

Where Credit is Due: Advantages of the Credit-Invoice Method  
for a Partial Replacement VAT

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## INTRODUCTION

The value-added tax (“VAT”) is a mainstay of fiscal systems in over 130 countries around the world, including every Organisation for Economic Cooperation and Development (“OECD”) country except the United States.<sup>1</sup> Although there are two major alternative methods for calculating VAT liability—the “credit-invoice method” and the “subtraction method”—existing national level VATs are implemented almost exclusively using the credit-invoice method.<sup>2</sup> Japan is the only developed economy that utilizes some subtraction-method features to impose a VAT.<sup>3</sup>

Numerous prior papers have analyzed credit-invoice method and subtraction-method VATs. This paper draws on that literature to focus on some of the similarities and differences between these two methods for calculating VAT liability. In the United States, some prominent tax reform proposals have involved variants of the subtraction-method VAT that are intended to make the tax more progressive and potentially more appropriate as a replacement for the entire income tax.<sup>4</sup> By contrast, this paper is focused on questions that would arise if an unmodified subtraction-method VAT or a credit-invoice method VAT were chosen to supplement or replace some portion of the revenue from the income tax.

Part I of this paper describes the basic mechanics of a credit-invoice method VAT and a subtraction-method VAT. Credit-invoice method VATs calculate VAT due by multiplying the value of taxable sales by the relevant tax rate and subtracting VAT paid on inputs from tentative tax due on sales. Subtraction-method VATs subtract the amount paid for inputs from taxable sales and multiply by the relevant tax rate. The key perceived difference between the credit-invoice method VAT and the subtraction-method VAT is that the former is generally conceived as a tax on specific transactions, whereas the latter is generally thought to be a tax on an entity. The key substantive difference between most subtraction-method VAT proposals and extant credit-invoice method VATs is that subtraction-method VAT proposals generally do not impose an invoice requirement. An invoice requirement achieves two ends: it limits the VAT credits provided for tax paid with respect to inputs purchased by entities subject to VAT (“registered

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<sup>1</sup> See Jeffrey Owens, *Fundamental Tax Reform: An International Perspective*, 59 NAT’L TAX J. 131 (2006) (providing detailed discussion of revenue sources in OECD countries).

<sup>2</sup> A third method for calculating VAT liability, the “addition method,” has never been adopted as a national tax in any jurisdiction. See also *infra* note 106 and accompanying text.

<sup>3</sup> See *infra* notes 13-14 and accompanying text.

<sup>4</sup> Various consumption tax proposals have received attention in academic and political circles. In addition to credit-invoice method and subtraction-method VATs, among the most well-known proposals are the Flat Tax, popularized by presidential candidate Steve Forbes, and the X-tax, a progressive rate variation developed by the late David Bradford that uses the same structure as the Flat Tax. See ROBERT E. HALL & ALVIN RABUSHKA, *THE FLAT TAX* (2d ed. 1995); DAVID BRADFORD, *FUNDAMENTAL ISSUES IN CONSUMPTION TAXATION* (1996); David Bradford, *The X-Tax In The World Economy* (Nat’l Bureau of Econ. Research, Working Paper No. W10676, 2004). The Flat Tax and the X-tax both modify a “subtraction-method” VAT in order to collect the portion of value-added to a product attributable to labor at the individual level. Using a graduated rate structure to tax value added attributable to labor makes the distribution of the burden of a VAT more progressive. Although extensively discussed in the U.S. fundamental tax reform debate, such modified subtraction-method VAT proposals are generally beyond the scope of this paper.

traders”) to purchases from other registered traders, and it ensures that the VAT credit obtained by the purchaser is equal to the VAT paid on the input. Borrowing from Charles McLure and David Weisbach’s work and nomenclature, Part I categorizes subtraction-method VATs that provide registered traders a deduction for all input purchases as “open” subtraction-method VATs, and subtraction-method VATs that would strictly limit deductions to purchases from other registered traders as “sophisticated” subtraction-method VATs. Most well-known U.S. subtraction-method VAT proposals are not sophisticated subtraction-method VATs.

Part II considers how choosing the credit-invoice method VAT, the open subtraction-method VAT, or the sophisticated subtraction-method VAT may affect VAT administration and design and, conversely, how choices regarding desired administrative and design features may dictate which method is preferable. These design features include whether to exempt certain supplies of goods or services by certain entities from VAT, whether to tax supplies of some goods or services at lower rates, the taxation of nonprofit organizations, state and local government, real estate, financial services, small business, and, importantly, how to treat imports, exports, and “losses” (negative taxable value-added). Part II identifies VAT best practices for each design feature and evaluates the capacity of a VAT to adopt those best practices with or without an invoice requirement, as well as the potential effect of using a credit-invoice or subtraction-method approach. Many of the relevant design issues are specifically addressed in other papers for this conference. Where those papers offer specific design recommendations based on the literature and international experience, Part II treats those recommendations as best practice.

Part II illustrates that the lack of symmetry between deductions and inclusions in an open subtraction-method VAT leaves such a system susceptible to significant tax avoidance. That same asymmetry also invites lobbying for inappropriate exemptions by providers of specific intermediate inputs to other businesses. In contrast, neither a sophisticated subtraction-method VAT nor a credit-invoice method VAT raise this and other concerns that result from a lack of symmetry between deductions and inclusions. However, the literature suggests that the perception of a subtraction-method VAT as an “entity-based” tax may make exemptions of specific goods and services less likely than in a credit-invoice method VAT, and for the same reasons may make entity-based exemptions more likely than in a credit-invoice method VAT. The recommendations provided by other authors at this conference with respect to the appropriate treatment of services provided by nonprofit organizations and state and local government, residential housing, and financial services suggest that in these areas narrowly tailored exemptions and zero-rating can be appropriate, while broad-based entity-level exemptions are less desirable. A credit-invoice method VAT may thus be preferable to a subtraction-method VAT, as it seems better suited to appropriately address these issues.

Part II also observes that a credit-invoice method VAT could easily interact with other consumption tax systems around the world and comply with World Trade Organization rules without sacrificing VAT design features that allow for effective enforcement. In contrast, following the standard neutrality and enforcement-enabling practice of “destination basis” taxation (as opposed to “origin basis” taxation) with respect to imports and exports could raise WTO complications in a subtraction-method VAT. Further, the taxation of cross-border services may also be more easily coordinated with other VAT systems around the world under a credit-invoice method VAT than under a subtraction-method VAT. A credit-invoice method VAT

would also provide more scope for coordination with state-level retail sales taxes than a subtraction-method VAT. Finally, political economy concerns may suggest that best consumption tax practices are more sustainable in a credit-invoice VAT than in a subtraction-method VAT intended to partially replace or supplement the corporate and individual income taxes.

Part III of the paper considers the implications of David Weisbach's demonstration that purported substantive differences between the subtraction-method VAT and the credit-invoice method VAT are not inherent to the two methods of calculation. Weisbach's analysis shows that a sophisticated subtraction-method VAT that went further and adopted a full invoice requirement could in principle import all potential features of a credit-invoice method VAT, including multiple rates. Part III concludes that while plausible in principle, there is little impetus for adopting such a tax at least outside the context of progressive consumption taxes. A subtraction-method VAT with a full invoice requirement and multiple rates would lack the simplicity and familiarity that advocates of subtraction-method VATs point to when recommending the subtraction-method VAT.

are more readily adopted in the context of a credit-invoice method VAT.

## I. OVERVIEW OF VALUE-ADDED TAXES

A variety of structures can be used to tax the value of goods and services consumed by taxpayers. In the United States, the most familiar consumption tax is the retail sales tax ("RST") used by most of the states. A conceptually pure RST would be imposed whenever a household purchased any good or service for the purpose of consumption. However, "real-world" RSTs most often are imposed on a relatively narrow group of goods and services and are prone to evasion.<sup>5</sup> RSTs also tend to "cascade," which is to say that some goods are double-taxed because businesses pay RST on goods or services they purchase as inputs for their business processes, and then those inputs are taxed a second time as part of the sale of the final good or service.<sup>6</sup> The VAT is conceptually similar to an RST, but is imposed via a mechanism that involves every stage of production and distribution. Relative to an RST, most analysts conclude that a VAT reduces evasion, improves enforcement, is more likely to be imposed on a broader tax base, and systematically avoids the "cascading" problem.<sup>7</sup>

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<sup>5</sup> Mikesell and McLure provide discussions of the narrowness of RST bases and their susceptibility to evasion. John L. Mikesell, *A Quality Index for State Sales Tax Structure--Measuring the States Against an Ideal Standard*, 35 STATE TAX NOTES 129-36 (Jan. 10, 2005); Charles E. McLure, *The U.S. Debate on Consumption-Based Taxes: Implications for the Americas*, 29 U. MIAMI INTER-AM. L. REV. 143 (Fall 1997/ Winter 1998).

<sup>6</sup> See, e.g., Robert Cline, John L. Mikesell, Thomas S. Neubig, and Andrew Phillips, *Sales Taxation of Business Inputs: Existing Tax Distortions and the Consequences of Extending the Sales Tax to Business Services*, 35 STATE TAX NOTES 457-70 (Feb. 14, 2005).

<sup>7</sup> See, e.g., George R. Zodrow, *The Sales Tax, the VAT, and Taxes in Between - or, Is the Only Good NRST a "VAT in Drag"?*, 52 NAT'L TAX J. 429 (1999); Sijbren Cnossen, *NRST from a VAT Perspective*, in UNITED STATES TAX REFORM IN THE 21<sup>ST</sup> CENTURY (George R. Zodrow & Peter Mieszkowski, eds., 2002); George K. Yin, *Dunwody Distinguished Lecture In Law: Is The Tax System Beyond Reform?*, 58 FLA. L. REV. 977, 1006-11 (2006); John L. Mikesell, *The American Retail Sales Tax: Consideration on Their Structure, Operations, and Potential as a Foundation for a Federal Sales Tax*, 50 NAT'L TAX J. 149 (1997).

## A. Credit-Invoice Method VAT

In a credit-invoice method VAT, registered businesses (“registered traders”) assess tax on taxable goods and services each time they supply such a good or service to either a business or a consumer.<sup>8</sup> Registered traders are then permitted to reduce the amount of VAT they are liable to remit to the government by a credit equal to the amount of VAT paid to other registered traders in purchasing business inputs (intermediate goods, services, fuel, plant and equipment, etc.). The credit eliminates the VAT on goods and services used by a registered trader, but leaves in place the VAT on sales to final consumers.<sup>9</sup> This mechanism ensures that the consumption of all goods and services subject to the VAT will be taxed once, but only once, generally at the consumer level.

The amount of VAT credit available to a registered trader to offset VAT liability is determined based on printed invoices received by a purchasing registered trader from a selling registered trader (referred to herein as the “invoice requirement”). These invoices detail the amount of VAT collected on a given sale, and the VAT registration numbers of the buyer and seller. The invoice requirement makes the VAT partially self-policing, because registered traders demand invoices in order to claim the input credits that reduce their own VAT liability. While the claim that the VAT is self-enforcing may be overstated, when subsequently used to claim an input credit, VAT invoices create a paper trail that gives tax authorities an independent source of information about the selling firm’s sales, and thus can help the tax authorities enforce the VAT. The prospect of this type of third party information reporting may induce businesses to comply more fully with the law. The VAT invoice chain may also provide a useful tool in the enforcement of business income taxes.

After applying input credits, a registered trader’s final VAT liability is equivalent to a tax on the “value added” by that business—defined as the sales price of the outputs of the business less the purchase price of its non-labor inputs previously subject to VAT. In a well-functioning VAT, a registered trader with more input credits than VAT liability (e.g., an exporter, or a firm that makes a large capital investment) can obtain a refund for VAT paid in excess of input credits.

Example 1a illustrates how the credit-invoice method VAT collects the same amount of tax as an ideal RST. A winemaker buys grapes from a grape grower and uses them to produce a case of wine for sale to retailers. The winemaker buys grapes and other supplies from the grape grower at a cost of \$30 per case of wine before tax. The winemaker sells each case of wine for \$70 before tax. The retailer sells a case of wine for \$100 before tax. In an ideal RST, only the sale by the retailer to consumers would be taxed. If the RST rate were twenty percent, \$20 of tax would be collected by the retailer on the sale of a \$100 case of wine to a final consumer and remitted to the government.<sup>10</sup>

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<sup>8</sup> Although some VAT regimes recognize a legal distinction between the terms “sale” and “supply,” they are used interchangeably in this paper.

<sup>9</sup> *Id.*

<sup>10</sup> RSTs tend to cascade, and thereby deviate from the ideal, because the law does not always distinguish between, for example, sales of wine to an individual for personal consumption and sales of wine to a restaurant for resale.

A 20 percent VAT added to each transaction in the production and distribution process collects the same amount of revenue as a non-cascading RST (charged only to final consumers). Because the VAT is charged on all sales of taxable goods and services (“taxable supplies”), the grape grower collects 20 percent VAT on her sales of grapes, charging the winemaker \$6 of tax on each \$30 of sales. The grape grower remits the \$6 of VAT to the government. The winemaker charges the retailer \$84 (\$70 + \$14 of VAT) per case of wine. However, instead of sending all \$14 of VAT to the government, the winemaker subtracts the \$6 of VAT paid by the winemaker to the grape grower from the \$14 collected in VAT, and remits \$8 to the government per case of wine sold. Similarly, instead of remitting \$20 per case of wine sold to the government, the retailer subtracts the \$14 of VAT paid by the retailer to the winemaker from the \$20 collected in VAT from the consumer, and remits \$6 to the government per case of wine sold. The tax authority receives \$20 in total—\$6 from the grape grower, \$8 from the winemaker, and \$6 from the retailer. The VAT and the RST collect equivalent amounts of revenue, and from the consumer’s perspective the taxes look identical.<sup>11</sup>

**Example 1a**

<b>Economic activity</b>	<b>Grape Grower</b>	<b>Winemaker</b>	<b>Retailer</b>	<b>Total</b>
<b>Basic transactions</b>				
1. Pre-tax Sales	\$ 30	\$ 70	\$ 100	
2. Pre-tax Purchases	\$ 0	\$ 30	\$ 70	
3. Value added (Sales - Purchases)	\$ 30	\$ 40	\$ 30	\$ 100
<b>Credit-Invoice Method VAT</b>				
4. Tax on sales (20% of line 1)	\$ 6	\$ 14	\$ 20	
5. Less: input tax on purchases	\$ 0	\$ 6	\$ 14	
6. Net VAT liability	\$ 6	\$ 8	\$ 6	\$ 20
<b>Retail Sales Tax</b>				
7. Tax on Sales (20% of line 1)	<b>Exempt</b>	<b>Exempt</b>	<b>\$20</b>	<b>\$20</b>

Credit-invoice method VAT liability is generally calculated from accounts for a taxable period (generally monthly, bi-monthly, or quarterly). Aggregate input tax paid is subtracted from aggregate tax liability on all taxable sales for the taxable period. Notwithstanding the fact that the credit-invoice method VAT is often referred to as a “transaction-based” tax (because conceptually the tax is assessed on each individual transaction subject to the VAT), VAT liability and VAT credits are not matched for each individual item sold. A more precise description is that the credit-invoice method VAT is a “transactions-based, accounts-verified” tax, because while the tax is assessed on each individual transaction, tax remittance to the tax authority is calculated and audited based on accounts.<sup>12</sup>

<sup>11</sup> Like an RST, consumers can be shown credit-invoice method VAT liability for their purchases on printed receipts, thereby making the tax “visible.” See, e.g., President’s Advisory Panel on Federal Tax Reform, Simple, Fair, and pro-Growth: Proposals to Fix America’s Tax System 204 (2005) [hereinafter Tax Reform Panel Report]. Stating VAT separately is not only possible, but also more consistent with the invoice requirement.

<sup>12</sup> See Cnossen, this volume. An auditor may, for example, request invoices to support particular input credits, and cross check a sample of those invoices.

