

INTERNATIONAL TAX PLANNING UNDER THE DESTINATION-BASED CASH FLOW TAX

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This paper considers the implications of the destination-based cash flow tax (DB-CFT) for three common ways of shifting taxable profits between countries: through manipulation of transfer prices, the use of debt, and locating intangible assets in low taxed jurisdictions. It shows that none of these planning devices would be available under a DBCFT, if adopted universally. This is because intra-group payments between two countries do not affect tax liabilities in either country. If adopted unilaterally, however, there would be an incentive to shift profit to the adopting country, at the expense of non-adopting countries.

Keywords: destination-based cash flow tax, international taxation, tax avoidance, tax planning, transfer pricing, profit shifting

JEL Codes: H20, H25, H26

I. INTRODUCTION

The inclusion of a Destination-Based Cash Flow Tax (DBCFT) by the Ways and Means Committee of the U.S. House of Representatives in their June 2016 Blueprint marked the start of an intense debate over the tax (Ways and Means Committee, 2016). In the space of a few months, the DBCFT went from being a topic discussed occasionally in public finance circles (e.g., Bond and Devereux, 2002; Auerbach, 2010; Auerbach, Devereux, and Simpson, 2010; Auerbach and Devereux, 2013) to being the primary focus of an intense and high profile policy debate. In this short time, many in the tax community and beyond familiarized themselves with the broad features of the tax, and the debate unquestionably improved understanding of it. In some respects, however, the properties of the tax do not yet seem to have been fully appreciated.

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At the time of writing, the Ways and Means Committee's proposal appears to have been shelved. However, elements of the DBCFT, or even the DBCFT itself, might well be back on the agenda in the United States and/or elsewhere before too long. Indeed, this was the second iteration of the tax on the U.S. political agenda, following its first appearance in the report of the President's Advisory Panel on Federal Tax Reform (2005). And there is good reason to believe that the forces that contributed to its consideration — profit shifting by multinationals and tax competition among governments — will persist and perhaps even intensify. This makes it important to continue exploring the properties and likely impact of the DBCFT, and identifying implementation issues it might face and how they could be resolved.

To that end, this paper focuses on just one aspect of the DBCFT: its robustness, or otherwise, to international tax planning.¹ It argues that the DBCFT, though not without gaming issues or potential vulnerabilities to evasion and fraud, is much more robust against planning activities by multinationals than is the present system. Indeed, this is one of its most attractive properties, so that it is both surprising and disappointing that this point did not feature more prominently in the recent debate.

The tax planning practices of companies, including of course U.S. multinational companies, have been a source of considerable political and public concern worldwide. Gauging the extent of these practices is extremely difficult, but recent estimates give a sense of likely orders of magnitude. Crivelli, De Mooij, and Keen (2016) put the revenue loss from base erosion and profit shifting by multinationals at around 1 percent of gross domestic product (GDP) in Organisation for Economic Co-operation and Development (OECD) economies (and more in others); another exercise finds a global corporate income tax (CIT) revenue loss of between 4 and 10 percent of global CIT revenues, equivalent to \$100–240 billion annually (OECD, 2015a). Specifically for the United States alone, Guvenen et al. (2017) estimate that multinationals shifted \$280 billion in profits abroad in 2012.² Applying a combined state and federal statutory rate of 40 percent, this would mean foregone corporation tax revenue of around 34 percent of the total actually collected in 2012.³ And the overstatement of net U.S. imports that this level of profit shifting implies would account for more than half of that year's reported trade deficit. These are evidently significant issues, of considerable public concern, and any tax reform that offers the prospect of substantially addressing them merits close attention.⁴

¹ Thus it does not take up other issues that have been widely discussed in connection with the DBCFT (such as those relating to exchange rate and price adjustment, or to World Trade Organization rules and tax treaties — for discussion on the WTO, for example, Schön (2016) and Grinberg (2017); for discussion on treaties, for example, Collier and Devereux (2017)). Nor does it consider evasion and avoidance issues that might arise from purely domestic application of cash flow taxation (on these, for example, Bankman and Schler (2007)).

² Clausing (2016) arrives at estimates of a similar size using a somewhat different, regression-based methodology.

³ Total U.S. corporate tax revenue in 2012 was around \$327 billion.

⁴ The overall revenue impact of adopting a DBCFT would of course depend on the rate applied. More fundamentally, adoption would also affect the distribution of revenues across countries, as discussed in Auerbach et al. (2017).

The G20-OECD “Base Erosion and Profit Shifting” (BEPS) project has set about addressing many of these challenges while retaining the essential features of the current international tax system. Even on the most favorable view, however, the minimum standards and proposals stemming from the BEPS project will not eliminate profit shifting. We argue here that the DBCFT, in contrast, would — if well-designed and implemented — effectively eliminate profit shifting through the channels targeted by the BEPS project,⁵ and through some that were not. The central reason for this is that the DBCFT roots taxation in the place in which sales to final consumers occur, the presumption being that it is a reasonable approximation to take that place as essentially fixed by the location of internationally immobile consumers.⁶ This has the consequence, as even one of its fiercest critics has noted, that the DBCFT “solves many of the most vexing problems of international taxation of corporate income, problems that have occupied the OECD in its BEPS project for several years without any satisfactory conclusion” (Graetz, 2017).

