribution of Profit to a Permanent Establishment Involved in Electronic Transactions*, a discussion paper from the Technical Advisory Group on Monitoring the Application of Existing Treaty Norms for the Taxation of Business Profits (Paris: OECD, February 2001); and the OECD discussion draft, supra note 36.

234 Paragraph 25 of the commentary on article 7 of the OECD model states, however, that a formulary apportionment method is generally "not as appropriate" as a method that looks only to the activities of the permanent establishment. The commentary also makes it clear that such method "should only be used where, exceptionally, it has as a matter of history been customary in the past and is accepted in the country concerned both by the taxation authorities and taxpayers generally there as being satisfactory."

235 OECD discussion draft, supra note 36, at paragraph 180.

236 Moreover, although article 7 of both the OECD model and the UN model requires the use of the arm's-length principle in attributing profit to a permanent establishment, the UN model specifically denies the deduction of notional expenses while the OECD model does not. Both approaches are considered to be authorized by article 9; however, the OECD commentary on article 7 denies such deductions. This treatment raises an interesting question about the weight to be given to the commentary when it goes beyond the apparent scope of the provision in the model itself. The OECD discussion draft, supra note 36, has recognized this issue in the context of the attribution of profit to a permanent establishment and suggests that amendment of certain provisions of the OECD model may be warranted.

237 The working hypothesis posits that each branch of a multinational bank is a separate entity that has the same credit rating as the bank, a proportionate amount of the bank's "free" capital, and debt capital that is based on the branch's share of the bank's risk-weighted assets. Notional interest is determined on that basis. OECD discussion draft, supra note 36, part II.

238 Institute of International Bankers, "Comments on the OECD Discussion Draft on the Attribution of Profits to Permanent Establishments" (2001) vol. 23, no. 4 *Tax Notes International* 477-507, at 480.

239 Wilkie, supra note 141, at 12:15.

240 Ibid.

241 See Canada, Department of Finance, *Legislative Proposals and Explanatory Notes on Taxation of Foreign Bank Branches* (Ottawa: Department of Finance, August 2000), and the accompanying release, "Foreign Bank Tax Proposals Released," *Release*, no. 2000-059, August 8, 2000. See also Daniel R. MacIntosh and Lara Friedlander, "Treatment of Foreign Bank Branches in Canada," in the 2000 Conference Report, supra note 182, 33:1-29; and David A. Ward, "Attribution of Income to Permanent Establishments" (2000) vol. 48, no. 3 *Canadian Tax Journal* 559-76, at 573.

242 Richard L. Doernberg, *International Taxation in a Nutshell*, 5th ed. (St. Paul, MN: West Publishing, 2000), 98-99.

243 For example, in *The North West Life Assurance Co. of Canada*, 107 TC 363 (1996), the court held that the use of the formulary method for determining profits attributable to the taxpayer's US branch was contrary to article 7 of the US-Canada treaty, which is materially identical to article 7 of the OECD model.

244 99-2 USTC 50,654 (Ct. Fed. Cl.).

245 Lee A. Sheppard, "NatWest Revisited in the New British Treaty" (2001) vol. 23, no. 13 *Tax Notes International* 1499-1510.

246 See Jill Pagan and J. Scott Wilkie, *Transfer Pricing Strategy in a Global Economy* (Amsterdam: IBFD, 1993); Peter Athanas, "General Report" in International Fiscal Association, *Cahiers de droit fiscal international*, vol. 81a, *Principles for the Determination of the Income and Capital of Permanent Establishments and Their Applications to Banks, Insurance Companies and Other Financial Institutions* (The Hague: Kluwer Law International, 1996), 69-106; and Sylvain Plasschaert, "An EU Tax on the Consolidated Profits of Multinational Enterprises" (1997) vol. 37, no. 1 *European Taxation* 2-13.

247 Treas. reg. section 1.482-2(a)(2).

248 Treas. reg. section 1.482-2(b)(6).

249 OECD guidelines, supra note 2, at paragraph 7.25.

250 For example, New Zealand Transfer Pricing Guidelines, paragraph 540, allows the following formula: (New Zealand gross sales ÷ costs to be allocated) × worldwide group's gross sales.

251 Jinyan Li, "Rethinking Canada's Source Rules in the Age of Electronic Commerce: Part 1" (1999) vol. 47, no. 5 *Canadian Tax Journal* 1077-1125, at 1090-91.

252 The formula for computing the amount of manufacturing and processing profits is as follows:

$$MP = ABI \times \frac{MC + ML}{C + L}$$

where MP is Canadian manufacturing and processing profits, ABI is adjusted business income, MC is cost of manufacturing and processing capital, ML is cost of manufacturing and processing labour, C is cost of capital, and L is cost of labour. Regulations 5200 to 5204 of the Income Tax Regulations.

253 See, for example, section 126 of the Canadian Income Tax Act and section 904 of the US Internal Revenue Code.

254 For purposes of provincial income tax, the amount of "taxable income earned in the year in a province" (as defined under section 124.4 of the Income Tax Act) is a portion of the corporation's total taxable income determined on the basis of a two-factor formula (sales and

payroll). Taxable income is allocated to a province if the corporation has a permanent establishment in the province. See regulations 400 to 402.

255 Lebowitz, supra note 53, at 1205.

256 Avi-Yonah, "International Taxation of Electronic Commerce," supra note 118, at 549.

257 Douglas Shackelford and Joel Slemrod, "The Revenue Consequences of Using Formula Apportionment To Calculate U.S. and Foreign-Source Income: A Firm-Level Analysis" (1998) vol. 5, no. 1 *International Tax and Public Finance* 41-59. Ignoring behavioural responses, the authors estimate that shifting to an equal-weighted, three-factor formula would have increased MNEs' US tax liabilities by an average of 38 percent, with an 81 percent increase for oil and gas firms. By contrast, Michael S. Schadewald, "Global Apportionment: How Would It Affect the Largest U.S. Corporations?" (1996) vol. 13, no. 2 *Tax Notes International* 131-39, found that the use of formulary apportionment would not have had a substantial effect on the 1994 US income tax liabilities of the firms under study.

258 Many have raised the possibility of a "GATT for taxes" or "General Agreement on Taxes" (GATaxes). An international tax organization, analogous to the World Trade Organization, would perhaps be needed to oversee the implementation of such an agreement. For further discussion, see Frances M. Horner, "Do We Need an International Tax Organization?" (2001) vol. 24, no. 2 *Tax Notes International* 179-87; Charles E. McLure, "Tax Policies for the XXIst Century," in International Fiscal Association, *Visions of the Tax Systems of the XXIst Century* (The Hague: Kluwer Law International, 1997), 9-52, at 36; John V. Surr, "Intertax: Intergovernmental Cooperation in Taxation" (1966) vol. 7, no. 2 *Harvard International Law Journal* 179-237; Vito Tanzi, "Is There a Need for a World Tax Organization?" in Assaf Razin and Efraim Sadka, eds., *The Economics of Globalization: Policy Perspectives from Public Economics* (New York: Cambridge University Press, 1999), 173-86; and Victor Thuronyi, "International Tax Cooperation and a Multilateral Treaty" (2001) vol. 26, no. 4 *Brooklyn Journal of International Law* 1641-81.