## B. Subtraction-Method VAT

The general design features of a subtraction-method VAT—sometimes referred to as a “business transfer tax”—are somewhat less well specified than those of a credit-invoice method VAT. This is largely because few taxes characterized as subtraction-method VATs have existed in practice. However, analysts consistently distinguish a subtraction-method VAT from a credit-method VAT by noting that a subtraction-method VAT does not use credits and that tax due is not calculated by subtracting tax paid from gross tax liability.<sup>13</sup> Instead, registered traders subtract the value of their total non-labor inputs from the total value of their sales and then multiply by the VAT rate to determine their tax liability.<sup>14</sup> As a result, the subtraction method is described as being “account-based,” rather than “transaction-based,”<sup>15</sup> and is commonly perceived to be a tax on an entity.<sup>16</sup> In contrast, the credit-invoice method tax is commonly understood to be a tax on specific goods and services.<sup>17</sup>

Michael Graetz observes that, to its proponents, “a subtraction-method VAT... has the political virtue of looking more like a corporate income tax, and it does not show up as a separate charge to consumers.”<sup>18</sup> One consequence is that U.S. subtraction-method VAT proposals, in contrast to credit-invoice method VAT proposals, are generally proposed to fully replace the corporate

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<sup>13</sup> Although there is almost uniform agreement on this point, many analysts also describe the Japanese VAT as a subtraction-method tax. Alan Schenk more accurately describes the Japanese VAT as a “credit-subtraction” VAT, as opposed to the “sales subtraction VAT” discussed in this article. Under the Japanese VAT, gross tax on taxable sales is calculated in the same way as in the credit-invoice method VAT. The most important “subtraction” feature of the Japanese VAT is that taxpayers are allowed to subtract from their VAT liability an amount of input credit that is calculated from aggregate accounts, based on total purchases from domestic entities, instead of subtracting the amount of tax paid on each individual transaction with a registered trader, as shown on credit-invoice method VAT invoices. The Japanese have gradually reformed their VAT since it was first imposed, and the reforms have adopted enforcement features that make the tax more akin to a credit-invoice method VAT. For more on the Japanese consumption tax, see *infra* notes 118–121 and accompanying text; see also Alan S. Schenk, *Japanese Consumption Tax After Six Years: A Unique VAT Matures*, 69 TAX NOTES 899 (1995); ALAN SCHENK AND OLIVER OLDMAN, *VALUE-ADDED TAX: A COMPARATIVE APPROACH* (2007).

<sup>14</sup> Alan Schenk and Oliver Oldman describe this method of VAT calculation more precisely as a “sales subtraction-method, to distinguish it from the Japanese VAT, which they term a “credit-subtraction method VAT.” ALAN SCHENK AND OLIVER OLDMAN, *VALUE-ADDED TAX: A COMPARATIVE APPROACH*, 42 (2007).

<sup>15</sup> Victoria P. Summers, *The Border Adjustability of Consumption Taxes, Existing and Proposed*, 12 TAX NOTES INT’L 1793 (June 3, 1996). David Weisbach points out that, like subtraction-method VATs, credit-invoice method VATs aggregate transactions over some period into a single return, so that both forms of VAT are based on transactions and both are periodic. David Weisbach, *Does the X-Tax Mark the Spot?*, 56 SMUL. REV. 201, 215 (2003). While this observation is correct, it is equally true that sales taxes imposed by the U.S. states are aggregated into a single return and imposed periodically. Nevertheless, sales taxes are perceived as taxes on specific transactions.

<sup>16</sup> See LIAM EBRILL, MICHAEL KEEN, JEAN-PAUL BODIN & VICTORIA SUMMERS, INT’L MONETARY FUND, *THE MODERN VAT* 21 (2001).

<sup>17</sup> *Id.*; Paul L. E. Grieco and Gary Clyde Hufbauer, *America Badly Needs a Value Added Tax*, FINANCIAL TIMES (April 21, 2005) (“The credit-invoice method used in Europe assesses VAT on each transaction but allows a credit for VAT paid by companies on their purchase of intermediate goods. This requires a chain of invoices and results in a system that looks similar to a sales or turnover tax. Under the subtraction method, used in Japan, companies pay VAT on their value added, calculated as the difference between final sales and purchases of intermediate goods. Administratively, this system closely resembles the corporate income tax—and is better suited to the United States”).

<sup>18</sup> MICHAEL J. GRAETZ, 100 MILLION UNNECESSARY RETURNS, A SIMPLE, FAIR, AND COMPETITIVE TAX PLAN FOR THE UNITED STATES 78 (2008).

income tax.<sup>19</sup> In addition to viewing the subtraction method as the simplest way to calculate VAT liability, proponents choose the subtraction-method VAT because they believe it to “demonstrate that the tax is a business tax,” to be more familiar to U.S. businesses, to avoid complicating the administration of state and local sales taxes, and to be less prone to imposition at multiple rates on different goods.<sup>20</sup>

Credit-invoice method VAT rates, like sales tax rates, are generally thought of on a tax-exclusive basis. In contrast, because a subtraction-method VAT is perceived to be a tax on an entity, subtraction-method VAT rates, like income tax rates, are generally thought of on a tax-inclusive basis. If a good costs \$100 and bears an additional \$20 of tax, the tax-exclusive rate is 20 percent. The tax inclusive-rate is 16.6%: \$20 (the tax paid) divided by \$120 (the total amount of receipts on taxable sales). Tax-exclusive and tax-inclusive rates are both appropriate ways of thinking about tax rates. For ease of comparison, however, this paper generally uses tax-exclusive rates, regardless of whether discussing credit-invoice method VATs or subtraction-method VATs.

Example 1b illustrates how a subtraction-method VAT is calculated, using the same facts as in Example 1a, with each registered trader subtracting the value of its pre-tax non-labor inputs from the total value of its pre-tax sales, and applying a flat 20% tax rate to the difference. As in Example 1(a), Example 1(b) assumes that the grape grower, the winemaker, and the retailer are all registered traders.

#### Example 1b

Economic activity	Grape Grower	Winemaker	Retailer	Total
Basic transactions				
1. Pre-tax Sales	\$ 30	\$ 70	\$ 100	
2. Pre-tax Purchases	\$ 0	\$ 30	\$ 70	
3. Value added (Sales - Purchases)	\$ 30	\$ 40	\$ 30	\$ 100
<b>Subtraction-Method VAT</b>				
7. VAT Liability (20% of line 3)	<b>\$ 6</b>	<b>\$ 8</b>	<b>\$ 6</b>	<b>\$ 20</b>

In this example, the subtraction-method VAT collects the same revenue as the credit-invoice method VAT – in total and at each stage in the production-distribution process. This result makes sense conceptually. In principle, the credit-invoice method and subtraction-method VAT are nearly identical taxes. Both are multistage consumption taxes applied on all businesses no matter whether they sell goods to the consumer (final point of sale) or to other businesses (intermediate stages of production and distribution), but with a credit or deduction to offset the

<sup>19</sup> Complications that result from repealing the corporate income tax while retaining the individual income tax, such as the incentives for individuals to accumulate passive investment income in the corporate form to defer or avoid paying individual investor-level taxes on such income, are beyond the scope of this article.

<sup>20</sup> *Memorandums on the Comprehensive Tax Restructuring and Simplification Act of 1994*, 103 TAX NOTES 27 (May 27, 1994); GARY CLYDE HUFBAUER & PAUL L. E. GRIECO, INST. FOR INT’L ECON., REFORMING THE US CORPORATE TAX 70–71 (2005).

tax burden imposed on an intermediate stage producer or distributor.<sup>21</sup> Conceptually either a credit or a deduction can provide an equivalent offset against taxes due for taxes paid. The tax value of subtracting purchased inputs from the tax base is arithmetically identical to a credit for all previous VAT paid, assuming VAT is paid at the same tax rate on all those inputs.

The interchangeability of credits and deductions led David Weisbach to posit that any perceived differences between credit-invoice method and subtraction-method VATs—such as the availability of deductions for the cost of inputs purchased from non-registered traders in the subtraction-method or the credit-invoice method’s flexibility to impose preferential tax rates on specific goods or services—are based on the amount of information that analysts assume will be collected and used to administer credit-invoice method and subtraction-method VAT systems, respectively, rather than being inherent in the method of calculation.<sup>22</sup> Instead of classifying VATs as credit-invoice method VATs or subtraction-method VATs, Weisbach divides VATs into three categories based on the amount of information the seller of an input provides to the buyer of an input and/or the tax administration.<sup>23</sup> The first category, described by Charles McLure as a “naïve” VAT,<sup>24</sup> and later by Weisbach as an “open system,”<sup>25</sup> allows buyers to deduct the cost of inputs regardless of whether a registered trader supplies them and therefore collects VAT on the supply. This paper refers to subtraction-method VATs of this type as “open subtraction-method VATs.” The second category Weisbach describes is a “closed” tax that collects and uses information about whether a supplier of an input is or is not a registered trader.<sup>26</sup> McLure has labeled a subtraction-method VAT that would limit buyers to deductions for the costs of inputs supplied by registered traders as a “sophisticated” subtraction-method VAT.<sup>27</sup> This paper uses that term. Finally, Weisbach describes a third category of VAT that collects not only the information to verify whether a supplier is a registered trader, but also information about the exact amount of tax paid by the supplier with respect to the sale of the input, *i.e.* the tax detail for each transaction. Standard credit-invoice method VATs fall into Weisbach’s third category because of their invoice requirement.

### C. The Lack of an Invoice Requirement in Subtraction-method VAT Proposals

The key substantive difference between subtraction-method VAT proposals and extant credit-invoice method VATs is that the former generally do not impose an invoice requirement.<sup>28</sup> Many analysts view the lack of an invoice requirement, and even the lack of verification as to whether a supplier is a registered trader, as essential characteristics of a subtraction-method

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<sup>21</sup> See Jack M. Mintz, *The Business Transfer Tax as a Consumption Tax*, 10 TAX NOTES INT’L 75 (Jan. 2, 1995).

<sup>22</sup> David Weisbach, *Does the X-Tax Mark the Spot?*, 56 SMU L. REV. 201, 203 (2003).

<sup>23</sup> David Weisbach, *Does the X-Tax Mark the Spot?*, 56 SMU L. REV. 201, 214–15 (2003).

<sup>24</sup> See CHARLES E. MCLURE JR., AM. ENTER. INST., THE VALUE-ADDED TAX: KEY TO DEFICIT REDUCTION? 71–79 (1987) [hereinafter KEY TO DEFICIT REDUCTION?]

<sup>25</sup> David Weisbach, *Ironing Out the Flat Tax*, 52 STAN. L. REV. 599, 613 (2000).

<sup>26</sup> David Weisbach, *Does the X-Tax Mark the Spot?*, 56 SMU L. REV. 201, 214–15 (2003) (describing the substantive difference between a credit-invoice method VAT and a sophisticated subtraction-method VAT to be that under the credit-invoice method, a seller must record the amount of tax paid, rather than simply certifying whether the transaction is subject to tax); see also MCLURE, KEY TO DEFICIT REDUCTION?, *supra* note 24, at 79.

<sup>27</sup> MCLURE, KEY TO DEFICIT REDUCTION?, *supra* note 24, at 76.

<sup>28</sup> David Weisbach, *Ironing Out the Flat Tax*, 52 STAN. L. REV. 599, 611 (2000).

VAT.<sup>29</sup> The lack of an invoice requirement may seem natural, because a subtraction-method VAT subtracts the cost of inputs, so that VAT paid may not seem relevant to the determination of tax liability. The lack of an invoice requirement is a feature of most subtraction-method type VATs proposed for the United States.<sup>30</sup>

For example, perhaps the best-known pure subtraction-method VAT proposals introduced in the U.S. Congress are Senators Boren and Danforth's Comprehensive Tax Restructuring and Simplification Act of 1994,<sup>31</sup> and Congressman Sam Gibbons' Revenue Restructuring Act of 1996.<sup>32</sup> Those subtraction-method VAT proposals did not impose an invoice requirement.<sup>33</sup> Other well-known consumption tax proposals in the United States (for example, the Flat Tax popularized by Steve Forbes) utilize a modified subtraction-method VAT structure to impose the VAT at progressive rates. Although these tax structures are generally beyond the scope of this paper, it should be noted that these proposals also generally do not include an invoice requirement.<sup>34</sup>

The Japanese VAT, which uses some subtraction-method and some credit-method features in its method of calculation,<sup>35</sup> does not incorporate an invoice requirement, but does limit the deductions available to registered traders when calculating VAT liability to those purchases made from other domestic entities.<sup>36</sup> Somewhat similarly, the Gibbons proposal imposed a tax on the amount by which the gross receipts of a taxable person from business activities exceeded

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<sup>29</sup> See, e.g., U.S. GEN. ACCOUNTING OFFICE, TAX CREDIT AND SUBTRACTION METHODS OF CALCULATING A VALUE-ADDED TAX, GGD-89-87, 13 (June 1989), available at <http://archive.gao.gov/d25t7/138940.pdf> (describing the absence of an invoice requirement as the essential characteristic of a subtraction-method VAT).

<sup>30</sup> See also McLURE, KEY TO DEFICIT REDUCTION?, *supra* note 24; A REPORT OF THE COMMITTEE ON THE VALUE ADDED TAX OF THE AMERICAN BAR ASSOCIATION SECTION OF TAXATION, VALUE ADDED TAX: A MODEL STATUTE AND COMMENTARY (1989). One notable exception is the progressive subtraction-method tax proposed by the Tax Reform Panel in 2005. Their report provided that the "Growth and Investment Tax Plan, although implemented using the subtraction method, would require that deductible purchases be allowed only from businesses that are subject to the tax, and that these purchases be substantiated." Tax Reform Panel Report, at 163. A recent pure subtraction-method VAT proposal for the United States, the "Corporate Activities Tax" proposed by Gary Clyde Hufbauer and Paul L. E. Grieco, also provides that deductions will only be available from other registered traders. GARY CLYDE HUFBAUER & PAUL L. E. GRIECO, INST. FOR INT'L ECON., REFORMING THE US CORPORATE TAX (2005).

<sup>31</sup> Senators Boren and Danforth proposed a 14.5% subtraction-method VAT to replace the corporate income tax, the individual income tax on undistributed profits of pass-through entities, and half of the Social Security tax. S. 2160, 103d Cong. (2d Sess. 1994), reprinted in 140 Cong. Rec. S6524-30 (daily ed. June 7, 1994); see also John C. Danforth & David L. Boren, *The Comprehensive Tax Restructuring and Simplification Act of 1994: Technical Overview*, 94 TAX NOTES TODAY 103-26 (May 27, 1994); Cliff Massa III, *The "Business Activities Tax"—A Primer*, 64 TAX NOTES 1219, 1222, 1227 (Aug. 29, 1994).

<sup>32</sup> Gibbons proposed a 20% subtraction-method VAT to replace all Federal income taxes and Social Security and Medicare employment taxes. A rebate of value added tax to low-income individuals and a "burden assessment" on high-income individuals were meant to keep the proposal distributionally neutral. H.R. 4050, 104th Cong. (2d Sess. 1996).

<sup>33</sup> An earlier proposal made by Congressman Richard Schulze also did not impose an invoice requirement, but did deny deductions for payments made to certain domestic entities that were exempt from the subtraction-method VAT proposed by the bill. H.R. 3170, 102d Cong. (1st Sess. 1991).

<sup>34</sup> Many subtraction-method VAT proposals simply do not address the question of whether to incorporate an invoice requirement.

<sup>35</sup> See *supra* notes 13-14.

<sup>36</sup> JAPANESE MINISTRY OF FINANCE, COMPREHENSIVE HANDBOOK OF JAPANESE TAXES 2006, 11-73 (2006), available at [http://www.mof.go.jp/english/tax/taxes2006\\_e.pdf](http://www.mof.go.jp/english/tax/taxes2006_e.pdf).

the business purchases of such person for the taxable period, and defined the term business purchase to exclude any amount paid or incurred for the import of property or services.<sup>37</sup> The Boren-Danforth proposal reaches the same result by taxing the import of property or services into the United States and then providing a deduction for purchases of imports by registered traders.<sup>38</sup>

Thus, the Japanese VAT and the Gibbons and Boren-Danforth proposals are all “sophisticated” systems internationally, but remain “open subtraction-method VATs” domestically.<sup>39</sup> They are not sophisticated subtraction-method VATs, because they allow purchases from domestic entities that are not registered traders to be deducted. In this regard, a 2007 Japanese national tax reform commission concluded that full adoption of the credit-invoice method would improve the reliability and transparency of the Japanese VAT, but expressed concerns regarding the consequence of such reform for preferences provided to small businesses under Japan’s current system.<sup>40</sup>

Closing the system internationally is an exception to the general availability of deductions in the Gibbons and Boren-Danforth proposals. The Gibbons and Boren-Danforth proposals are closed internationally as part of an effort to achieve “destination basis” taxation for the subtraction-method VAT. VATs can be imposed on either a “destination basis” or an “origin basis.”<sup>41</sup> A “destination-basis” tax excludes exports from the tax base and includes imports in the tax base. An origin-basis tax includes exports in the tax base and excludes imports from the tax base. Credit-invoice method VATs are generally imposed on a destination basis. Thus domestic consumption is taxed regardless of where the goods being consumed are produced. If a subtraction-method VAT were imposed on the origin-basis, foreign-produced goods and services would not be subject to VAT on the portion of value added abroad when consumed in the U.S., while U.S.-produced goods and services would continue to be subject to VAT when consumed abroad under the standard credit-invoice method VATs imposed around the world.<sup>42</sup> Many subtraction-method VAT proponents view that result as raising a competitiveness issue, and propose closing the system internationally to address this concern -- although economists generally suggest that such treatment should not affect a country’s trade position.<sup>43</sup> Further

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<sup>37</sup> H.R. 4050, Sec. 201.