Throughout this debate, some doubt has been cast on the effectiveness of the DBCFT in eliminating profit shifting through these channels, and other planning strategies were considered. A distinction must be made here, however, with respect to the form of DBCFT being addressed. In this paper we focus on what Miller (2017) calls the “pure” DBCFT — essentially the version discussed in the academic literature and set out most fully in Auerbach et al. (2017). Miller and others (such as Hariton (2017); Avi Yonah and Clausing (2017); Schizer (2017); Graetz (2017)) have addressed the possibility of profit shifting and other planning strategies primarily under the House Blueprint proposals. As Miller (2017) stresses, however, the Blueprint proposal is “a hybrid that incorporates aspects of the pure DBCFT, but also elements of our current income tax. Many of the planning opportunities under the [Blueprint] arise because of its hybrid nature.” This paper does not discuss in any detail the implications of divergences between the “pure” DBCFT and the Blueprint proposal.

The paper is structured as follows. Section II briefly describes the (“pure”) DBCFT. Section III explores the robustness of the DBCFT to three of the major profit-shifting channels under the existing system, dealing in turn with the cases in which the tax is adopted universally and in which it is adopted unilaterally.⁷ Section IV raises some other considerations, and Section V concludes.

II. ELEMENTS OF THE DBCFT

The “cash flow” component of the DBCFT means giving immediate relief to all expenditure, including capital expenditure, and taxing revenue as it accrues. In the terminology of the Meade Committee (1978), a cash-flow tax could be levied on a company on either an “R” (real) base or an “R+F” (real plus financial) base. Under

⁵ Apart from the three main channels discussed below, other channels include treaty abuse and manipulation of the permanent establishment rules.

⁶ More precisely, key assumptions — maintained throughout the paper — are that the locations of final consumers are both fixed and verifiable.

⁷ Sections II and III are based on Auerbach et al. (2017).

the R base, transactions involving financial assets and liabilities are ignored — so, for example, interest receipts would not be taxed and interest expenses would not be deductible. The R base is thus limited to the difference between real inflows (from the sale of products, services, and real assets) and real outflows (from the purchase of materials, products, services — including labor — and real assets). By contrast, under the R+F base — which the Meade committee showed to be an appropriate form of cash flow taxation for financial flows — all cash inflows (excluding injections of equity), including borrowing and the receipt of interest, would be taxable; and all cash outflows, including lending, repaying borrowing and interest payments (but excluding equity repurchases and dividends) would be deducted in calculating the tax base. The tax would thus apply to all net financial inflows related to borrowing, including principal amounts, as well as to net real inflows.

The “destination” component means that tax payable under the DBCFT in any country applying it would be based on sales of goods and services in that country less expenses incurred there (with analogous treatment for financial flows): so receipts from exports are not included in taxable revenues and imports are taxed.⁸ This “border adjustment” is essentially the same treatment as is standard for goods and services under the value added tax (VAT).

The relevant “destination” for the calculation of tax, it should be emphasized, is the location of the immediate purchaser, not (necessarily) that of the final consumer. If a U.S. manufacturer sells steel to a French automobile producer, for example, which uses the steel to produce automobiles sold back to the United States, U.S. application of the destination-based tax would not tax the sale of steel but would tax the automobile imports.

Ultimately, however, it is the location of the final consumer upon which the impact of the DBCFT turns. This is because sales to other businesses effectively attract no tax under the DBCFT, either (if the sale is domestic) because they generate a deduction for the purchaser or (if exported) because they are untaxed. The DBCFT is built on the intuition that taxing companies on the basis of something that is relatively immobile — which we take consumers, by and large, to be — limits the scope for the gaming that has caused such difficulties within the current international tax framework.⁹ Therefore, it is the destination-basing component of the DBCFT, not the cash flow part, that is at the heart of the distinct robustness of the DBCFT against much international tax planning. Indeed, the analysis that follows would be broadly similar for other forms of taxation that depart from cash flow treatment but retain destination-basing.

⁸ More precisely (and as discussed later): imports by businesses liable to a DBCFT could either be taxed, with a credit or equivalent deduction then made available to the purchaser, or untaxed but with no credit or deduction; imports by final consumers would of course be taxed.

⁹ Gaming can arise, of course, if the relationship between the consumer and the firm is not at arm's length or if consumers can disguise their location. We do not explore these possibilities (which also arise under current income taxes and the VAT).

A simple example makes the workings of the DBCFT clear (Table 1). Suppose a company produces goods in country A, employing labor at a cost of 60 and with costs of 40 on other domestic purchases. It sells goods to domestic consumers in A for 150, and also exports goods to country B for 150. It therefore has a total profit, in cash flow terms, of 200. The DBCFT tax base in country A is calculated as domestic sales of 150 less domestic costs of 100: a total of 50. The DBCFT tax base in B is simply the value of the imports into B: 150. If the tax rate in A is 20 percent and that in B is 30 percent, then the firm's tax liabilities are 10 in A and 45 in B.

III. THE DBCFT AND INTERNATIONAL TAX PLANNING

This section assesses the DBCFT's robustness to three of the most significant profit-shifting channels under existing tax systems: the manipulation of transfer prices, debt shifting through the use of related party finance, and the location of intangible assets that earn a royalty or license payment in a low-tax country. For this, we consider first the case in which the DBCFT is adopted universally, and then turn to that in which it is adopted by only one country.

As noted, we focus on the adoption of a "pure" DBCFT. That is not what was proposed by the House Republicans in their Blueprint: for example, the simple carry forward of losses, even with interest, as proposed there, creates clear planning opportunities.¹⁰ It may seem unfair to compare an idealized proposal with the current system as actually implemented. To the extent that the implementation of a DBCFT departs from its ideal

Table 1
Illustration of Application of the DBCFT

	Country A	Country B	Total
<i>Tax rate</i>	20%	30%	
Labor costs	60	0	60
Other costs	40	0	40
Sales	150	150	300
DBCFT tax base	50	150	200
DBCFT charge	10	45	55

Note. This table illustrates the application of the DBCFT to a company that has costs in country A, and sales in both country A and country B. The table shows the tax base and tax liability arising in each country.