<sup>38</sup> S. 2160, Sec. 301.

<sup>39</sup> David Weisbach, *Ironing Out the Flat Tax*, 52 STAN. L. REV. 599, 615 (2000).

<sup>40</sup> BASIC IDEA FOR FUNDAMENTAL REFORM OF TAX SYSTEM, JAPANESE TAX COMMISSION 28 (Nov. 2007), available at <http://www.mof.go.jp/english/tax/e0711a.pdf>. See also n.119 and accompanying text, *infra*.

<sup>41</sup> For helpful discussions of the international implications of consumption tax proposals, see Harry Grubert & T. Scott Newlon, *The International Implications of Consumption Tax Proposals*, 48 NAT’L TAX J. 619 (Dec. 1995); Stephen E. Shay & Victoria P. Summers, *Selected International Aspects of Fundamental Tax Reform Proposals*, 51 U. MIAMI L. REV. 1029 (1997); Michael J. Graetz, *International Aspects of Fundamental Tax Restructuring: Practice of Principle?*, 51 U. MIAMI L. REV. 1093 (1997); Reuven S. Avi-Yonah, *From Income to Consumption Tax: Some International Implications*, 33 SAN DIEGO L. REV. 1329 (1996); David Bradford, *Blueprints for International Tax Reform*, 26 BROOK. J. INT’L L. 1449 (2001).

<sup>42</sup> Many U.S. companies oppose this treatment of exports and imports. The Flat Tax and the original X-tax proposal, both discussed at n. 4, *supra*, were “origin-based” and therefore lacked border adjustments, which made them less attractive to U.S. companies.

<sup>43</sup> Because an origin-based tax does not tax the full value of imported goods and services that are consumed domestically, it appears to favor imports. Economic theory suggests the benefit to imports from origin-basis treatment will be offset by currency exchange rates or other changes in the price level. The most basic notion is that a currency appreciation triggered by border adjustments will negate any permanent improvement in competitiveness.

issues associated with the taxation of imports and exports under credit-invoice and subtraction method VATs are discussed further in Part II. In the domestic context, however, proponents of U.S. subtraction-method VAT proposals recommend an open system on simplification grounds. The goal is described as allowing “businesses to use their most basic financial data to compute tax liability.”<sup>44</sup>

## II. KEY DESIGN FEATURES IN THE SUBTRACTION-METHOD AND CREDIT-INVOICE METHOD VAT

### A. Deductions from Non-Taxpayers

As a result of deductions by purchasers that are not offset by corresponding inclusions by sellers, any open subtraction-method VAT would be susceptible to significant tax avoidance. Limiting deductions for imports (as is done in the Boren-Danforth and Gibbons proposals) can solve this problem with respect to cross-border transactions, but does not address the problem more generally. Thus, even if the VAT is “closed” internationally, the absence of an invoice requirement or similar limitation could significantly reduce the amount of revenue the VAT collects for the fisc.

Bradford, Weisbach, and Bankman and Schler detail various potential problems of adopting a consumption tax system in which deductions are generally available for inputs on which consumption tax was not paid by the seller. One important concern is susceptibility to transfer pricing abuse.<sup>45</sup> Transfer prices are the amount charged by related entities in sales and transfers to one another. These entities have incentives to set prices in their transactions with one another to minimize tax, rather than on an “arm’s length” basis. The transfer pricing problem can be ameliorated if the VAT is closed internationally and coexists with an income tax system domestically.

Another important problem arises because the VAT is a tax on consumption – financial transactions are excluded. Thus, VATs do not require inclusion of interest or dividends received, and do not provide deductions for interest paid. This feature makes the tax economically efficient, and is also an important reason the tax is simple. However, maintaining the efficiency and simplicity of the VAT requires drawing a sharp distinction between “real” and financial

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*See, e.g.,* Alan Viard, *Border Adjustments Won't Promote Competitiveness*, 105 TAX NOTES 122 (October 4, 2004). However, some analysts point out that “fundamental” forces do not easily explain exchange rate adjustments. If exchange rates do not adjust properly, economic theory suggests that in the long run, the relevant adjustments could occur through adjustments in domestic prices and wages. The possibility that adjustments would occur other than through exchange rates and over an extended transition period has been a source of concern for various analysts, including the Tax Reform Panel. Tax Reform Panel Report at 173. Furthermore, these adjustments do not appear certain, while border adjustments are both immediate and certain, such that U.S. companies do not readily accept economists’ assurances in this regard. *See, e.g.,* MICHAEL J. GRAETZ, 100 MILLION UNNECESSARY RETURNS, A SIMPLE, FAIR, AND COMPETITIVE TAX PLAN FOR THE UNITED STATES 81 (2008).

<sup>44</sup> Senator David L. Boren, Statement before the Bipartisan Commission on Entitlement and Tax Reform (Oct 6, 1994), *reprinted in* 94 TAX NOTES TODAY 198-38 (Oct. 7, 1994).

<sup>45</sup> David Bradford focused heavily on the transfer pricing concern in the course of his writings regarding the international aspects of the X-tax. *See, e.g.,* David Bradford, *The X-Tax In The World Economy* (Nat’l Bureau of Econ. Research, Working Paper No. W10676, 2004).

transactions. Taxpayers would find it easy to manipulate that distinction to their advantage in an open subtraction-method system.<sup>46</sup>

Bankman and Schler provide the example of a taxpayer entering into offsetting long and short forward contracts for the delivery of goods. The taxpayer settles the favorable side of the straddle for cash, resulting in nontaxable gain from a financial transaction, and takes delivery on the unfavorable transaction, resulting in a deductible purchase.<sup>47</sup> Imagine an airline that enters into two forward contracts – one to buy fuel at \$2 per gallon, and one to sell fuel at \$2 per gallon. If fuel costs \$3 at the closing date of the contract, the airline could close out the long contract to buy fuel for \$1 in cash, spend \$3 to buy fuel on the market, deduct \$3, and deliver that fuel to the counterparty of the unfavorable contract for \$2. The airline has \$1 in non-taxable financial gain, and \$1 of net VAT deduction. In contrast, if fuel costs \$1 at the closing date of the contract, the airline could close out the short contract to sell fuel for \$1 in non-taxable financial gain, take delivery on the unfavorable contract for \$2, and either use the fuel or resell it for \$1, in either case providing an extra \$1 of net VAT deduction to the airline. In a system with an invoice requirement, however, the purchases of fuel will only be deductible if they are offset by taxable inclusions to registered traders. As a result, there will be no overall loss to the tax system. In an open subtraction-method VAT, however, a transaction involving a non-registered trader (who therefore would not have a VAT inclusion) would result in a deduction for a registered trader. David Weisbach suggests that in an open subtraction-method VAT “[g]iven that no risk is involved, businesses can use this type of transaction to eliminate business taxes at any time by simply doing it in greater size.”<sup>48</sup>

Standard credit-invoice method systems avoid this issue by denying input credits for purchases from non-registered traders. A sophisticated subtraction-method VAT produces the same result by making purchases from non-registered traders non-deductible.

## B. Exemptions and Input Taxation

Subtraction-method VAT advocates suggest that as an entity-based tax, the system is less susceptible to exemptions for specific goods and services than a credit-invoice method VAT. However, in an open subtraction-method VAT, the lack of matching between deductions and inclusions creates an incentive for lobbying for inappropriate tax exemptions by producers of intermediate inputs. The Japanese example also suggests subtraction-method VATs may include

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<sup>46</sup> The distinction between exempt financial institutions and other institutions is also susceptible to manipulation in standard credit-invoice method VATs to reduce VAT liability among related parties. (See, e.g., *Halifax PLC and Others v. Commissioners of Customs and Excise*, Decision No. 17124, VAT & Duties Tribunal (March 1, 2001) and STC 402 (Ch.D) [2002]; *Halifax and Others v. Customs and Excise Commissioners*, Case C-255/02, European Court of Justice (February 21, 2006); Peter Nias & Amy Manchia, *Halifax Judgment Raises VAT Planning Questions*, 42 TAX NOTES INT’L 7 (Apr. 3, 2006).

<sup>47</sup> Joseph Bankman & Michael Schler, Tax Planning Under the Flat Tax/X-Tax, Brookings Institution Conference on Taxing Capital Income: Do We? Should We? Can We? (Can We Not?) 19 (Sept. 2005), available at [http://www.americantaxpolicyinstitute.org/pdf/FallConference2005/NYCorp\\_2532993\\_3.pdf](http://www.americantaxpolicyinstitute.org/pdf/FallConference2005/NYCorp_2532993_3.pdf). Other examples provided by Weisbach and Bankman and Schler, such as valuation problems associated with sales of assets by an individual to a business that they own, may be less severe in a partial replacement VAT than in the full replacement consumption tax scenario those authors consider, depending on the tax consequences to the non-registered trader under the remaining income tax system.

<sup>48</sup> David Weisbach, *Ironing Out the Flat Tax*, 52 STAN. L. REV. 599, 616 (2000).

exemptions. Moreover, some exemptions may be appropriate or inevitable in any VAT. Finally, while a sophisticated subtraction-method VAT may be less susceptible to exemptions for specific goods and services, it may be more likely to be implemented with inappropriate entity-based exemptions.

VATs typically provide three different types of exemptions. First, supplies of goods and services provided by government entities, as well as non-profit organizations, charitable organizations and similar tax-exempt entities are often exempted from VAT for administrative, distributional, or other policy reasons. Second, for similar reasons, specific goods and services (for example, “merit goods” like educational services and health services) may also be exempted from the VAT regardless of the nature of the entity that makes the supplies.<sup>49</sup> Finally, small businesses may receive entity exemptions in recognition of the constraints on their administrative capacity.<sup>50</sup> Importantly, VATs, whether of the credit-invoice method or subtraction-method type, generally do not provide exemptions from VAT for categories of purchasers, as is commonly done in RSTs.<sup>51</sup> However, VATs do provide somewhat similar treatment by providing refunds of input tax paid with respect to supplies that are not taxed. This mechanism is known as “zero-rating.”<sup>52</sup> This section deals only with certain issues that arise generally in relation to the provision of an exempt good or service (“exempt supplies”). Issues related to zero-rating, and the policy issues posed by VAT exemptions or zero-rating that benefit specific categories of entities, notably nonprofit and charitable organizations, state and local governments, small business, and exporters are discussed later in this paper.

In a credit-invoice method VAT, no VAT is collected on exempt supplies. Similarly, a registered trader will not receive input credits for inputs associated with the provision of exempt supplies. In a subtraction-method VAT, revenues from the sale of exempt supplies are excluded from the registered trader’s VAT base. A sophisticated subtraction-method VAT would also deny deductions for inputs associated with the exempt good or service. For this reason, exemption in a credit-invoice method VAT or a sophisticated subtraction-method VAT can also be characterized as “input taxation.” In contrast, exemption in an open subtraction-method VAT will not result in the denial of deductions associated with the exempt good or service, producing a gap in the tax base.

Thus, while exemption of an intermediate-stage good or service in an open subtraction-method VAT reduces total tax collected in the value chain, exemption of an intermediate-stage good or service in a credit-invoice method VAT increases total tax collected in the value chain. Using

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<sup>49</sup> See Pierre-Pascal Gendron, this volume. See also U.S. TREASURY DEPARTMENT, APPROACHES TO IMPROVE THE COMPETITIVENESS OF THE U.S. BUSINESS TAX SYSTEM FOR THE 21ST CENTURY, 54 (2007).

<sup>50</sup> Michael J. Graetz, *100 Million Unnecessary Returns: A Fresh Start for the U.S. Tax System*, 112 YALE L.J. 261, 287–88 (2002); U.S. GEN. ACCOUNTING OFFICE, TAX ADMINISTRATION: POTENTIAL IMPACT OF ALTERNATIVE TAXES ON TAXPAYERS AND ADMINISTRATORS 140 (1998); LIAM EBRILL, MICHAEL KEEN, JEAN-PAUL BODIN & VICTORIA SUMMERS, INT’L MONETARY FUND, THE MODERN VAT (2001).

<sup>51</sup> Some exceptions may apply in some jurisdictions, for example in the case of exports or readily identifiable sales to governments and multilateral institutions. See Gendron, this volume; McLure, this volume; ALAN SCHENK AND OLIVER OLDMAN, VALUE-ADDED TAX: A COMPARATIVE APPROACH, 298 (2007).

<sup>52</sup> Zero-rating means that, while VAT is charged at a “zero rate” on the supply of goods or services, the supplier remains entitled to claim input tax credit for input tax incurred in making that supply, and therefore may be eligible for a refund of input tax paid. Zero-rating is discussed at Section II. D., *infra*.

the earlier example of the grape grower, the winemaker, and the retailer, Example 2 suggests that if wine sold by a winemaker is exempt from VAT under a credit-invoice method VAT, \$100 of that wine, when sold by a retailer to an end consumer, will bear \$26 of VAT on the inputs and final product. In contrast, if the same \$100 of wine is sold by a retailer under an open subtraction-method VAT with an exemption for sales by the winemaker, the wine will bear only \$12 of VAT.

### Example 2: Exemptions

Economic activity	Grape Grower	Winemaker	Retailer	Total
<b>Basic transactions</b>				
1. Sales	\$ 30	\$ 70	\$ 100	
2. Purchases	\$ 0	\$ 30	\$ 70	
3. Value added (Sales - Purchases)	\$ 30	\$ 40	\$ 30	\$ 100
<b>Credit-Invoice Method VAT</b>				
4. Tax on sales (20% of line 1)	\$ 6	EXEMPT	\$ 20	
5. Less: input tax on purchases	\$ 0	\$ 6	\$ 0	
6. Net VAT liability	\$ 6	EXEMPT = \$ 0	\$ 20	\$ 26
<b>Open Subtraction-Method VAT</b>				
7. VAT Liability (20% of line 3)	\$ 6	EXEMPT	\$ 6	\$ 12

A standard credit-invoice method VAT regime does not provide the retailer with an input credit for wine purchased from the winemaker, because no VAT was assessed on the sale of the wine. In addition, the credit-invoice method VAT does not provide the retailer a credit for the \$6 VAT paid by the winemaker on its purchase of grapes, the tax cost of which will be passed on to the retailer in the price of the wine. Thus, a credit-invoice method VAT with an exemption for an intermediate-stage good “cascades,” resulting in a tax burden on consumption of the final good that is higher than the standard VAT rate, and an incentive for self-supply of the exempt intermediate input by sellers of the final good. In contrast, in an open subtraction-method VAT (where the VAT is calculated based on total sales and total purchases), whether the winemaker’s sales were exempt from VAT is irrelevant to the calculation of the retailer’s subtraction-method VAT liability.

Advocates of subtraction-method VATs may claim that such a VAT is more likely to be imposed on a broad base, and avoid exemptions for specific goods and services, because it is entity-based.<sup>53</sup> However, under the credit-invoice method VAT, providers of intermediate goods prefer their sales to be fully taxed. If they are not, goods and services that incorporate their products become more expensive to final consumers. In contrast, an open subtraction-method VAT with an exemption for an intermediate good produces a lower-than-standard tax burden on

<sup>53</sup> See, e.g., HUFBAUER ET AL., *supra* note 30, at 71; see also John C. Danforth & David L. Boren, *The Comprehensive Tax Restructuring and Simplification Act of 1994: Technical Overview*, reprinted in 94 TAX NOTES TODAY 103–26 (May 27, 1994).

consumption of the final good. An open subtraction-method VAT therefore invites lobbying for special treatment by providers of intermediate inputs to other businesses.<sup>54</sup> The reduction in the tax collected in the value added chain creates a tax-induced preference for their goods or services if those goods or services are exempt.

These results are not, however, due to the credit method or subtraction method of calculation. A sophisticated subtraction-method VAT would deny a deduction to the retailer for the purchase of the case of wine in Example 2, producing the same effect as under the credit-invoice method VAT.<sup>55</sup> In that case, the winemaker would prefer to be taxed rather than to be exempt, as in the credit-invoice method VAT.