¹⁰ For firms permanently making tax losses, as some exporters might be under the DBCFT, such carry forward alone is not in itself enough to provide effective relief; there would then be an incentive to achieve such relief by merging with fully taxpaying firms or through other strategies (e.g., Miller, 2017).

design, it may be less robust to these and other planning strategies. But the DBCFT is not unique in this regard. The flawed implementation of any tax can create weaknesses for tax planners to exploit. More to the point is that the underlying incentives for tax planning at the heart of the DBCFT and the current system are fundamentally different, and this would shine through in any implementation of the DBCFT that incorporates the key features set out earlier.

A. Universal Adoption

We consider in turn the three profit-shifting devices highlighted earlier.

1. *Transfer Pricing*

Manipulation of transfer prices is recognized as an important profit-shifting channel for multinationals.¹¹ A large proportion of international trade takes place within multinationals, and since pricing intragroup transactions is not an exact science, there is ample scope for price manipulation. Furthermore, the primary counter-measure to these practices, application of the Arm's Length Principle, is fraught with significant conceptual and practical weaknesses.

While direct empirical evidence on transfer pricing abuse has been scarce, recent work finds significant profit shifting through this route by multinational firms (examples include Hebous and Johannesen (2016); Cristea and Nguyen (2016); Flaaen (2017)). Indeed, the BEPS project has been very much focused on transfer pricing issues, which are the subject of several of the 15 BEPS Actions. A number of commentators, however, have seen little progress on these issues coming from the BEPS outcomes (for instance Brauner (2016)). More generally, it seems clear that the changes flowing from the BEPS Actions will not eliminate all problems with transfer pricing (for instance Collier and Andrus (2017)).

In contrast, profit shifting through the manipulation of intra-group prices is precluded by the DBCFT.¹² To see this, consider the effect of a sale of a good by company A to another member of the same multinational group, company B, with the two companies located in different countries. Under current arrangements, A pays tax on the sale of the good to B, but B receives tax relief on the purchase of the good as an input into its own activity. If the country in which A is taxed has a higher tax rate than B, then the multinational has an incentive to understate the true price of the good, so as to shift tax base from high-tax country A to low-tax B. If, on the other hand, the country in which A is located has a lower tax rate, then the incentive is reversed: overall tax is lowered if the price is overstated.

¹¹ Kleinbard (2011), for example, who explains the importance of transfer pricing strategies for U.S. firms creating "stateless income."

¹² Transfer prices could of course remain relevant for other taxes with an ad valorem component, such as tariffs and excises.

Things are very different under a DBCFT. Company A then faces no domestic tax on its export; company B does face a tax on its import, but as an input into whatever activity B is undertaking the cost of the good also will be deducted from B's tax base. These two effects exactly cancel out, making the value of the import irrelevant for tax purposes.

An alternative approach to implementing this treatment of imports, as discussed in Auerbach (2010) and later, would be simply to exclude imports by taxable businesses from the tax base altogether — so that for them there is neither a tax on imports, nor a deduction for their cost. (Imports by final consumers would of course be taxable.) In this case, the transaction between A and B is entirely free of tax, so it is particularly easy to see how the destination basis eliminates planning techniques that rely on manipulating the prices of transactions within the multinational.

An example illustrates this key point. Suppose one affiliate in the multinational group imports some good from another affiliate and then sells it to a domestic third party — for example, a final consumer or an unrelated party — for a price of 160. Both countries operate a DBCFT. There is then no tax on the export in the exporting country. The tax in the importing country — assumed to be at a rate of 25 percent — can be applied in either of two ways, as just described. Table 2 illustrates. In column (a) the import is taxed, and the cost of the import set against the tax charge on the sale to the final consumer. In column (b), the import is ignored for both purposes.

Suppose first that the price at which the good is imported is 100. Then under method (a), there is a tax charge on the import of 25. In addition, there is a tax charge on the profit of the importing company at 25 percent of sales (of 160) less imports (of 100): a tax liability of 15. Adding this to the tax on imports, total tax payable in the importing country is 40. Because the tax on imports washes out, this is the same liability as is implied by simply taxing sales of 160 at 25 percent.

Under method (b), the import is simply ignored, and there is a tax charge on the total value of the sale to the domestic consumer, which also generates a total tax liability of 40.

The import price thus has no impact on the total tax charge faced by the multinational under either method. The lower two panels of the table illustrate this by showing that total liability remains at 40 if the import price were not 100 but, say, zero, or 160.

2. Profit Shifting through the Use of Debt

Multinationals' use of third party and related party interest payments to shift profits from high- to low-tax countries has been established in a series of studies (De Mooij (2011); Riedel (2014)). These planning techniques rely on the deductibility of interest payments under most existing corporate tax systems. Suppose for instance¹³ that a multinational has two affiliates, one in high-tax country A, the other in low-tax country B. The affiliate in B requires financing for its business, but instead of borrowing directly from a third party bank, it is equity funded by the affiliate in A using funds borrowed

¹³ This example is taken from OECD (2015b). Further examples are set out there.

Table 2
Tax Liabilities of an Importing Business under a DBCFT

	Price	Tax Liability: Method (a)	Tax Liability: Method (b)
Import price = 100			
Import	100	25	0
Sale to domestic consumer	160	15	40
<i>Total tax liability</i>	—	40	40
Import price = 0			
Import	0	0	0
Sale to domestic consumer	160	40	40
<i>Total tax liability</i>	—	40	40
Import price = 160			
Import	160	40	0
Sale to domestic consumer	160	0	40
<i>Total tax liability</i>	—	40	40

Note: This table illustrates the tax liabilities of a business that imports a product and sells it to a domestic consumer. It considers three alternative import prices (100, 0, 160) and under two alternative treatments: in column (a) the import is taxed, and the cost of the import set against the tax charge on the sale to the final consumer; in column (b) the import is ignored for both purposes. The tax rate is 25 percent.

from a bank in A. The interest paid to the bank is thus deducted from the profit of the affiliate in A rather than that of the affiliate in B. This structure benefits the multinational as a whole, as the former is subject to a higher tax rate than the latter.

Countries have sought to combat profit shifting through this channel in several ways — including thin capitalization rules, transfer pricing rules, and withholding taxes — and with varied degrees of success. An interest limitation rule is proposed under BEPS Action 4, which, if adopted by participating states, may address the worst excesses of planning through this channel. It would not, however, eliminate tax planning through debt shifting since a significant proportion of interest payments would remain deductible (e.g., Collier, Devereux, and Lepoev (2017)). Moreover, interest limitation rules can create their own distortions.

In contrast, the DBCFT would eliminate profit shifting through this channel, without creating additional distortions. This is clear under an R-based cash flow tax, since there is simply no tax relief for interest payments and no tax on interest received. So the debt-shifting channel simply would not exist.

There would also be no incentives for debt shifting if the R+F base were applied, by all countries, on a destination basis. Recall that the R+F base would tax all financial inflows, including borrowing and the receipt of repayment of loans and interest, and would give relief for all financial outflows, including lending, repayment of borrowing and payment of interest. Where lending and borrowing takes place within a single country between parties subject to the same R+F tax, these tax effects net out to zero. A bank would receive tax relief when it makes a loan to a company, for example, but the company would be taxed at the same rate on its corresponding borrowing. And the repayment with interest by the company would attract tax relief, but would also be taxed in the hands of the recipient bank.

Where a loan crosses borders, this is analogous to an export by the lender, and an import by the borrower, so the borrower is in the destination country. Under a destination-based approach, lending by the bank would be treated as an export — hence neither the original loan, nor the receipt of repayment and interest would have any tax consequences in the originating country. Instead, in principle all the financial flows associated with a loan would be taxed (and deducted) in the destination country. However, in this case, as with purely domestic financial flows between taxed entities, net taxes would again be zero.

The R+F base would thus only raise net tax revenue when a taxable entity makes a loan to a non-taxable entity. Auerbach et al. (2017) therefore argue that an R-based approach could be used for transactions between taxable entities, including for cross-border loans. If used at all, the R+F base need only be applied to transactions with non-taxable entities.

3. Locating IP in Low-Tax Jurisdictions

Intellectual property (IP) has become increasingly important for multinationals and the economy as a whole¹⁴ — and for tax planning it has the merit that it can be located and relocated strategically more easily than physical factors, thus making it a prominent element of current strategies. As the OECD noted at the start of the BEPS project, “many corporate tax structures focus on allocating significant risks or hard-to-value intangibles to low-tax jurisdictions, where their returns may benefit from a favourable tax regime” (OECD, 2013, p. 42). Empirical studies confirm that the location of valuable IP is systematically distorted towards low-tax locations (Riedel, 2014).

Under the existing system, once highly valuable intangibles are located in low-tax countries, related companies within the multinational group that are located in high-tax countries may pay royalties or license fees to the company that owns the intangible asset in return for their use. These payments receive tax relief at the high rate of tax and are liable to tax on their receipt at the low rate of tax.

¹⁴ Auerbach (2017).

Transfer pricing rules are a primary response to profit shifting through this channel. But the difficulties arising in their application to intangibles are notorious. While BEPS Action 8 sought to improve transfer pricing rules as they relate to hard-to-value intangibles, this is one area where commentators have been particularly critical of the lack of progress made by BEPS (as for instance is Brauner, 2016). Countries can take other countermeasures, individually or collaboratively. BEPS Action 5, for example, resulted in collaborative action to address patent box regimes. However, this action is of narrow scope. More broadly, there is little doubt that this profit-shifting channel will continue to trouble existing tax systems post-BEPS.

This channel too would be eliminated by the DBCFT. The reason is the same as that given earlier for the irrelevance of transfer prices. The purchase or sale of the right to make use of the intangible asset would naturally be treated in the same way as the purchase or sale of a good or service. Thus a purchase, in the form of a royalty or licence payment say, would be treated as an import into a destination country, and as such, would be liable to tax (and be deductible) there. So if A (located in a high-tax country) acquires a license from B (located in a tax haven) to use its IP, no tax arises for B. There would be a tax liability for A, but the import would also be deductible as a cost for A, providing an exactly offsetting tax reduction. Just as noted earlier, these two elements would balance out. An alternative arrangement, as with other imports by taxed businesses, would be simply to disregard the import and the payment for it. In any case, since there are no real tax consequences of the transaction, the incentive to locate intangible assets in a low-tax country would disappear under the DBCFT.

The numerical example in Table 2 again illustrates the point. We can re-interpret the import there as being the purchase by A of the right to make use of an intangible asset owned abroad. That enables the importer to produce a good which it sells to a consumer for 160. Company A incurs no other costs. Then the analysis in Table 2 holds for the import of the right to make use of an intangible asset. If A pays 100 or 160 for the use of IP it incurs the same overall tax liability as it would if it paid zero. As a result, locating IP in B's low-tax country and paying a royalty or licence fee from A's high-tax country does not alter the tax due by either affiliate in their respective countries.