Thus, one might believe that a sophisticated subtraction-method VAT would be more likely to avoid exemptions for specific goods and services than a credit-invoice method VAT. On the other hand, the Japanese VAT, which is largely a closed system, has some of the same exemptions one finds in most credit-invoice method VATs. For example, the Japanese exempt supplies of medical services and educational services.<sup>56</sup> The Japanese example would seem to cast doubt on the claim that an entity-based system of calculation limits exemptions for socially preferred goods and services.

Furthermore, although there are good policy arguments for minimizing exemptions generally, no country has removed all exemptions from its VAT.<sup>57</sup> The broad, but realistic, consumption tax base recommended in 2005 by the President's Advisory Panel on Federal Tax Reform (the "Tax Reform Panel") for the credit-invoice method VAT it studied for the United States would include about 60% of GDP.<sup>58</sup> New Zealand has the broadest VAT base in use in the OECD today, but still offers certain exemptions, including for residential accommodation, certain supplies made by nonprofit entities, and the supply of certain fine metals.<sup>59</sup> In the rest of the OECD, services like health care and education are often referred to as politically "untouchable," and exempted, or given more preferential treatment through zero-rating.<sup>60</sup> The Tax Reform Panel recommended exempting charitable and religious services, leases of residential housing, and sales of pre-existing owner-occupied housing in the partial replacement VAT it studied for the United

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<sup>54</sup> MCLURE, KEY TO DEFICIT REDUCTION?, *supra* note 24, at 75

<sup>55</sup> Jack M. Mintz, *The Business Transfer Tax as a Consumption Tax*, 10 TAX NOTES INT'L 75 (Jan. 2, 1995); Charles E. McLure, Jr., *Economic, Administrative, and Political Factors in Choosing a General Consumption Tax*, 46 NAT'L TAX J. 345, 350 (1993).

<sup>56</sup> The Japanese VAT also exempts other so-called social welfare services (for example, Japan exempts meal delivery to the elderly, crematory services, and equipment for the physically handicapped). See JAPANESE MINISTRY OF FINANCE, COMPREHENSIVE HANDBOOK OF JAPANESE TAXES 2006 157 (2006), available at [http://www.mof.go.jp/english/tax/taxes2006e\\_e.pdf](http://www.mof.go.jp/english/tax/taxes2006e_e.pdf).

<sup>57</sup> DAVID WILLIAMS, INT'L MONETARY FUND, *Value-added Tax*, in 1 TAX LAW DESIGN AND DRAFTING 204 (Victor Thuryoni ed., 1996); New Zealand Inland Revenue, available at <http://www.ird.govt.nz/gst/additional-calcs/calc-spec-supplies/calc-exempt>.

<sup>58</sup> Tax Reform Panel Report at 249–55.

<sup>59</sup> New Zealand Inland Revenue, available at <http://www.ird.govt.nz/gst/additional-calcs/calc-spec-supplies/calc-exempt>; SCHENK ET AL. *supra* note 11, at 289.

<sup>60</sup> See, e.g., David White, *The Serious Research Gap on VAT/GST: A New Zealand Perspective after 20 Years of GST*, 18 INTERNATIONAL VAT MONITOR 343 (2007); Pierre-Phillipe Gendron, this volume. Domestic zero-rating of goods and services is discussed at Section II.D., *infra*.

States.<sup>61</sup> Design planning for a VAT should likely be prepared to accommodate at least some exemptions for specific goods and services.

While using the subtraction method lens to design a VAT may make exemptions of specific goods and services less likely, it also may make entity-based exemptions more likely. Limited liability corporations, S corporations, partnerships, and sole proprietorships are not subject to the current U.S. corporate income tax. Rather, their income is generally taxed to individual owners, who flow the income through to their individual income tax returns. One recent subtraction-method VAT proposal, put forth by Gary C. Hufbauer and Paul L. E. Grieco, exempts such flow-through entities from being registered traders, on the theory that they are not subject to the current corporate income tax.<sup>62</sup> In studying a subtraction-method VAT approach to business tax reform in the United States, the United States Treasury Department's report, *Approaches to Improve the Competitiveness of The U.S. Business Tax System for the 21<sup>st</sup> Century* (the "Competitiveness Report"), similarly considered, as one of the potential issues, whether flow-through entities would be treated as registered traders.<sup>63</sup> In a VAT, however, widespread exemptions for businesses across many sectors of the economy could undermine the integrity of the tax system.<sup>64</sup> Flow-through businesses account for about one-third of gross business receipts in the United States.<sup>65</sup> While in a broadly-applicable VAT businesses do not have an incentive to avoid paying VAT on their purchases (because they receive input credits), businesses that make exempt supplies, and therefore are ineligible for input credits, do have an incentive to avoid or evade VAT. Some subtraction-method VAT proposals have recognized this issue and subjected flow-through entities to VAT, while others have not.<sup>66</sup> The key point is that using the subtraction-method lens opens this design issue to discussion – which would not be the case in a credit-invoice method VAT understood as a tax imposed at the cash register.<sup>67</sup>

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<sup>61</sup> Tax Reform Panel Report at 250–52.

<sup>62</sup> HUFBAUER ET AL., *supra* note 30, at 71.

<sup>63</sup> U.S. TREASURY DEPARTMENT, *APPROACHES TO IMPROVE THE COMPETITIVENESS OF THE U.S. BUSINESS TAX SYSTEM FOR THE 21ST CENTURY* 27–55 (2007); *see also* Gary Clyde Hufbauer & Paul L. E. Grieco, *Comprehensive Reform for U.S. Business Taxation*, Statement to the U.S.-China Economic and Security Review Commission (May 20, 2005) (proposing to retain the income tax distinction between Subchapter C corporations and pass-through firms in a subtraction-method VAT).

<sup>64</sup> WILLIAMS, *supra* note 56, at 208.

<sup>65</sup> U.S. TREASURY DEPARTMENT, *TREASURY CONFERENCE ON BUSINESS TAXATION AND GLOBAL COMPETITIVENESS* 16–17 (JULY 26, 2007).

<sup>66</sup> Compare John C. Danforth & David L. Boren, *The Comprehensive Tax Restructuring and Simplification Act of 1994: Technical Overview*, reprinted in 94 *TAX NOTES TODAY* 103–26 (May 27, 1994) (subjecting all flow through entities to VAT) with HUFBAUER ET AL., *supra* note 30, at 71.

<sup>67</sup> In a subtraction-method VAT, the policy debate may be posed with reference to “the income of non-corporate business entities,” and as a result income tax assumptions may influence policymaking. *See* HUFBAUER ET AL., *supra* note 30, at 39 (describing their “Corporate Activities Tax” proposal as a “business tax”). A somewhat related issue involves whether financial accounting would treat the credit-invoice method VAT and the subtraction-method VAT similarly or differently, and how firms would respond to the two taxes as a result. While a credit-invoice method VAT would be accounted for like a sales tax, a question might arise as to whether a subtraction-method VAT could or should be accounted for like an income tax. However, clear guidance on the appropriate accounting for subtraction-method VATs is not available in the accounting literature under either U.S. GAAP or IFRS. *Cf.* EITF 06-3: *How Taxes Collected from Customers and Remitted to Governmental Authorities Should Be Presented in the Income Statement (That Is, Gross versus Net Presentation)* (June 28, 2006).

### **C. Multiple VAT Rates**

Conventional analysis highlights that a credit-invoice method VAT, as distinct from a subtraction-method VAT, provides the flexibility to impose preferential tax rates on specific goods or services. Preferential tax rates for specific goods and services are generally undesirable. However, as a practical matter, policymakers may choose to impose multiple rates.

Returning to our example, imagine that grapes are taxed at 10 percent rather than 20 percent. As shown in Example 3, the grape grower will still net \$30 after tax, but will charge only \$33 and remit only \$3 to the government, rather than charging \$36 and remitting \$6 as in Example 1a. The winemaker, in turn, will still charge \$84 ( $\$70 + 20\%$  VAT, because she is selling wine, not grapes, and wine is subject to the standard 20% VAT rate).

**Example 3**

Economic activity	Grape Grower	Winemaker	Retailer	Total
Basic transactions				
1. Pre-tax Sales	\$ 30	\$ 70	\$ 100	
2. Pre-tax Purchases	\$ 0	\$ 30	\$ 70	
4. Value added (Sales - Purchases)	\$ 30	\$ 40	\$ 30	\$ 100
<b>Credit-invoice method VAT</b>				
5. Tax on sales (10% of line 1 for grapes, 20% otherwise)	\$ 3	\$ 14	\$ 20	
6. Less: input tax on purchases	\$ 0	\$ 3	\$ 14	
7. Net VAT liability	<b>\$ 3</b>	<b>\$ 11</b>	<b>\$ 6</b>	<b>\$ 20</b>

The only difference between Example 1a and Example 3 is that instead of subtracting \$6 in tax already paid to determine what to remit to the government, the winemaker subtracts \$3 from the \$14 he collects from the retailer, thereby paying \$11 to the government. As a result, the same total amount is remitted to the government, and the preferential rate for grapes does not pass through. However, if the grapes are purchased by the retailer and sold for consumption as fresh fruit, the preferential 10% rate for grapes will continue to apply and pass through to the final consumer. The same retailer will apply the standard 20% VAT rate on bottles of wine it sells.

In contrast, without an invoice requirement, even a “sophisticated” subtraction-method VAT, cannot feasibly be administered with multiple tax rates. Imagine a corner store that only sells fresh grapes and wine. It buys \$200 of grapes and wine from registered traders, and has \$300 of sales. If there are different tax rates for grapes and for wine, simply subtracting the value of the corner store’s non-labor inputs (grapes and wine) from the total value of its sales and then multiplying by the VAT rate will not work to determine its VAT liability. To replicate the tax burden that the corner store would remit to the government in a credit-invoice method VAT, the tax authorities must know not only what part of the retailer’s sales consisted of grapes and what part of the retailer’s sales consisted of wine, but what part of the retailer’s inputs consisted of grapes, what part consisted of wine, and the tax rate paid on each of these inputs. In the absence of an invoice requirement (or comparable information collection) the necessary information is not available.<sup>68</sup>

At a theoretical level, it may be possible to impose multiple rates under a sophisticated subtraction-method VAT with a full invoice requirement. However, such a system seems highly complex at best. It would make partial exemptions and partial deductions the norm, rather than an exception. Consider again the example in which fresh fruit is taxed at a preferential rate, and a corner store sells fresh grapes and wine. If there are multiple rates and the corner store is to determine tax due in a single account, it must somehow “adjust” the value of its sales subject to

<sup>68</sup> U.S. GEN. ACCOUNTING OFFICE, TAX CREDIT AND SUBTRACTION METHODS OF CALCULATING A VALUE-ADDED TAX 23 (June 1989), available at <http://archive.gao.gov/d25t7/138940.pdf>.

the preferential rate.<sup>69</sup> One way to do this might be to treat such sales as partially exempt. But for the calculation to work properly, the adjustment must be to pre-tax sales, rather than post-tax sales.<sup>70</sup> Thus, instead of booking \$120 of grape sales, the corner store might book half the pre-tax value of such sales grossed up as if to include full VAT. Similarly, to account for deductions, it might deduct half the pre-tax cost of the grapes it bought from registered traders grossed up as if to include full VAT. With multiple preferential rates, the math will become even more complicated. These calculations are very different from using summary financial statement information to simply subtract the value of the store's non-labor inputs (grapes, wine, price labels, and shelving) from the total value of its sales and then multiply by the VAT rate to determine tax liability. More importantly, such calculations effectively require determining tax liability with respect to individual classes of supplies. They would “transform the subtraction method... into something like the invoice method.”<sup>71</sup>

Commentators frequently view the oddity of imposing multiple rates under a subtraction-method VAT as an advantage of the subtraction-method.<sup>72</sup> Most experts recommend that an ideal VAT should generally be imposed with a single non-zero rate.<sup>73</sup> Preferential rates, like inappropriate exemptions of specific goods and services, undermine revenues, impede administration, and reduce efficiency.<sup>74</sup>

However, policymakers may feel compelled to impose design features that vary from the academic ideal. Two-thirds of OECD countries maintain at least one non-zero preferential tax rate as part of their VATs.<sup>75</sup> The Competitiveness Report noted that there may be policy reasons to reduce or eliminate the rate of a VAT on “merit goods,” such as education, health care, welfare services, cultural activities, and religious and charitable activities.<sup>76</sup> It also pointed out

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<sup>69</sup> Exposition through an example may be eased somewhat by providing both tax-exclusive and tax-inclusive tax rates. Imagine the corner store pays \$100 for grapes purchased from registered traders (\$90.90 of grapes, plus \$9.09 of VAT imposed at a 10% tax-exclusive rate, or a 9.09% tax inclusive rate). It has \$109.09 pre-VAT of grape sales. The corner store pays \$100 for wine purchased from registered traders (\$83.33 of wine, plus \$16.66 of VAT imposed at a 20% tax-exclusive / 16.66% tax inclusive rate). It has \$150 pre-VAT of wine sales. The corner store also purchases other business inputs, such as price labels and shelving, used to sell both the grapes and the wine, for \$12 (\$10 plus \$2 of VAT imposed at 20% tax-exclusive / 16.66% tax-inclusive). The store sells the grapes for \$120 (\$109.09 plus \$10.90 of VAT imposed at a 10 % tax-exclusive / 9.09% tax inclusive), and the wine for \$180 (\$150 plus \$30 of VAT imposed at 20% tax-exclusive / 16.66% tax-inclusive). To adjust the value of its sales subject to the preferential rate, instead of booking \$120 of grape sales, the corner store might book half the pre-tax value of such sales, grossed up as if to include full VAT (\$54.54 of pre-tax grape sales, plus \$10.90 of hypothetical VAT, for a total inclusion of \$65.44). Similarly, to account for deductions, it might deduct only half the pre-tax cost of the grapes it bought from registered traders, grossed up as if to include full VAT (\$45.45 of pre-tax grape sales, plus \$9.09 of hypothetical VAT, for a \$54.54 deduction).

<sup>70</sup> *See id.*

<sup>71</sup> EBRILL ET AL., *supra* note 14, at 9–12.

<sup>72</sup> *See, e.g.,* Oliver Oldman & Alan Schenk, *The Business Activities Tax: Have Senators Danforth and Boren Discovered a Better Value-added Tax?* 10 TAX NOTES INT’L 55 (1995).

<sup>73</sup> EBRILL ET AL., *supra* note 14, at 69–82.

<sup>74</sup> EBRILL ET AL., *supra* note 14, at 69–82; Pierre-Pascal Gendron, this volume.

<sup>75</sup> ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, CENTRE FOR TAX POLICY AND ADMINISTRATION OECD TAX DATABASE (Jan. 1, 2007), *available at* [http://www.oecd.org/document/60/0,3343,en\\_2649\\_34533\\_1942460\\_1\\_1\\_1\\_1,00.html#table\\_IV1](http://www.oecd.org/document/60/0,3343,en_2649_34533_1942460_1_1_1_1,00.html#table_IV1). Worldwide, approximately half of all VATs include at least one non-zero preferential rate. EBRILL ET AL., *supra* note 13, at 68.

<sup>76</sup> U.S. TREASURY DEPARTMENT, APPROACHES TO IMPROVE THE COMPETITIVENESS OF THE U.S. BUSINESS TAX SYSTEM FOR THE 21ST CENTURY, 31 (Dec. 20, 2007).

that while a lower VAT rate for necessities is generally viewed as an inefficient way to address perceived regressivity, policymakers could decide to tax food, electricity, heating oil and gas, and clothing at a lower rate.<sup>77</sup> Of interest in this regard are the conclusions of a 2007 Japanese national tax reform commission that studied various potential tax reforms for Japan, including the possibility of adopting multiple VAT rates. The commission concluded that a subtraction-method VAT with multiple rates would not be enforceable, so that if Japan were to adopt a multiple rate structure, it would also need to adopt a credit-invoice system for its VAT.<sup>78</sup>

In comparing credit-invoice and subtraction-method VATs, the multiple rate issue may require a judgment regarding the political probability associated with various vagaries of the legislative process. Choosing a subtraction-method VAT may make the use of multiple rates less likely, as shown by the findings of the Japanese reform commission. However, a credit-invoice method VAT is equally able to be imposed with a single non-zero rate. In fact, more than 70% of countries that adopted a credit-invoice method VAT in the 1990s adopted and maintained VATs with only one positive VAT rate.<sup>79</sup> Extant subtraction-method VAT proposals suggest that a subtraction-method VAT is likely to deviate from VAT best practices in various other respects, as described above with respect to deductions from non-registered traders and the scope of application of the VAT, and below with respect to other issues of VAT design. Given the fact that a credit-invoice method VAT often is imposed at one non-zero rate, the question is what weight the prospect that it could be imposed at multiple rates should be given relative to other considerations.

#### **D. Zero-rating**

Zero-rating a good or service means that while no VAT is due on the supply, the supplier remains entitled to claim a tax offset for input tax incurred in making that supply, and therefore may be eligible for a refund of input tax paid. Zero-rating is used primarily to “border adjust” exports of goods and services to achieve destination basis taxation, and can provide a full refund for VAT paid with respect to a product in earlier stages of production and distribution. Zero-rating is possible in both a credit-invoice method VAT and a sophisticated subtraction-method VAT. Zero-rating produces a benefit similar to exemption in an open subtraction-method VAT.

Example 4 illustrates the mechanics of zero-rating a supply using a VAT imposed via either the sophisticated subtraction method or the credit-invoice method. Example 4 is identical to Example 1, except that the case of wine produced by the winemaker is purchased by an exporter and sold abroad. As a result, the wine is zero-rated and input credit is provided to the exporter with respect to the VAT paid on the wine at earlier stages of production. As lines 6 and 7 in the last column show, the result is that the net VAT collected by the government on the wine is zero.

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<sup>77</sup> *Id.*

<sup>78</sup> JAPANESE TAX COMMISSION, BASIC IDEA FOR FUNDAMENTAL REFORM OF TAX SYSTEM 28 (Nov. 2007), available at <http://www.mof.go.jp/english/tax/e0711a.pdf>.

<sup>79</sup> EBRILL ET AL., *supra* note 14, at 68–69 (data is as of 2001).

#### Example 4: Zero-Rating

Economic activity	Grape Grower	Winemaker	Wine Exporter	Total
<b>Basic transactions</b>				
1. Pre-tax Sales	\$ 30	\$ 70	\$ 100 outside the U.S. = \$ 0 (zero-rated)	
2. Pre-tax Purchases	\$ 0	\$ 30	\$ 70	
3. Value added (Sales - Purchases)	\$ 30	\$ 40	-\$ 70	
<b>Credit-invoice method VAT</b>				
4. Tax on sales (20% of line 1)	\$ 6	\$ 14	\$ 0	
5. Less: input tax on purchases	\$ 0	\$ 6	\$ 14	
6. Net VAT liability	\$ 6	\$ 8	-\$ 14	\$ 0
<b>Sophisticated Subtraction-Method VAT</b>				
7. Subtraction-Method VAT (20% of line 3)	\$ 6	\$ 8	-\$ 14	\$ 0

As discussed further below, zero-rating an export is not a tax preference under the “destination basis” for cross-border transactions, because in that case it simply reflects that exports are consumed outside the jurisdictional reach of the national VAT and therefore should only be taxed in the jurisdiction of consumption.

However, when there is a policy desire to provide a tax preference for certain goods or services, some countries deem it appropriate to zero-rate rather than exempt (i.e., input tax) that good or service even when supplied for domestic consumption. The rationale for zero-rating domestically is that exemption (input taxation) is more appropriate where administrative considerations make it undesirable to attempt to tax a particular good or service.<sup>80</sup> With exemption, some tax is maintained on the exempted good or service because the inputs used in supplying that good or service are still taxed. If there is an affirmative desire to consistently remove all tax from a specific good or service, then zero-rating may be more appropriate.<sup>81</sup> Zero-rating also has the benefit of eliminating any risk of cascading taxation or self-supply bias in connection with the zero-rated good or service.<sup>82</sup>

<sup>80</sup> See, e.g., MCLURE, KEY TO DEFICIT REDUCTION?, *supra* note 24, at 74–5; AUSTRALIAN TREASURY, TAX REFORM: NOT A NEW TAX, A NEW TAX SYSTEM 91 (Aug. 1, 1998), available at <http://www.treasury.gov.au/documents/167/PDF/Whitepaper.pdf>.

<sup>81</sup> One corollary to the argument that zero-rating is more appropriate than exemption when there is an affirmative desire to remove all tax from a specific good or service is that a reduced rate (as part of a multiple rate system) is also more appropriate than exemption if the goal is to provide a partial tax subsidy for a specific good or service, as the amount of the subsidy is known and not dependent on the degree of vertical integration with respect to the supply of the good or service.

<sup>82</sup> Thus, for example, the Tax Reform Panel suggested zero-rating educational services and noncommercial government services in the credit-invoice method VAT it studied for the United States. Tax Reform Panel Report at 250–52.

Exemption in an open subtraction-method VAT effectively removes all the tax previously collected on that good in earlier stages of production and distribution.<sup>83</sup> Thus, in an open subtraction-method VAT zero-rating and exemption of a final-stage supply produces a similar benefit. An open subtraction-method system has no mechanism for “input taxing” a good or service where administrative considerations make exemption appropriate but maintaining some level of taxation is desired. As the example illustrates, zero-rating is possible in both a credit-invoice method VAT and a sophisticated subtraction-method VAT with one non-zero rate.

## **E. Goods and Services Provided by Government and Nonprofit Organizations**

Goods and services supplied by nonprofit organizations and government entities represent almost twenty percent of U.S. GDP.<sup>84</sup> Furthermore, state and local government accounts for two-thirds of this economic activity – or almost thirteen percent of GDP.<sup>85</sup> The relationship between the states and the federal government is a sensitive question with a constitutional dimension. Thus, for reasons of both economic efficiency and political comity, a workable approach to the treatment of nonprofit organizations and government entities under the VAT is important to a well-administered VAT. The best practice approach focuses on the taxation of specific supplies, rather than entities, and thus may be more easily achieved in a credit-invoice method structure than in a subtraction-method structure.

### **1. Ideal Treatment**

In his paper for this conference, Gendron argues that in an ideal VAT, goods and services supplied by public sector bodies and charitable and non-profit organizations would be within the scope of VAT.<sup>86</sup> Very few such goods or services would be exempt from VAT.<sup>87</sup> However, goods and services supplied for no (or nominal) consideration would generally be zero-rated.<sup>88</sup> Those goods and services supplied by the public sector and the nonprofit sector that compete with private sector sales would be taxed.<sup>89</sup> Thus, Gendron focuses on the nature of the good or service being supplied, rather than the entity that is supplying that good or service, in determining how to treat the activities of governments and nonprofit organizations.

### **2. Supplies by Nonprofit Organizations**

Gendron recommends that the United States severely limit zero-rating and exemptions for goods and services supplied by non-profit and charitable organizations. Gendron notes that full taxation under VAT for nonprofits and charitable organizations is consistent with exempt status under the income tax because taxable status under the VAT simply means that charitable and

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<sup>83</sup> In principle an open subtraction-method VAT could deny deductions proportionately based on the proportion of exempt to taxable sales. In that case, exemption of a final-stage good would produce a similar result to exemption in the credit-invoice method VAT.

<sup>84</sup> DEPARTMENT OF COMMERCE, SURVEY OF CURRENT BUSINESS, TABLE 1.1.10, PERCENT SHARES OF GROSS DOMESTIC PRODUCT D-4 (Dec. 2008).

<sup>85</sup> *Id.*

<sup>86</sup> Pierre-Pascal Gendron, this volume.

<sup>87</sup> *Id.*

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*

nonprofit entities act as VAT collection agents for the government with respect to a tax that is, and is widely understood to be, imposed on consumers. Further, because supplies for no or nominal consideration generally would not be taxed on their implicit fair market value, those supplies by charitable and nonprofit entities would receive treatment that is similar in effect to zero-rating.<sup>90</sup>

Both a sophisticated subtraction-method VAT and a credit-invoice method VAT could be used to implement these design recommendations. However, as Gendron points out, the rationale for full taxation of charitable and nonprofit entities turns on thinking of these entities as collection agents for a tax imposed on consumers, rather than as being “consumers” subject to the tax themselves. Conventionally the credit-invoice method VAT is thought of as a tax imposed on a consumer and collected by the selling entity at the cash register, whereas the subtraction-method VAT is thought of as a tax that is imposed on the entity. As a result, the conceptual framework that justifies full taxation of nonprofit entities with zero-rating for any supplies for which they do not charge consideration may be an easier fit with the credit-invoice method than the subtraction method.

### 3. State and Local Government Services

Gendron concludes that given potential constitutional limitations in the United States on mandating state and local governments to collect a federal tax on the goods and services they provide,<sup>91</sup> the most feasible policy for the United States may be to exempt supplies by state (and local) governments, but allow them to elect to make taxable supplies. The notion is that for a governmental entity providing mostly public goods, opting in to collecting the VAT (and consequently receiving zero-rating for most of the goods and services they supply) will be more attractive than remaining exempt as an entity.<sup>92</sup> Again, at a theoretical level, both a sophisticated subtraction-method VAT and a credit-invoice method VAT could be used to implement this design recommendation. Revealingly, however, the Japanese VAT simply exempts local government from VAT. From a political economy perspective, asking state and local governments to pay a subtraction-method VAT may appear similar to asking those governments to pay company income tax. In the United States it may be more palatable to ask the states to consider choosing to assess a credit-invoice method tax on specific transactions where they

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<sup>90</sup> In comparison, the Boren-Danforth proposal would have subjected charities described in present-law IRC section 501(c)(3) to the VAT only with respect to their business activities that would be subject to the unrelated business income tax under present law. Other nonprofit organizations would have been fully subject to the VAT, including with respect to the fair market value of their supplies not made for fair market value consideration. John C. Danforth & David L. Boren, *The Comprehensive Tax Restructuring and Simplification Act of 1994: Technical Overview*, 94 TAX NOTES TODAY 103–26 (May 27, 1994).

<sup>91</sup> *Helvering v. Gerhardt*, 304 U.S. 405 (1938) (upholding federal taxation of employees of the Port Authority of New York as falling outside the state immunity from federal taxation reserved for “essential government functions,” while noting that “there may be state agencies of such a character and so intimately associated with the performance of an indispensable function of state government that any taxation of them would threaten such interference with the functions of government itself as to be considered beyond the reach of the federal taxing power.”); *see also Printz v. United States*, 521 U.S. 898, 944 (1997) (“The Federal Government may neither issue directives requiring the States to address particular problems, nor command the States’ officers, or those of their political subdivisions, to administer or enforce a federal regulatory program.”).

<sup>92</sup> Gendron, this volume.

provide commercial services that may compete with the private sector, and providing them strong incentives to do so through the opt-in regime recommended by Gendron.

## F. Real Estate

The appropriate treatment of residential housing and other real property is important in a VAT both because residential housing represents approximately fifteen percent of gross domestic product,<sup>93</sup> and because of the political importance of residential housing.<sup>94</sup> Taxation of residential real property under a VAT is complicated by issues such as whether it would be appropriate to tax the imputed rental value of home ownership, and also requires distinguishing between real property investment and consumption as well as personal vs. business use of real property.<sup>95</sup> The Tax Reform Panel, consistent with the recommendation of various experts and the general approach taken in Canada and New Zealand, recommended that the sale and rental of immovable property should be generally taxable, but that residential rent should be exempt from VAT, as should the sale of previously occupied residential property.<sup>96</sup> Similarly, in his paper for this conference, Satya Poddar generally describes a structure that exempts long-term residential rent, fully taxes supplies of construction services and the first sale of new residential property, and exempts the resale of used residential dwellings, as the most practical one for taxing residential real property under a VAT.<sup>97</sup>

VATs in existence around the world take a variety of approaches to the taxation of real property, but all utilize exemption and zero-rating. Because of the perception that exemptions and zero-rating for specific goods and services are inappropriate in a subtraction-method system, it may be more difficult to legislate any solution involving exemption or zero-rating in a subtraction-method VAT. Residential rent paid to a real estate management company may not seem deserving of exemption when the tax is perceived to be assessed on the “income” of the entity receiving the payment, rather than the individual to whom housing is supplied. Neither the Boren-Danforth nor the Gibbons subtraction-method VAT proposals provided special rules to exempt residential rent, although the definition of taxable activity in those proposals would appear to exempt the resale of owner-occupied housing.<sup>98</sup> Poddar observes that such treatment tends to be regressive and is not economically neutral.<sup>99</sup>

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<sup>93</sup> BUREAU OF ECONOMIC ANALYSIS, U.S. DEP'T OF COMMERCE, SURVEY OF CURRENT BUSINESS, NATIONAL DATA, TABLE 1.5.5 GROSS DOMESTIC PRODUCT, EXPANDED DETAIL (Dec. 2008), *available at* [http://www.bea.gov/scb/pdf/2008/12%20December/D-Pages/1208dpg\\_a.pdf](http://www.bea.gov/scb/pdf/2008/12%20December/D-Pages/1208dpg_a.pdf).

<sup>94</sup> *See, e.g.*, Exec. Order No. 13,369, President's Advisory Panel on Federal Tax Reform (Jan. 7, 2005) (mandating that the Tax Reform Panel should recommend options to make the tax code simpler, fairer, and more conducive to economic growth, while “recognizing the importance of home ownership”).

<sup>95</sup> *See* SCHENK ET AL., *supra* note 11, at 408–31.

<sup>96</sup> Tax Reform Panel Report at 252; Sijbren Cnossen, *VAT Treatment of Immovable Property*, in 1 TAX LAW DESIGN AND DRAFTING 244 (Victor Thuryoni ed., Int'l Monetary Fund 1996).

<sup>97</sup> Poddar, this volume.

<sup>98</sup> S. 2160, 103d Cong. (2d Sess. 1994), *reprinted in* 140 Cong. Rec. S6524-30 (daily ed. June 7, 1994); H.R. 4050, 104<sup>th</sup> Cong. (2d Sess. 1996).

<sup>99</sup> Poddar, this volume.

## G. Financial Services

As described earlier, financial payments are excluded from the VAT base. Many financial services are therefore difficult to tax under a VAT because implicit fees for financial services are typically imbedded in interest rate spreads and financial margins associated with financial payments. The value of the financial intermediation fee imbedded in these interest rate spreads and financial margins is difficult to determine. As Alan Schenk explains in another paper for this conference, the goal should be to at least tax all business-to-business supplies of financial services under a VAT, so that the financial institutions rendering those services can recover VAT on their business inputs just like any other firm, and so that the tax does not cascade.<sup>100</sup> Unfortunately “(n)o convincing conceptually correct *and* practical solution for capturing the bulk of financial services under the VAT has yet been developed.”<sup>101</sup> Many commentators generally view the total global value of the intermediation services rendered by financial institutions to be susceptible to calculation, but no acceptable method has been devised to calculate the value of the services rendered to each depositor and borrower on a transaction-by-transaction basis.<sup>102</sup>

The most common approach to the taxation of financial intermediation in credit-invoice method VATs worldwide is to exempt financial intermediation services, thereby using input taxation as a substitute for full taxation of financial services on the theory that taxation is appropriate but impractical.<sup>103</sup> However, exemption of financial services (in a credit-invoice method VAT or a sophisticated subtraction-method VAT) produces at least two significant problems: cascading and self-supply bias.<sup>104</sup> An increasing number of countries are experimenting with solutions to the problems caused by exempting financial services. For example, New Zealand recently revised its law so as to zero-rate certain business to business financial services in order to reduce cascading, while continuing to exempt financial services supplied to consumers, in order to ensure that the consumption of financial services by final consumers is taxed, partially and indirectly, by denying financial services providers full recovery of their VAT input tax.<sup>105</sup> Most alternatives to exemption implemented in jurisdictions with a VAT involve distinguishing between various types of financial service supply, so that some financial services remain exempt while others are taxable or zero-rated.<sup>106</sup> Schenk generally recommends exempting a narrow range of specifically-defined financial services, rather than financial services entities more generally.

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<sup>100</sup> Schenk, this volume. Cascading results from any exemption for intermediate inputs, as described in Part II.B, *supra*.

<sup>101</sup> R. BIRD & P.P. GENDRON, *THE VAT IN DEVELOPING AND TRANSITIONAL COUNTRIES*, 96 (CUP 2007).

<sup>102</sup> See Schenk, this volume. The author is grateful to Emil Sunley for discussions regarding this issue.

<sup>103</sup> See, e.g., Pierre-Pascal Gendron, *VAT Treatment of Financial Services: Assessment and Policy Proposal for Developing Countries*, BULLETIN FOR INTERNATIONAL TAXATION 494 (Nov. 2008).