B. Unilateral Adoption

The unilateral adoption of a DBCFT would leave existing planning opportunities in place; however, they would then operate to the detriment of the rest of the world, not that of the adopting country. Intuitively, international tax planning often plays off differences in statutory rates of source-based taxation, and adoption of a destination-based tax effectively sets the rate of source-based tax in the adopting country to zero. So if all countries adopt a DBCFT, that difference in rates, and hence the opportunities for international tax planning which rely on it, go to zero. But if only one country does so, then, if rates elsewhere are unchanged, the incentive for such international tax planning unambiguously increases, with incentives created to shift profits out of the non-adopting countries.

1. Transfer Pricing

If country A adopts a DBCFT while country B maintains a source-based tax, transfer mispricing could be used to the detriment of B but not A. As we have seen earlier, cross-border intra-group transactions would not appear in the tax base in country A. But the declared prices used for intra-group cross-border transactions would still affect the tax base in the non-DBCFT country B. If the company were exporting from B, there would be an incentive to under-price; if it was importing into B, there would be an incentive to over-price. These incentives arise whatever the tax rates in A and B, so long as the latter is strictly positive — and are larger the higher is the tax rate of the non-DBCFT country B.

Table 3 illustrates. Suppose first (in the upper panel) that a company in country A (which has the DBCFT) exports goods to an affiliate in B (which employs a source-based tax) for resale to consumers in B at 160. Assume a tax rate of 25 percent in both countries — so in this case there would be no transfer pricing issue if both countries adopted a source-based tax. Not so with a unilateral DBCFT. Then exports are not taxed by A, and therefore the company in A is indifferent to the price charged on its export. But the intra-group price is important for the tax liability of the affiliate in B. If the import price is set at 100 the affiliate in B makes a profit of 60 and pays tax of 15; if the price is set at zero it makes a profit of 160 and pays tax of 40; and if the import price is 160 it makes no profit and pays no tax. Whenever the source based tax in B is strictly positive, the group thus has an incentive to over-price sales from affiliates in A to affiliates in B; and this incentive is larger the higher is the rate in B.

Transfer Price	Price of Final Good	Exporter Tax Liability (DBCFT Country)	Importer Tax Liability (Non-DBCFT Country)
100	160	0	15
0	160	0	40
160	160	0	0
		Exporter Tax Liability (Non-DBCFT Country)	Importer Tax Liability (DBCFT Country)
100	160	25	40
0	160	0	40
160	160	40	40

Note: This table illustrates the tax liabilities of an exporting business and importing business when only one of the two is in a country with a DBCFT. In the first panel, the exporter is in the DBCFT country; in the second, the importer is in the DBCFT country. In each case, the importer sells on the import without further costs for a price of 160. The tax rate is 25 percent.

If instead a company in non-DBCFT country B exports to an affiliate in DBCFT country A under the same conditions, then the transfer price is irrelevant for tax in A. Either the affiliate in A will pay tax on the import and receive a deduction for costs equal to the value of the import, or the import will be ignored altogether for calculating the tax in A. In either case, the affiliate in A will pay tax of 40 on the sale of 160, whatever the transfer price. But now there is a clear incentive for the exporter from non-DBCFT country B to under-price the export in order to reduce the tax due there.

2. Profit Shifting through the Use of Debt

The previous section showed that if two countries adopt the DBCFT, multinationals cannot shift profits from one to another through intra-group debt. But what would happen if country A adopted a DBCFT, while country B maintained a source-based tax?

Suppose first that country A adopts an R-based cash flow tax. Then a company in A borrowing from a lender in B would not receive tax relief on its interest payments. As long as B continued to levy a tax on the interest received, then there would be a net tax payment at B's tax rate. So there would be no opportunity for profit shifting out of A by borrowing in A. On the other hand, interest received in A on lending from A to B would not be subject to tax in A, but the interest payment would receive relief in B; in effect this would be a channel for shifting profit from B to A. Unilateral adoption of an R-based cash flow tax would then make the adopting country a very favorable place from which to lend to other countries, just as is currently the case with any tax haven or low-tax country.

The same conclusions hold if instead country A adopts a destination-based R+F cash flow tax. Companies located in A cannot shift profits to affiliates located in B through intra-group debt. This is because even under an R+F base, the payment of interest (or principal) from A to B receives no relief in A, since under the destination basis the tax relief on the payment is matched by a tax on the receipt. As noted earlier, this is just like the treatment of purely domestic financial transactions between taxed entities. But the interest received in B would generally be taxable under the source-based system in country B. On the other hand, any lending from A would be an untaxed export, and so there would again be no tax on the receipt of interest (or principal) received in A, even though the interest would normally receive relief in B.

The unilateral adoption of either form of the DBCFT therefore increases the incentive for companies in non-adopting countries to shift profits to affiliates in the adopting country through intra-group debt. Interest paid by companies in non-adopting countries is likely to be deductible in those countries, subject to anti-avoidance rules, but will not be taxed in the adopting country. Countries adopting a DBCFT thus aggravate debt-shifting problems for non-adopting countries — a potentially significant and adverse spillover effect for them.