<sup>104</sup> Cascading arises because financial services are often supplied to other businesses, for which those financial services are an intermediate input. The self-supply bias arises because as exempt entities, financial service providers cannot make use of input credits.

<sup>105</sup> See NEW ZEALAND INLAND REVENUE, TAXATION (ANNUAL RATES, GST, TRANS-TASMAN IMPUTATION AND MISCELLANEOUS PROVISIONS) BILL (Commentary on the Bill), *available at* <http://www.ird.govt.nz/resources/5/c/5c15a7804bbe353b973ed7bc87554a30/maybill03.pdf>.

<sup>106</sup> See, e.g., SATYA PODDAR, *VAT on Financial Services – Searching for a Workable Compromise*, in *GST IN RETROSPECT AND PROSPECT* 186-89 (Richard Krever & David White, eds., 2007).

Taxation of financial services may seem simpler under a subtraction-method VAT than under a credit-invoice method VAT. Particularly in an open subtraction-method VAT, which does not endeavor to match deductions and inclusions, it may not seem necessary to devise a mechanism to calculate the value of the services rendered to each depositor and borrower on a transaction-by-transaction basis. However, if a system were implemented to tax the total global value of the intermediation services rendered by financial institutions, that tax would cascade unless a mechanism were developed to allow business users of financial services to claim input credits with respect to the financial services supplied to them. For example, Israel taxes banks and insurance companies under an “addition-method” value-added tax,<sup>107</sup> but the tax is administered separately from the Israeli VAT, banks and insurance companies cannot recover VAT on their business inputs, and the users of financial services cannot claim input credits with respect to financial services that are provided to them.

In recognition of the potential cascading problem associated with full taxation of financial service providers in a subtraction-method VAT, the Boren-Danforth proposal required financial service providers to report the implicit charge for intermediation services to business users. The proposal did not, however, provide a methodology for determining that implicit charge.<sup>108</sup> The lack of such a methodology illustrates that to avoid the cascading problem, a subtraction-method VAT must calculate the value of the services rendered to each recipient of financial services – thereby recreating the most significant problem encountered with taxing financial services under the credit-invoice method VAT. Without such a calculation, registered traders are over-taxed on financial services because VAT imbedded in financial services received is not recoverable by these registered traders when they make their own supplies. In contrast, the subtraction-method system may make it easier to ensure full taxation of household consumption of financial services. Whether a system that over-taxes financial services supplied to business, and fully taxes financial services supplied to consumers is preferable to a system that over-taxes financial services supplied to business and under-taxes financial services supplied to consumers is not at all clear. Some commentators suggest that the optimal rate of tax for financial services may be a lower-than-standard rate.<sup>109</sup>

While the open subtraction-method VAT, the credit-invoice method VAT, and the sophisticated subtraction-method VAT all face the same challenges in structuring a workable system to properly tax financial intermediation, the open subtraction-method VAT cannot properly manage the distinction between real and financial transactions. As described in Part II.A., this makes the

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<sup>107</sup> The addition-method VAT requires taxable entities to calculate tax liability by adding the cost of the firm’s economic factors of production plus a measure of profit for VAT purposes, and multiplying the total by the tax rate. See SCHENK ET AL., *supra* note 11, at 43.

<sup>108</sup> David L. Boren & John C. Danforth, TECHNICAL OVERVIEW OF DANFORTH/BOREN ‘COMPREHENSIVE TAX RESTRUCTURING AND SIMPLIFICATION ACT OF 1994’, *reprinted in* TAX NOTES TODAY (May 27, 1994) (“We would expect the Secretary of the Treasury to issue regulations regarding the requirements for reasonably allocating implicit fees among the recipients of financial intermediation services. These regulations could provide general rules for allocating fees for different types of financial intermediaries or specific rules for certain financial intermediaries.”).

<sup>109</sup> Boadway & Keen, Theoretical Perspective on the Taxation of Capital Income and Financial Services, ch. 2, in P. HONOHAN, ED., TAXATION OF FINANCIAL INTERMEDIATION: THEORY AND PRACTICE FOR EMERGING ECONOMIES (World Bank 2003). See also Harry Grubert and James Mackie, *Must Financial Services be Taxed Under a Consumption Tax*, 53 NAT’L TAX J. 23 (2000) (suggesting that a range of financial services provided to households should be treated as non-taxable).

manipulation of the “real vs. financial” distinction a source of potential tax avoidance by non-financial institutions in the open-subtraction method VAT. Both the credit-invoice method VAT and the sophisticated subtraction-method VAT avoid this problem, and both could accommodate exemption, zero-rating, or most other solutions for the taxation of financial services adopted by governments or considered in the literature, including cash flow taxation and various modifications thereof.<sup>110</sup> Taxation of financial services is “the major remaining frontier”<sup>111</sup> for the VAT. Fifty years of experience with credit-invoice method VATs have led tax administrations to identify best practices for the credit-invoice method VAT in most areas of consumption taxation. In financial services, however, no convincing best practice has emerged. *A priori*, either a sophisticated subtraction-method VAT or a credit-invoice method VAT could be used to address the relevant challenges. Nevertheless, exemption of a limited set of specific financial services of the sort recommended by Schenk, as well as the zero-rating approach taken by some jurisdictions, may each seem more appropriate in a credit-invoice method VAT.

## H. Small Business

As part of their credit-invoice method VATs, approximately two-thirds of OECD countries allow small businesses to elect to be exempt from collecting the VAT.<sup>112</sup> Exempted businesses tend to account for a relatively small fraction of gross receipts and continue to pay VAT on their inputs, limiting the revenue loss generated by this policy.<sup>113</sup> Further, small businesses with registered traders as their main customers generally will voluntarily choose to register to collect VAT, even though they are eligible for exemption, in order to pass input tax credits on to their customers. Thus an optional VAT exemption for small business, if implemented with a reasonable threshold, is administratively appealing. It simplifies enforcement efforts by substantially decreasing the number of VAT returns the tax administration receives.<sup>114</sup> As the compliance costs associated with a VAT are low overall, but may be disproportionately high for many small businesses, a small business exemption also minimizes the impact that administrative costs of the VAT may have on small business. Because small businesses exempt from the credit-invoice method VAT cannot claim input credits, and purchases from small businesses do not provide input credits, exempting small businesses does not generally provide a significant distortive advantage to those businesses.

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<sup>110</sup> See Satya Poddar and Morley English, *Taxation of Financial Services Under a Value-Added Tax*, 50 NAT'L TAX J. 89 (1997); Howell Zee, *A New Approach to Taxing Financial Intermediation Services Under a Value-Added Tax*, 58 NAT'L TAX J. 77 (2005).

<sup>111</sup> Pierre-Pascal Gendron, *VAT Treatment of Financial Services: Assessment and Policy Proposal for Developing Countries*, BULLETIN FOR INTERNATIONAL TAXATION 494 (Nov. 2008).

<sup>112</sup> U.S. TREASURY DEPARTMENT, APPROACHES TO IMPROVE THE COMPETITIVENESS OF THE U.S. BUSINESS TAX SYSTEM FOR THE 21ST CENTURY 55 (2007).

<sup>113</sup> Estimates for 2003 suggest that only 1.8 percent of gross receipts in the United States are collected by businesses with less than \$100,000 in gross receipts. Kelly Luttrell, Patrice Treubert & Michael Parisi, *Integrated Business Data, 2003, Statistics of Income Bulletin* (Fall 2006), available at <http://www.irs.gov/taxstats/article/0,,id=164743,00.html>. A gross receipts exemption threshold of approximately \$100,000 would entail relatively little revenue loss for the fisc according to a 1993 Governmental Accountability Office study. U.S. Government Accountability Office, *Tax Policy: Value-Added Tax: Administrative Costs Vary with Complexity and Number of Businesses* (May 3, 1993).

<sup>114</sup> As of 2003, of the 27.5 million businesses in the United States, 21.4 million, or 77%, had gross receipts of less than \$100,000. Kelly Luttrell, Patrice Treubert & Michael Parisi, *Integrated Business Data, 2003, Statistics of Income Bulletin* (Fall 2006), available at <http://www.irs.gov/taxstats/article/0,,id=164743,00.html>.

A small business exemption is problematic in an open subtraction-method VAT, because purchases from exempt small businesses can still be deducted by registered traders.<sup>115</sup> Without an invoice requirement, a small business exemption creates the potential for firms to, among other abuses, avoid VAT liability on inputs by purchasing from businesses below the small business threshold, to convert non-deductible salary expenses into deductible service costs by housing their employees in separate legal entities, and to avoid VAT collection on sales by organizing their activities in a series of small enterprises.<sup>116</sup> A sophisticated subtraction-method VAT should avoid this problem by identifying and denying deductions for supplies from an exempt supplier.

The Japanese example provides a cautionary note about the potential for deviations from the matching principle of closed systems with regards to small businesses in a subtraction-method VAT. The Japanese VAT includes rules that allow registered taxpayers to deduct inputs purchased from small businesses eligible for a “simplified system” of VAT taxation, even though VAT is not truly assessed on the small businesses’ sales. Under the simplified system, these small businesses are allowed to pay a presumptive amount of VAT liability, rather than VAT calculated based on actual sales and input tax paid.<sup>117</sup> These rules favoring small domestic businesses had much broader application before 2004, when Japan lowered the threshold above which a business is no longer eligible for the simplified system for small businesses from taxable sales of 200 million Yen (approximately \$2 million) per taxable year to taxable sales of 50 million Yen (approximately \$500,000) per taxable year.<sup>118</sup> In contrast to an ideal small business exemption regime, the Japanese “simplified tax system” resulted in VAT input credits for purchases of goods on which full VAT may not have been assessed, and created a distortive advantage for small businesses eligible for the simplified tax system.

The conclusions of a 2007 Japanese tax reform commission may also be instructive in considering the politics of adopting a sophisticated subtraction-method VAT. The commission concluded that “the adoption of an “invoice method” into the Japanese VAT would be useful in increasing the appropriateness of an input tax credit, but at the same time it is feared that tax-

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<sup>115</sup> Jack M. Mintz, *The Business Transfer Tax as a Consumption Tax*, 10 TAX NOTES INT’L 75 (Jan. 2, 1995).

<sup>116</sup> See McLURE, KEY TO DEFICIT REDUCTION?, *supra* note 24, at 117–23; U.S. TREASURY DEPARTMENT, APPROACHES TO IMPROVE THE COMPETITIVENESS OF THE U.S. BUSINESS TAX SYSTEM FOR THE 21ST CENTURY 41 (Dec. 20, 2007). Providing a small business exception creates some potential for firms to avoid VAT by organizing their activities in a series of small enterprises even in a credit-invoice method VAT. Anti-abuse rules that aggregate related firms for purposes of applying the VAT threshold may therefore be necessary. Some commentators suggest that these rules can be burdensome to enforce. Joseph Bankman & Michael Schler, *Tax Planning Under the Flat Tax/X-Tax*, Brookings Institution Conference on Taxing Capital Income: Do We? Should We? Can We? (Can We Not?), (Sept. 2005), *available at* [http://www.americantaxpolicyinstitute.org/pdf/FallConference2005/NYCorp\\_2532993\\_3.pdf](http://www.americantaxpolicyinstitute.org/pdf/FallConference2005/NYCorp_2532993_3.pdf).

However, the pressure on these rules would be much more intense without an invoice requirement, because the tax incentives to segregate activities so as to qualify for exemption would be much greater.

<sup>117</sup> Businesses with annual taxable sales of less than ¥ 50 million (approx \$500,000) can choose to calculate their VAT input credits by multiplying tax liability on sales by a fixed percentage determined based on a statutorily-prescribed business classification system. JAPANESE MINISTRY OF FINANCE, COMPREHENSIVE HANDBOOK OF JAPANESE TAXES 2006 178 (2006), *available at* [http://www.mof.go.jp/english/tax/taxes2006\\_e.pdf](http://www.mof.go.jp/english/tax/taxes2006_e.pdf).

<sup>118</sup> JAPANESE MINISTRY OF FINANCE, COMPREHENSIVE HANDBOOK OF JAPANESE TAXES 2006 178 (2006), *available at* [http://www.mof.go.jp/english/tax/taxes2006\\_e.pdf](http://www.mof.go.jp/english/tax/taxes2006_e.pdf).

exempt business operators might be kept out of the chain of transactions.”<sup>119</sup> The commission stated that reform efforts needed to “strike a balance between the need to improve the reliability and transparency of the system and the need to care for the trading realities” of small businesses.<sup>120</sup> The reform commission’s report suggests that the reason the Japanese maintain their current hybrid credit/subtraction method system, rather than fully adopting the credit-invoice method, is to allow other businesses deductions for purchases from small Japanese businesses that remain in the simplified system of taxation and therefore are not fully subject to the VAT.

## I. Exports, Imports, and Border Tax Adjustments

Every country in the OECD imposes the VAT on the destination basis with respect to cross-border transactions involving goods, although there is less consistency in the treatment of international trade in services.<sup>121</sup> The choice between a destination basis and an origin basis VAT<sup>122</sup> has consequences for a substantial part of the economy, as gross exports represented 13% of GDP in 2008, while the value of gross imports was equal to 18% of GDP.<sup>123</sup> Fully open subtraction-method VATs are imposed on an origin-basis, while imposing a sophisticated subtraction-method VAT on a destination-basis may be susceptible to challenge under World Trade Organization rules.

### 1. Difficulties of Origin-basis Taxation

An origin-basis VAT could be susceptible to significant tax avoidance problems. Taxpaying businesses would be able to deduct purchases from foreign businesses that do not pay U.S. tax. Thus taxpayers could claim deductions that would not be offset by corresponding inclusions by other U.S. taxpayers. An origin-based VAT thus creates the same types of asymmetries that arise domestically in an open subtraction-method VAT. However, because the asymmetry arises with respect to related foreign parties, rather than just non-registered domestic individuals, small businesses, and other tax-non-registered entities, the scope for tax avoidance may be much more severe, because the range of entities that can act as counterparties for avoidance transactions is broader, transactions may be easier to arrange, and enforcement of anti-abuse rules is likely to be more difficult.

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<sup>119</sup> BASIC IDEA FOR FUNDAMENTAL REFORM OF TAX SYSTEM, JAPANESE TAX COMMISSION 28 (Nov. 2007), available at <http://www.mof.go.jp/english/tax/e0711a.pdf>.

<sup>120</sup> *Id.*

<sup>121</sup> SCHENK ET AL., *supra* note 11, at 182.

<sup>122</sup> As described at n. 41-42 and accompanying text, *supra*, a “destination-basis” VAT excludes exports from the tax base and includes imports in the tax base. Thus domestic consumption is taxed regardless of where the goods being consumed are produced. An origin-basis tax includes exports in the tax base and excludes imports from the tax base. Thus, an origin-basis tax is imposed on the entire value of goods and services produced domestically (whether sold at home or abroad), but taxes only the domestic markup (value-added in the United States) to the value of imported goods and services.

<sup>123</sup> DEPARTMENT OF COMMERCE, SURVEY OF CURRENT BUSINESS, TABLE 1.1.10, PERCENT SHARES OF GROSS DOMESTIC PRODUCT D-4 (Feb. 2009).

A related problem with an origin-basis consumption tax is its susceptibility to transfer pricing abuse, including with respect to royalty payments on intangible assets.<sup>124</sup> Transfer pricing is also a major problem in enforcing the income tax. Nevertheless, there are some reasons to fear that transfer pricing problems would be even more severe under an origin-basis VAT than under the income tax.<sup>125</sup>

Limiting the tax base to domestic consumption by imposing the VAT on a destination basis (taxing imports and excluding exports from tax) resolves these issues.<sup>126</sup> In a destination-basis system the price established in cross-border transactions is irrelevant to the amount of revenue collected, because purchases from abroad do not provide a deduction and producing goods or services in the United States which are consumed abroad does not create taxable value-added. For example, royalties paid for foreign-created intangible assets would not be deductible, since they are payments for imports, and royalties received from abroad would be exempt, because they represent payments for exports of intangible assets. For example, the 2005 Tax Reform Panel expressed a strong preference for a destination-basis consumption tax because of the serious enforcement difficulties raised by an origin-basis consumption tax.<sup>127</sup>

## 2. Imposing VAT on a Destination Basis

Imposing the VAT on a destination-basis requires a “border adjustment.” To eliminate the tax paid on an exported good by businesses at earlier stages in the production and distribution process exports are zero-rated, and as a result exporters receive a credit (and therefore perhaps a refund) for tax paid on their inputs under a credit-invoice method system, even though no tax is assessed on their sales. On the other hand, VAT is imposed at the border on imported goods.<sup>128</sup> Subsequently, an importer may claim a credit against VAT liability (or refund) on their domestic sales.