3. *Locating IP in Low-Tax Jurisdictions*

A similar analysis applies to the strategic location of intangible assets. Under the existing system, there is an incentive for companies to locate intangible assets in low-tax countries and pay royalties and license fees from high-tax countries. But, as shown earlier, this incentive would not arise in a country with a DBCFT, however high the tax rate. That is because the use in the DBCFT country of the benefits of the intangible asset would be treated as an import. The tax on the import would again net out with tax relief on the purchase of that import; or the import could be ignored entirely. In either case, there is no net deduction for the cost of using the imported service generated by the intangible asset.

If other countries maintained existing source-based systems, however, then there would be an incentive to locate intangible assets in the DBCFT country, since there would be no tax on the receipt of royalty or license fees but royalty or licence payments to the DBCFT country would generally be deductible in non-DBCFT countries, reducing taxable income there.

The example in Table 3 can again illustrate the point. The key point arises in the first panel of the table, where the IP is owned in the DBCFT country A and a company in the non-DBCFT country B pays a royalty or licence fee for the right to use it. That represents an export from the DBCFT country, which is not taxed there. The payment does, however, receive relief in the non-DBCFT country, which is greater the higher is the charge for use of the IP.

IV. OTHER CONSIDERATIONS

Several other issues arise in assessing planning possibilities under the DBCFT.

A. **Other Planning Strategies**

The DBCFT puts considerably less pressure on the notion of corporate residence than does the existing system, though at the cost of introducing a different notion of nexus. The tax base is essentially domestic sales less domestic expenses. There is no requirement for corporate residence to identify either sales or expenses. Sales are taxed in the country of the consumer, irrespective of corporate residence. And expenses are allowed in the country in which the payor is located, also irrespective of corporate residence. Under the DBCFT, companies would not gain any tax advantage by moving their corporate tax residence. Inversions and similar tax strategies would thus become obsolete.

The DBCFT also removes planning strategies revolving around the taxation of capital accruing to non-residents, with the realization of gains ultimately deriving from assets located in one country being realized, through a series of intermediary companies, in low-tax countries rather than that in which the underlying asset is located (IMF, 2014;

Cui, 2015). This planning device, which is of particular importance to low-income countries was not covered by the BEPS project (for instance IMF, 2014). Under the consumption tax approach of the DBCFT, there would simply be no clear rationale for taxing such corporate-level capital gains.

B. Lessons from the Value-Added Tax

Expositions of the DBCFT make much of its equivalence to a broad-based VAT levied on a destination basis combined with a subsidy to labor at the same rate. So while there is no practical experience with the DBCFT to draw on, one might look for some lessons from experience with the VAT.

Some international problems that have arisen under the VAT might also arise under a DBCFT. In each case (as under sales taxation and excises in the United States), there is an incentive — not present under a source based corporate tax — to disguise domestic sales to final consumers as exports. Other forms of VAT fraud,¹⁵ however, seem less likely to be significant issues under the DBCFT, since they have an element of speed which reflects the relatively high frequency of VAT returns that would not be replicated under a DBCFT administered on the same annual basis as is normal for income taxation. Missing trader fraud under the VAT, for instance, revolves around claiming and receiving refunds then quickly disappearing. This is not to say that fraud issues analogous to those under the VAT would not arise: the deductibility of wages could make finding devices for fraudulent refund claims even more attractive under the DBCFT, and would doubtless spur creative fraudsters. Issues of outright fraud and evasion should not be dismissed, and clearly require further attention. These, however, are matters of enforcement rather than — our concern here — planning opportunities associated with core design features of the tax.

The VAT experience would, however, have direct applicability to key aspects of the design and implementation of a DBCFT. Defining the destination of sales is straightforward for goods and tangible services, but not for intangible services. Here the OECD's VAT/GST Guidelines (OECD, 2017) provide the natural starting point for addressing the issue under a DBCFT. In terms of implementation, the problems that a DBCFT would face in bringing into tax sales of such services to final consumers (and low value consignments) are also familiar under the VAT. While an entirely satisfactory solution has yet to be found, there is extensive experience in Europe to draw on; and experience with state sales taxes in the United States too, where considerable progress has been made in bringing inter-state sales into tax.¹⁶ Well-developed proposals have been made to facilitate enforcement, such as introducing simple registration requirements for foreign companies. Innovative solutions are also being explored, such as using financial institutions as collection agents or electronic identification devices (e.g., Lamensch, 2015).

¹⁵ For example, Keen and Smith (2006).

¹⁶ Bruce, Fox, and Luna (2015).

C. Comparison with Sales-Based Formula Apportionment

The analysis in the previous section compared the DBCFT with source-based taxation of the kind that is now the norm. Among the radical alternatives to the present system, however, another proposal is movement to some form of formula apportionment — as with the recently-revived Common Consolidated Corporate Tax Base (CCCTB) proposal of the European Commission (European Commission, 2016). Such a scheme would likely allocate profits across countries in part — perhaps U.S. experience suggests, to a large degree — by sales defined on a destination basis.

That, however, creates planning possibilities. A highly profitable company A could, instead of making final sales into a high-tax country itself, sell its products in a fully arms-length transaction to an independent, much less profitable retailer B in a low-tax country. As a result, only the low rate of tax would be applied to A's high profits. The retail company B could sell on the goods into the high-tax country and face tax at that high rate, but that would only apply to its relatively low profit. Company A's tax liability, and the sum of its and the retailers', may then be considerably lower than if A had sold directly into the high-tax country. This would not happen under a DBCFT. In that case, the full value of imports into the final country of destination — rather than a corresponding proportion of the profits of the final seller — would be subject to tax in that country.

V. CONCLUSION

Even a well-designed DCBFT would involve opportunities for evasion and tax planning. Some of these are the same as under a traditional income tax (or sales tax): the incentives, for instance, to evade tax by concealing domestic sales or presenting purchases that are for personal consumption as being for business use. Others are novel in detail, but qualitatively familiar: lines would need to be drawn — between those entities subject to the DBCFT and those not, for instance, and between financial institutions and others — which always invites tax planning. And of course an imperfectly designed DBCFT would likely open up even more opportunities: if businesses faced different marginal tax rates, for example, full border adjustment for all businesses could encourage shifts in exporting (importing) activity to those in higher (lower) brackets.

A well-designed DBCFT, however, would — if adopted by all countries — be fundamentally immune from the opportunities for international tax planning to which the current system, particularly given the inherent difficulties associated with the arm's length principle (conceptual as well as practical),¹⁷ is so clearly prone. Those opportunities generally hinge on differences in the rates at which payments made by one affiliate of a multinational to another located elsewhere — “imports,” broadly interpreted to include not only purchases of goods and services but payments of interest or of royalties and

¹⁷ For example, Collier and Andrus (2017).

license fees — are taxed by the jurisdiction in which they are received and deductible in that from which they are paid. With universal adoption of destination-based taxation, however, these payments are neither taxable where received nor deductible where paid. Such opportunities for tax planning thus disappear.

If only some subset of countries applies a DBCFT, they insulate themselves against tax planning that tends to reduce their tax bases: the application of the destination basis eliminates scope for game playing on the prices paid or charged on the international transactions of firms located there.

For those countries not adopting the DBCFT, in sharp contrast, opportunities and incentives for outward profit shifting unambiguously increase. Conversely, countries adopting the DBCFT become clear beneficiaries of profit-shifting activities. The likely extent of such effects from partial adoption is hard to gauge: multinationals already have many opportunities to shift profits to low rate countries. And the impact will depend on the particular circumstances, being greater, for instance, if the adopter is a large and initially high-tax country. The likelihood is, in any case, of increased pressure on the devices that non-adopters have at their disposal to limit profit shifting: thin capitalization rules, withholding taxes and the like. While the most direct responses are in the hands of the non-adopters, the adopter may also wish to protect foreign tax bases from undermining through artificial transactions and pricing. Participation in the country by country reporting that is a minimum standard under the G20-OECD BEPS project, for instance, may yield relatively little direct benefit to a DBCFT-adopter, but can be helpful for others in addressing transfer pricing issues. Even if adequate responses can be shaped, however, this — or following suit by adopting a DBCFT themselves — is likely to take some time, during which the adverse impact on non-adopters might be significant. This is, or should be, a significant concern with unilateral adoption.

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REFERENCES

Avi Yonah, Reuven S., and Kimberly Clausing, 2017. "Problems with Destination-Based Corporate Taxes and the Ryan Blueprint." *Columbia Journal of Tax Law* 8 (2), 229–255.

Auerbach, Alan J., 2010. "A Modern Corporate Tax." The Center for American Progress / *The Hamilton Project*; available at <https://www.americanprogress.org/wp-content/uploads/issues/2010/12/pdf/auerbachpaper.pdf>.

Auerbach, Alan J., Michael P. Devereux, and Helen Simpson, 2010. "Taxing Corporate Income." In Mirrlees, James, et al. (eds.), *Dimensions of Tax Design: The Mirrlees Review*, 837–893. Oxford University Press, New York, NY.

Auerbach, Alan J., and Michael P. Devereux, 2013. "Cash Flow Taxes in an International Setting." Oxford University Centre for Business Taxation Working Paper No. 13/11. Oxford, UK.

Auerbach, Alan J., Michael P. Devereux, Michael Keen, and John Vella, 2017. "Destination-Based Cash-Flow Taxation." Oxford University Centre for Business Taxation Working Paper No. 17/01. Oxford, UK.

Auerbach, Alan J., 2017. "Demystifying the Destination-Based Cash-Flow Tax." Paper presented to the Brookings Panel on Economic Activity. The Brookings Institution, Washington, DC.

Bankman, Joseph, and Michael L. Schler, 2007. "Tax Planning under the Flat Tax." In Aaron, Henry J., Leonard Burman, and C. Eugene Steurele (eds.), *Taxing Capital Income*, 245–284. The Urban Institute Press, Washington, DC.

Brauner, Yariv, 2016. "Changes? BEPS, Transfer Pricing for Intangibles, and CCAS." University of Florida Levin College of Law Research Paper No. 16-14. Gainesville, FL.

Bond, Stephen R., and Michael P. Devereux, 2002. "Cash Flow Taxes in an Open Economy." CEPR Discussion Paper No. 3401. Centre for Economic Policy Research, London, UK.

Bruce, Donald, William F. Fox, and LeAnn Luna, 2015. "E-Tailer Sales Nexus and State Tax Policies." *National Tax Journal* 68 (3S), 735–766.

Clausung, Kimberly, 2016. "The Effect of Profit Shifting on the Corporate Tax Base in the United States and Beyond." *National Tax Journal* 69 (4), 905–934.

Collier, Richard, and Joseph Andrus, 2017. *Transfer Pricing and the Arm's Length Principle after BEPS*. Oxford University Press, Oxford, UK.

Collier, Richard, Michael P. Devereux, and Strahil Lepoev, 2017. "Proposed UK Changes on the Tax Deductibility of Corporate Interest Expense." *British Tax Review* 1, 60–79.

Collier, Richard, and Michael P. Devereux, 2017. "The Destination-Based Cash Flow Tax and Double Tax Treaties." Oxford University Centre for Business Taxation Working Paper No. 17/06. Oxford, UK.