A fully open subtraction-method VAT will not include border adjustments, because it provides deductions for all inputs, including imported inputs, and does not provide for zero-rating. In

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<sup>124</sup> See, e.g., David Bradford, *The X-Tax In The World Economy* (Nat’l Bureau of Econ. Research, Working Paper No. W10676, 2004); Tax Reform Panel Report at 169-70. See n. 43, *supra*, and accompanying text, for a description of transfer pricing issues generally.

<sup>125</sup> Subpart F base company rules act as a partial backstop to transfer pricing enforcement when U.S. multinationals attempt to shift sales or services income to low-tax jurisdictions. Under the United States’ current regime for taxing international income, taxation of foreign-source income of a foreign subsidiary of a U.S. company is generally deferred until such time as that income is repatriated to the United States. In contrast, in an origin-basis VAT, obtaining foreign-source treatment for cash flow permanently exempts that cash flow from U.S. taxation. Thus, incentives to manipulate rules deeming in which country a good or service is “produced” and transfer prices to minimize the value of “U.S.-produced” sales may be stronger under the VAT than current incentives to manipulate transfer prices and sourcing rules to limit current year U.S. income tax liability. See generally Michael Graetz & Paul Oosterhuis, *Structuring an Exemption System for Foreign Income of U.S. Corporations*, 54 NAT’L TAX J. 771 (Dec. 2001).

<sup>126</sup> See e.g., Tax Reform Panel Report, at 169. A destination-basis VAT does, however, face what David Bradford referred to as the “tourism problem,” whereby individuals can reduce their taxes by consuming in low-tax jurisdictions. David Bradford, *The X-Tax In The World Economy* (Nat’l Bureau of Econ. Research, Working Paper No. W10676, 2004).

<sup>127</sup> Tax Reform Panel Report at 167.

<sup>128</sup> In some instances, instead of imposing VAT at the border, EU VATs shift the liability for VAT from suppliers to purchasers of goods and services through a mechanism known as reverse charging.

principle, a sophisticated subtraction-method VAT with one non-zero tax rate can be border-adjusted with exactly the same effect as a credit-invoice method VAT. Inputs associated with export sales are simply deducted even though export sales revenue is not included. Similarly, an importing taxpayer is denied a deduction for imports on which VAT has not been assessed. However, effectively administering border adjustments without an explicit invoice requirement requires mechanisms that allow the tax administration to confirm that claimed exports were in fact exported, and that inputs claimed as subtraction-method deductions were in fact purchased domestically from registered traders.<sup>129</sup> As described below, providing refunds to exporters is important to the economic efficiency of a destination-basis VAT, but the possibility of improper claims makes these refunds a source of substantial risk for the fisc.

### 3. World Trade Organization Rules and Border Tax Adjustments

Border adjusting a subtraction-method VAT may elicit a challenge under WTO rules. Under those rules (as originally developed under the General Agreements on Tariffs and Trade (“GATT”)), a border tax adjustment applied to a “direct” tax is a prohibited trade subsidy. In contrast, WTO rules allow countries to border-adjust “indirect taxes.” Further, WTO rules require that imported products be accorded treatment no less favorable than like products of national origin.<sup>130</sup> Lastly, WTO rules require that border adjustments for indirect taxes not exceed the tax levied on similar products sold in the domestic market.<sup>131</sup> A subtraction-method VAT might be challenged as a direct tax under WTO rules. The imposition of a customs duty at the subtraction-method VAT rate on imports might be challenged as violating WTO rules. Finally, the border adjustment provided for exported goods under a subtraction-method VAT might be challenged as being excessive.

The WTO’s Agreement on Subsidies and Countervailing Measures defines direct taxes as “taxes on wages, profits... and all other forms of income.”<sup>132</sup> In contrast, indirect taxes are defined as “sales, excise, turnover, value added... and all taxes other than direct taxes and import charges.”<sup>133</sup> States do not assess sales tax on sales made by companies inside their borders to customers outside the state, but income from these sales may be taxable under state corporate income taxes. Some observers suggest that the GATT’s distinction between direct and indirect taxes conforms to the definition of those terms as they are used in U.S. domestic jurisprudence.<sup>134</sup> In U.S. domestic law, an indirect tax is understood to be a tax that is imposed on goods, rather than income or wealth of an entity.<sup>135</sup>

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<sup>129</sup> See, e.g., Jack M. Mintz, *The Business Transfer Tax as a Consumption Tax*, 10 TAX NOTES INT’L 75 (Jan. 2, 1995).

<sup>130</sup> General Agreement on Tariffs and Trade, Article III, para. 4 (1947).

<sup>131</sup> See World Trade Organization, *Agreement on Subsidies and Countervailing Measures*, Annex I(g) (Apr. 15, 1994) [hereinafter ASCM].

<sup>132</sup> (ASCM, 1994, Annex I[58]).

<sup>133</sup> (ASCM, 1994, Annex I[58]).

<sup>134</sup> *Hearing before the Subcommittee on Select Revenue Measures of the Committee on Ways and Means of the House of Representatives*, 107th Cong. 14 (Apr. 10, 2002) (statement of Samuel Gibbons).

<sup>135</sup> See *Zenith Radio Corp v. United States*, 437 U.S. 443, 446 (1978) (“[A]n indirect tax [is] a tax levied on the goods themselves, and computed as a percentage of the manufacturer’s sales price rather than the income or wealth of the purchaser or seller.”).

The 1970 GATT Working Party on Border Tax Adjustment concluded that a “fractioned collection” tax on value added (a credit-invoice method VAT) was equivalent to a retail sales tax levied directly on products, and thus was border-adjustable.<sup>136</sup> The credit-invoice method VAT is thus WTO-compliant. Unlike a credit-invoice method VAT, a subtraction-method VAT may not formally be treated as a tax imposed on sales to consumers through fractioned collection. Rather, because it is entity-based and utilizes deductions rather than credits, the subtraction-method VAT could, formalistically, be challenged as more akin to a tax on corporate income or profits. The rebate provided for input credits associated with exports might therefore be deemed to be a trade subsidy. Furthermore, because the subtraction-method VAT could be characterized as a tax on an entity, rather than a tax on products, collecting tax on imports at the border in the context of a subtraction-method VAT might be susceptible to challenge as a WTO-impermissible customs duty less favorable than that accorded products of domestic origin, in contrast to the in-lieu-of domestic taxation portion of a credit-invoice method value-added tax.

Finally, if the deductions for exported goods in a subtraction-method VAT were not adjusted to account for actual tax paid with respect to inputs, and if some inputs were exempted from tax or taxed at a lower rate, then the “rebate” provided by the deduction could exceed the VAT imposed with respect to the inputs on the export. GATT/WTO prohibits “exemption or remission in respect of the production and distribution of exported products of indirect taxes in excess of those levied in respect of the production and distribution of like products when sold for domestic consumption.”<sup>137</sup> In this regard, some commentators speculated, prior to recent amendments to the Japanese VAT that limited the special treatment provided for small domestic business, that the Japanese VAT could be subject to a WTO challenge. They reasoned that while sales by small and medium-sized businesses were exempt from Japan’s VAT, purchases from these businesses were still deductible in the hands of an exporter.<sup>138</sup> A sophisticated subtraction-method VAT (with a single positive rate) would avoid susceptibility to challenge on this issue if it limited deductions to purchases from registered traders, just as the invoice-requirement does for credit-invoice method systems. However, the possibility of WTO challenge might lead the U.S. to choose an origin basis tax, or, in the alternative, could result in the imposition of WTO-impermissible sanctions if the U.S. were to lose a WTO challenge. Either outcome would be highly undesirable. Selecting a credit-invoice method destination-basis tax avoids concerns about these issues.

#### 4. Refunds and “Losses”

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<sup>136</sup> Report of the Working Party, *Border Tax Adjustments*, § 18S/97-109, L/3464 (Dec. 2, 1970), GATT B.I.S.D. (18th Supp.) (1972).

<sup>137</sup> ASCM, 1994, Annex I(g).

<sup>138</sup> See Stephen E. Shay & Victoria P. Summers, *Selected International Aspects of Fundamental Tax Reform Proposals*, 51 U. MIAMI L. REV. 1029, 1049–53, & n. 100 (1997); but see n. 119, *supra* (discussing reforms to the Japanese consumption tax in 2004 that substantially reduced the scope of the special VAT treatment for small business in Japan by limiting that treatment to small businesses with taxable sales of less than 50 million Yen (approximately \$500,000) per taxable year). Note that the language of the ASCM may be read to imply that the question is whether remission of VAT on exports is in excess of VAT levied on the production and distribution of like products domestically, and not simply whether treatment of exports is more favorable than domestic treatment of like products.

Negative taxable value-added arises whenever taxed inputs exceed taxable supplies. Pure exporters generally have negative taxable value-added, because exports are generally zero-rated. Similarly, other entities providing mostly zero-rated supplies, for example state and local governments, will have negative taxable value-added, as may suppliers of specific goods or services subject to zero-rating. Other registered traders may also have negative value-added. For example, any business whose investment in real assets is large relative to their current sales can have negative value-added for a taxable period.

Providing refunds or otherwise providing for prompt recovery of tax on negative-valued added is important to the integrity of the VAT.<sup>139</sup> Zero-rating is intended to provide input tax recovery in respect of specific supplies, which may result in particular entities being due refunds. Failing to provide prompt input tax recovery converts the VAT, in part, from a tax on consumption to a tax on both consumption and production. The economic efficiency arguments associated with implementing a VAT are thus greatly weakened to the extent refunds are not prompt. One way of conceptualizing the problem is that denying refunds for negative taxable value-added is equivalent to allowing the tax to cascade (the most important efficiency criticism with respect to a retail sales tax), at least for the period the refund is denied. Failing to immediately refund tax on negative value-added also increases the effective tax rate on risky ventures, because firms will be taxed if they have positive value-added, but denied refunds if they have negative taxable value-added.

The possibility of improper claims in open subtraction-method VATs makes immediate refundability of negative taxable value-added a significant revenue risk. Without invoices to allow for audit and ensure offsetting tax revenue, the abuse potential implicit in being able to demand a check from the fisc by claiming to have negative taxable value-added is great.<sup>140</sup> In other developed open economies, VAT refunds often exceed forty percent of gross VAT collections.<sup>141</sup> The United States has a substantially lower ratio of exports to GDP than most OECD economies, so VAT refunds would be correspondingly lower in a U.S. VAT.<sup>142</sup> Nevertheless, the general magnitude of VAT refunds relative to collections makes clear the fiscal risk that may be associated with providing immediate refunds. Although refund fraud exists in the credit-invoice method VAT, the invoice requirement empirically has provided a reasonably adequate enforcement mechanism. Under European Union rules, Member States generally may

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<sup>139</sup> See, e.g., *Boletín Oficial del Estado*, Royal Decree 2126/2008 (2008) (Spain), available at <http://www.boe.es/boe/dias/2008/12/27/pdfs/A52074-52078.pdf> (emphasizing the need to avoid deferring the payment of refunds, for example in the case of startup enterprises and companies engaging in substantial capital investments).

<sup>140</sup> David Weisbach, *Ironing Out the Flat Tax*, 52 STAN. L. REV. 599, 617 (2000); see also Richard M. Bird, *Review of 'Principles and Practice of Value Added Taxation: Lessons for Developing Countries'*, 41 CANADIAN TAX J. 1222, 1223 (1993) (noting that a VAT is uniquely susceptible to fraud to the extent that a supplier's invoice in effect constitutes a check drawn on government).

<sup>141</sup> Graham Harrison & Russell Krelove, *VAT Refunds: A Review of Country Experience* 11 (Int'l Monetary Fund, Fiscal Affairs Department, Working Paper No. 05/218, May 2005). Over the four year period from 1998 to 2001, and VAT refunds in Canada averaged 50.3 percent of gross VAT collections, while VAT refunds in the EU averaged 38.1 percent of collections; see also Michael Keen & Stephen Smith, *VAT Fraud and Evasion: What Do We Know, and What Can be Done?*, 59 NAT'L TAX J. 861 (2006).

<sup>142</sup> Keen, et al., *supra* note 143.

not require registered traders to carry forward excess credits for more than six months before providing refunds.<sup>143</sup>

Refunds of negative taxable value-added may be more controversial in a subtraction-method VAT, particularly if using the subtraction-method lens brings income tax system assumptions into play. The corporate income tax allows losses to be carried back and carried forward, to claim refunds for tax paid in prior years or reduce tax liability in future years.<sup>144</sup> Such business losses are the closest income tax analog to negative taxable value-added. Thus, it is possible that near-immediate refunds for negative taxable value-added would be limited if the subtraction-method VAT was understood as a business tax. On the other hand, the Boren-Danforth and Gibbons proposals did provide for immediate refunds.<sup>145</sup>

## J. Coordinating Tax Administration With the Rest of the World

In addition to being border-adjustable, credit-invoice method VATs may be more likely to be imposed in a manner that avoids double taxation and double non-taxation of cross-border services than subtraction-method VATs. One key issue in designing a VAT for the 21st century relates to the rules for taxation of cross-border trade in services and intangibles.<sup>146</sup> U.S. exports of financial services, insurance services, education, telecommunications, and professional and technical services grew at an average rate of 9.9 percent per year between 1992 and 2005.<sup>147</sup> Cross-border royalty and license fees for intangibles grew at a rate of 8.1 percent over the same period.<sup>148</sup>

The OECD's Committee on Fiscal Affairs is currently developing VAT/GST guidelines in the area of internationally traded services and intangibles, with the twin goals of ensuring that taxation aligns as closely as possible with consumption of these services and intangibles (*i.e.* value added is taxed on a destination basis) and that international norms develop on a consensus basis so as to avoid both double taxation and unintended non-taxation.<sup>149</sup> In the income tax area,

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<sup>143</sup> Eighth Council Directive 79/1072/EEC, art., 7(4), 1979, O.J. 1979 L331.

<sup>144</sup> Net operating losses can generally be carried back for two years or carried forward for twenty years. Many limitations and special rules apply, including rules limiting or disallowing the carryover of net operating losses when stock ownership in a corporation shifts in specified ways. IRC §§ 172, 381 - 384.

<sup>145</sup> Revenue Restructuring Act of 1996, H.R. 4050, Sec. 202 (providing refunds for VAT overpayments within 45 days) (1996); David L. Boren & John C. Danforth, TECHNICAL OVERVIEW OF DANFORTH/BOREN 'COMPREHENSIVE TAX RESTRUCTURING AND SIMPLIFICATION ACT OF 1994', *reprinted in* TAX NOTES TODAY (May 27, 1994) ("Refunds of BAT (e.g., a refund may be due because a taxpayer has business purchases for the taxable period in excess of gross receipts for the period) would be made by the Secretary of the Treasury within 45 days of the taxpayer filing a return requesting the refund.").

<sup>146</sup> Hellerstein and Keen, this volume.

<sup>147</sup> Maria Borgia, U.S. Bureau of Economic Analysis, *Improved Measures of U.S. International Services: the Cases of Insurance, Wholesale and Retail Trade, and Financial Services*, in INTERNATIONAL TRADE IN SERVICES AND INTANGIBLES IN THE ERA OF GLOBALIZATION 40 (Marshall Reinsdorf & Matthew Slaughter eds., 2008), available at [http://www.nber.org/books\\_in\\_progress/crws06/borga3-2-08.pdf](http://www.nber.org/books_in_progress/crws06/borga3-2-08.pdf).

<sup>148</sup> *Id.*

<sup>149</sup> ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, CENTRE FOR TAX POLICY AND ADMINISTRATION, APPLYING VAT/GST TO CROSS-BORDER TRADE IN SERVICES AND INTANGIBLES: EMERGING CONCEPTS FOR DEFINING PLACE OF TAXATION—INVITATION FOR COMMENTS (Jan. 2008), available at <http://www.oecd.org/dataoecd/42/11/39874228.pdf>.

bilateral tax treaties allocate taxing rights between jurisdictions and include other provisions that reduce the risk of double taxation. This bilateral treaty system, however, does not generally extend to the area of VAT/GST. Thus, if the United States were to adopt a VAT, it would be important to coordinate our domestic rules for addressing the application of VAT/GST with those of the most significant recipients of services and intangibles supplied from the United States, and providers of services and intangibles to the United States, in order to avoid double taxation and non-taxation with respect to cross-border services.<sup>150</sup> Without such coordination, the application of destination basis principles can be inconsistent and lead to double taxation or double non-taxation.