Cristea, Anca D., and Daniel Nguyen, 2016. "Transfer Pricing by Multinational Firms: Evidence from Foreign Firm Ownerships." *American Economic Journal: Economic Policy* 8 (3), 170–202.

Crivelli, Ernesto, Ruud De Mooij, and Michael Keen, 2016. "Base Erosion, Profit Shifting and Developing Countries." *FinanzArchiv* 72 (4), 268–301.

Cui, Wei, 2015, "Taxation of Non-Residents' Capital Gains." In Alt, Hugh and Brian Arnold (eds.), *United Nations Handbook on Selected Issues in Protecting the Tax Base of Developing Countries*, 107–154. United Nations, New York, NY.

De Mooij, Ruud A., 2011. "The Tax Elasticity of Corporate Debt: A Synthesis of Size and Variations." IMF Working Paper No. 11/95. International Monetary Fund, Washington, DC.

European Commission, 2016. "Proposal for a Council Directive on a Common Consolidated Corporate Tax Base (CCCTB)." COM(2016) 683 final.

Flaen, Aaron, 2017. "The Role of Transfer Prices in Profit-Shifting by U.S. Multinational Firms: Evidence from the 2004 Homeland Investment Act." FEDS Working Paper No. 2017-055. Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series, Washington, DC.

Graetz, Michael, 2017. "The Known Unknowns of the Business Tax Reforms Proposed in the House Republican Blueprint." *Columbia Journal of Tax Law* 8 (2), 117–170.

Grinberg, Itai, 2017. "The House GOP Blueprint Can Be Drafted to Comply with WTO Rules." April 26, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2956048.

Güvenen, Faith, Raymond J. Mataloni, Jr., Dylan G. Rassier, and Kim J. Ruhl, 2017. "Offshore Profit Shifting and Domestic Productivity Measurement." NBER Working Paper No. 23324. National Bureau of Economic Research, Cambridge, MA.

Hebous, Shafik, and Niels Johannesen, 2016. "At Your Service! The Role of Tax Havens in International Trade with Services." CESifo Working Paper No. 5414. Center for Economic Studies and Ifo Institute, Munich, Germany.

Hariton, David P., 2017. "Planning for Border Adjustments: A Practical Analysis." *Tax Notes* (February 20), 965–977.

IMF, 2014. *Spillovers in International Corporate Taxation*. IMF Policy Paper, May 9, available at <https://www.imf.org/external/np/pp/eng/2014/050914.pdf>.

Keen, Michael, and Stephen Smith, 2006. "VAT Fraud and Evasion: What Do We Know, and What Can Be Done?" *National Tax Journal* 59 (4), 861–887.

Kleinbard, Edward, 2011. "Stateless Income." *Florida Tax Review* 11, 733.

Lamensch, Marie, 2015. *European Value Added Tax in the Digital Era*. IBFD Doctoral Series Vol. 36. International Bureau of Fiscal Documentation, Amsterdam, The Netherlands.

Meade Committee, 1978. "The Structure and Reform of Direct Taxation." Report of a committee chaired by Professor J.E. Meade. George Allen & Unwin, London, UK.

Miller, David S., 2017. "Tax Planning under the Destination Based Cash Flow Tax: A Guide for Policy Makers and Practitioners." *Columbia Journal of Tax Law* 8 (2), 295–308.

OECD, 2013. "Addressing Base Erosion and Profit Shifting." OECD Publishing, Paris, France, available at <http://www.oecd.org/tax/beps/addressing-base-erosion-and-profit-shifting-9789264192744-en.htm>.

OECD, 2015a. "Measuring and Monitoring BEPS, Action 11 – 2015 Final Report." OECD/G20 Base Erosion and Profit Shifting Project. OECD Publishing, Paris, France, available at <http://www.oecd.org/tax/measuring-and-monitoring-beps-action-11-2015-final-report-9789264241343-en.htm>.

OECD, 2015b. "Limiting Base Erosion Involving Interest Deductions and Other Financial Payments, Action 4 – 2015 Final Report." OECD/G20 Base Erosion and Profit Shifting Project. OECD Publishing, Paris, France, available at <http://www.oecd.org/tax/limiting-base-erosion-involving-interest-deductions-and-other-financial-payments-action-4-2015-final-report-9789264241176-en.htm>.

OECD, 2017. "International VAT/GST Guidelines." OECD Publishing, Paris, France, available at <http://www.oecd.org/ctp/international-vat-gst-guidelines-9789264271401-en.htm>.

President's Advisory Panel on Federal Tax Reform, 2005. "Simple, Fair and Pro Growth: Proposals to Fix America's Tax System," available at <https://www.treasury.gov/resource-center/tax-policy/Documents/Report-Fix-Tax-System-2005.pdf>.

Riedel, Nadine, 2014. "Quantifying International Tax Avoidance: A Review of the Academic Literature." European Tax Policy Forum Policy Paper No. 2, available at <http://www.etpf.org/papers/PP002QuantAvoid.pdf>.

Schön, Wolfgang, 2016. "Destination-Based Income Taxation and WTO Law: A Note." Working Paper of the Max Planck Institute for Tax Law and Public Finance No. 2016-3. Munich, Germany.

Schizer, David M., 2017. "Border Adjustments and the Conservation of Tax Planning." *Tax Notes* 155, June 5, 1451–1459.

Ways and Means Committee of the House of Representatives, 2016. *A Better Way Forward: Our Vision for a Confident America*, available at https://abetterway.speaker.gov/_assets/pdf/ABetterWay-Tax-PolicyPaper.pdf.