The guidelines emerging from the OECD, however, will be primarily intended to inform the administration of a credit-invoice method VAT, for the simple reason that most OECD member states have such a VAT. To be sure, this advice could be adapted to a subtraction-method VAT, but the relevance of the guidelines may be less apparent, and the likelihood of adopting their recommendations with ease may consequently be lower. Today, in fact, a lack of continuity between EU and Japanese rules regarding the place of taxation of traded services and intangibles can lead to significant double taxation and double non-taxation.<sup>151</sup> Cross-border services and intangibles thus provide an example of where the advantages of conformity with the international norm of a credit-invoice VAT makes a credit-invoice method VAT more attractive than a subtraction-method VAT.

### **K. Coordinating the VAT with State Retail Sales Taxes**

Domestically, coordinating the VAT with state sales taxes is likely to pose significant challenges. Federal adoption of a credit-invoice method VAT as opposed to a subtraction-method VAT may result in different responses from the states with respect to their existing retail sales taxes. In another paper for this conference, McLure suggests that one ideal solution for adopting an add-on VAT in the United States would involve a set of state retail sales taxes that conform to the federal VAT, both with respect to the treatment of supplies to business and with respect to the set of goods and services that are taxed.<sup>152</sup> McLure suggests that all services taxed under the VAT should also be taxed under state RSTs, and that, with caveats not described here, VAT-registered traders could be treated as exempt from RST as a result of having registered to

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<sup>150</sup> ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, CENTRE FOR TAX POLICY AND ADMINISTRATION, REPORT: THE APPLICATION OF CONSUMPTION TAXES TO THE TRADE IN INTERNATIONAL SERVICES AND INTANGIBLES 6 (June 30, 2004), available at <http://www.oecd.org/dataoecd/56/36/32997184.pdf>. There is currently no widely available mechanism to settle international double consumption tax disputes. There are, however, some refund mechanisms under certain countries domestic law for VAT/GST incurred by foreign business (or registration procedures in certain countries to achieve the same effect), which address some issues of double consumption taxation. *Id.* at 7. While in principle it would be possible to extend the existing bilateral tax treaty network to cover such taxes, as a practical matter, such a development seems highly unlikely. Victor Thuryoni, *International Tax Cooperation And A Multilateral Treaty*, 26 BROOK. J. INT'L L. 164, 1645–46 (2001).

<sup>151</sup> Richard Thompson Ainsworth, *Taxing Services Under The EU VAT and Japanese Consumption Tax: A Comparative Assessment of New EU Place of Taxation Rules For Services and Intangibles* 28–33 (Boston Univ. Sch. of Law Working Paper No. 06-30, 2006), available at <http://www.bu.edu/law/faculty/scholarship/papers.html>.

<sup>152</sup> Charles E. McLure, this volume. McLure recommends that the states adopt a “zero-rate VIVAT” (which is equivalent to comprehensive reverse charging) and can be seen as an ideal form of RST that could be easily coordinated with the federal VAT.

pay VAT. He argues that it would ease compliance substantially if only the goods and services benefiting from exemptions and zero-rating under the federal VAT were exempt under state RSTs.<sup>153</sup> No less importantly, he notes that to make compliance manageable any goods and services benefiting from exemption or zero-rating should be defined in a standard way for both VAT and RST purposes.

Whether this ideal level of coordination between federal and state tax administrations is given consideration could be affected by the nature of the VAT adopted at the federal level. In the open subtraction-method VAT, there is no VAT registration of the type on which McLure hopes to rely, and thus no prospect for conformity with respect to the treatment of sales of intermediate inputs to other businesses. More generally, advocates of a subtraction-method VAT believe that one reason to adopt such a tax is that, unlike the credit-invoice method VAT, it is a “business tax” and not a “transactions-based” tax, and therefore does not intrude on a space (transactions-based consumption taxes) historically occupied by state and local government.<sup>154</sup> This perception may be a political advantage of the subtraction-method VAT. However, migration towards a uniform VAT / RST base seems significantly less likely if the federal government adopts any form of subtraction-method VAT, precisely because such a tax has little outward resemblance to retail sales taxes, and therefore the question of base conformity is unlikely to arise. As McLure notes, although it would be a challenge to convince the states to conform to a federal VAT base, any reasonably broad VAT base would be a significant improvement for most state sales taxes.<sup>155</sup> Analysts generally agree that if such a base were adopted on a revenue-neutral basis by state RSTs, it would be of benefit to the states and taxpayers alike.<sup>156</sup>

## L. The Political Economy of Adoption and Amendment

Advocates of subtraction-method VATs claim that a political and practical advantage of the subtraction method of calculation is its relative familiarity.<sup>157</sup> At first glance, the major differences between an open subtraction-method consumption tax and a corporate income tax are expensing and the loss of interest deductions. These are major divergences from the corporate

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<sup>153</sup> McLure notes that in addition to the lack of uniformity of tax bases, the absence of uniform administrative procedures across states and the lack of administrative cooperation among states are the chief causes of complexity of the sales tax system as it is experienced by businesses operating in more than one state. Charles E. McLure, Jr., *Coordinating State Sales Taxes With A Federal VAT: Opportunities, Risks, and Challenges*, 117 STATE TAX TODAY 2 (June 20, 2005).

<sup>154</sup> Alan Schenk, *Choosing the Form of a Federal VAT*, 22 CAP. U. L. REV 291, 309 (1993) (noting that opposition to a federal credit-invoice method VAT may intensify because state governments view it as an intrusion into the field of sales tax, whereas states may not raise a serious objection to a federal subtraction-method VAT because it is “buried in the sales price of taxable goods and services because buyers do not see the tax on every taxable purchase.”).

<sup>155</sup> Charles E. McLure, Jr., *Coordinating State Sales Taxes With A Federal VAT: Opportunities, Risks, and Challenges*, 117 STATE TAX TODAY 2 (June 20, 2005); Charles E. McLure, Jr., *The Nuttiness of State and Local Taxes and the Nuttiness of Responses Thereto*, 25 STATE TAX NOTES 841 (Sept. 16, 2002).

<sup>156</sup> Charles E. McLure, Jr., *The Nuttiness of State and Local Taxes and the Nuttiness of Responses Thereto*, 25 STATE TAX NOTES 841, 844–48 (Sept. 16, 2002); John L. Mikesell, *Sales Tax Incentives for Economic Development: Why Shouldn't Production Exemptions be General*, 54 NAT'L TAX. J. 557 (2001); MICHAEL J. GRAETZ, 100 MILLION UNNECESSARY RETURNS, A SIMPLE, FAIR, AND COMPETITIVE TAX PLAN FOR THE UNITED STATES 189-91 (2008)..

<sup>157</sup> HUFBAUER ET AL., *supra* note 30, at 70–71; *see also* Tax Reform Panel Report at 163. That claim is somewhat overstated, since every multinational corporation should have experience with the credit-invoice method VAT in its operations outside the United States. Nevertheless, most U.S. businesses are not multinationals.

income tax, but for legislative purposes these changes may seem small relative to the perceived sea-change of imposing a federal tax at the cash register.

One potential consequence of the claim that a subtraction-method VAT is a “business tax” rather than a transactional tax imposed on sales to consumers could be that the rules governing an add-on subtraction-method VAT and a corporate income tax may come to be seen as fungible, and the two taxes may be allowed to blur and interact in unexpected ways. For example, businesses that have negative income but continue to have positive VAT liability (because sales exceed non-labor input costs) might lobby to amend or repeal a subtraction-method VAT. Positive VAT liability for the auto industry at a time it was experiencing significant losses led to the repeal of Michigan’s Single Business Tax, a state-level value-added tax that was structured as an accounts-based, entity-level tax.<sup>158</sup> Alternately, some analysts suggest that the VAT might be vulnerable to a political compromise that allows capital investments to be expensed (as in a VAT) while providing deductions for interest expense (as in the corporate income tax), resulting in negative marginal effective tax rates.<sup>159</sup> Or, to raise revenue, expensing might be repealed and replaced with a depreciation system, as effectively happened over time with the Michigan Single Business Tax.<sup>160</sup> Even if initially adopted in a relatively “clean” form, the very familiarity of the subtraction-method VAT would seem to leave it vulnerable to adornment with various features familiar from the current corporate income tax.<sup>161</sup> The credit-invoice method VAT would certainly be subject to its own political pressures, with regard to preferential rates, exemption, zero-rating, and the like. However, the corporate income tax lens would not seem to have salience in debates over a credit-invoice method VAT. Meanwhile, the basic integrity of the credit-invoice method VAT is retained even in the face of some exemptions and zero-rating.<sup>162</sup>

### III. AN ALTERNATIVE FRAMEWORK PREMISED ON INFORMATION COLLECTION

As alluded to early in this paper, David Weisbach has elegantly demonstrated that purported substantive differences between the subtraction-method VAT and the credit-invoice method

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<sup>158</sup> Dave Turzewski & Mike Deal, *The Impact Of The New Michigan Business Tax On The Auto Industry*, 50 STATE TAX NOTES 745 (Dec. 15, 2008). Michigan’s Single Business Tax (SBT) was a state-level “addition-method” modified value added tax. The SBT was perceived as a business-level tax since the accounts-based formula for calculating liability relied on deductions and additions to a “business income” concept. The SBT was in place from 1975 until its repeal, effective December 31, 2007. It had been amended various times, and the Michigan legislature added various deductions, exemptions, and credits that moved the tax away from a theoretically pure consumption tax base. See, e.g., Single Business Tax Act, P.A. 1974, No. 228, MCL Section 208.35a (investment tax credit). The SBT “was ultimately viewed as a burdensome tax on businesses that had large payroll expenses and significant capital investment.” Dave Turzewski and Mike Deal, *The Impact Of The New Michigan Business Tax On The Auto Industry*, 50 STATE TAX NOTES 745 (Dec. 15, 2008).

<sup>159</sup> Ronald Pearlman, *A Tax Reform Caveat: In the Real World, There is No Perfect Tax System*, in TOWARD FUNDAMENTAL TAX REFORM 115 (Alan J. Auerbach & Kevin A. Hassett eds., 2005).

<sup>160</sup> Dave Turzewski & Mike Deal, *The Impact Of The New Michigan Business Tax On The Auto Industry*, 50 STATE TAX NOTES 745 (Dec. 15, 2008).

<sup>161</sup> See, e.g., J. Clifton Fleming, Jr., *Scoping Out the Uncertain Simplification (Complication?) Effects of VATs, BATs, and Consumed Income Taxes*, 2 FLA. TAX REV. 390, 410 (1995); Ronald Pearlman, *A Tax Reform Caveat: In the Real World, There is No Perfect Tax System*, in TOWARD FUNDAMENTAL TAX REFORM 112 (Alan J. Auerbach & Kevin A. Hassett eds., 2005).

<sup>162</sup> GRAETZ, *supra* note 18, at 82.

VAT are not inherent to the two methods of calculation.<sup>163</sup> Weisbach points out that with the same information collection and other parallel design decisions, a subtraction-method VAT could, in principle, be fashioned to produce identical results to a credit-invoice method VAT. He argues that the differences, such as the ability to deduct the cost of inputs purchased from non-taxpayers or the flexibility to impose preferential tax rates on specific goods or services, are based on the amount of information that analysts assume will be collected in a credit-invoice method VAT and a subtraction-method VAT respectively. In his words, “anything that can be achieved through a credit system can be achieved through a deduction system with the right information.”<sup>164</sup>

The virtue of Weisbach’s analytical framework, which differentiates between open and closed VAT systems, is that it emphasizes the distinction between the information gathered in a credit-invoice or subtraction method system, the design decisions made in implementing that system, and the mechanics of calculating tax liability. If one takes the only difference between a credit-invoice method VAT and a subtraction-method VAT to be that one uses credits and the other uses deductions, then it should be possible to mathematically convert between the two systems.

Weisbach illustrated that the credit-invoice method of calculation and the subtraction method of calculation can be used to produce the same policy result as part of an argument that a progressive two-tier consumption tax could be a workable tax reform proposal, and could combine the subtraction method of calculation with the invoice features and certain other design elements of a credit-invoice method VAT. This unique combination of features was in fact largely adopted by the 2005 Tax Reform Panel in its Growth and Investment Tax recommendation.<sup>165</sup>

But unless the goal is a progressive consumption tax, or implementing some other substantive deviation from standard credit-invoice method VAT design, there is no clear impetus for combining a subtraction-method of calculation with the invoice requirement and other standard design features of the credit-invoice method VAT. Particularly in the presence of multiple rates, such a system results in tax calculations that are less intuitive than the credit-invoice method, and cannot be described as simpler to calculate, or more familiar to U.S. businesses than the credit-invoice mechanism.

A recent proposal from Hufbauer and Grieco to adopt a subtraction-method VAT with information collection features similar to an invoice requirement illustrates that the rationale for using a subtraction-method VAT tends to be to maintain an entity-based approach that justifies deviations from typical VAT design.<sup>166</sup> Unlike most subtraction-method VAT proposals for the United States, Hufbauer and Grieco propose a sophisticated subtraction-method VAT. However, while Hufbauer and Grieco would limit the availability of deductions to purchases from registered taxpayers, they would then limit the application of their subtraction-method VAT to corporations currently subject to the corporate income tax, and exempt all other businesses. As discussed above, businesses that make exempt supplies have an incentive to avoid paying VAT. The widespread exemption for flow-through businesses across all sectors of the U.S. economy

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<sup>163</sup> David Weisbach, *Does the X-Tax Mark the Spot?*, 56 SMU L. REV. 201, 215 (2003).

<sup>164</sup> David Weisbach, *Does the X-Tax Mark the Spot?*, 56 SMU L. REV. 201, 215 (2003).

<sup>165</sup> Tax Reform Panel Report at 163, 167–72.

<sup>166</sup> HUFBAUER ET AL., *supra* note 30, and as considered at *supra* note 61.

entailed by Hufbauer and Grieco’s proposal therefore undermines the self-policing nature of the VAT.

## CONCLUSION

Credit-invoice method VATs and subtraction-method VATs are, at a conceptual level, very similar taxes. The subtraction method aggregates all taxable receipts into an account, subtracts deductible expenses, and then multiplies by a tax rate. In contrast, the credit-invoice method starts with taxable amounts imposed on individual transactions, but businesses must ultimately aggregate transactions into accounts to file returns. Nevertheless, as a result of the different starting points, the subtraction-method VAT is perceived to be a tax on an entity, while the credit-invoice method VAT is perceived to be a tax on specific goods and services. The most important substantive difference between the credit-invoice method VAT and the subtraction-method VAT lies in the invoice requirement. The invoice requirement performs two basic functions – it limits the ability of a registered trader to reduce its VAT burden by an offset for the cost of its business inputs to an offset for business inputs purchased from other registered traders, and it ensures that offset is exactly equal to the amount of VAT paid. By ensuring symmetry between deductions and inclusions, the invoice requirement substantially reduces tax avoidance opportunities in the VAT. The invoice requirement also allows exemptions and zero-rating to work properly and makes WTO-compliant border adjustments possible. Together, these features are essential if the VAT is to be an efficient tool for revenue collection while remaining consistent with the United States’ international trade obligations.

Subtraction-method VATs can be divided into open subtraction-method VATs and sophisticated subtraction-method VATs. Subtraction-method VAT proposals introduced in the U.S. Congress have generally been open domestically. Open subtraction-method VATs are flawed. They are vulnerable to tax avoidance, invite widespread lobbying for exemptions, and probably cannot be administered on a destination basis and remain WTO-compliant. A sophisticated subtraction-method VAT imposed at a single non-zero rate could address these issues by limiting deductions to inputs purchased from registered taxpayers. In this case, the credit-invoice method VAT and the subtraction-method VAT could produce identical results. To do so, however, the sophisticated subtraction-method VAT must abandon the calculation of VAT liability based on simpler summary accounts, which is a primary reason cited by subtraction-method VAT advocates for preferring the subtraction method.

Furthermore, the perceived difference between the subtraction-method VAT, as an “accounts-based” tax on an entity, and the credit-invoice method VAT, as a “transactions-based” tax on specific goods and services, could affect policy outcomes. For instance, the “entity tax” characterization of a subtraction-method VAT may make it less likely to be imposed at multiple rates. Multiple rates are generally undesirable. However, a subtraction-method VAT may also be more likely to be enacted with less desirable entity-based exemptions, including for nonprofit and governmental entities, or even for all pass-through entities, and with broad rather than narrowly tailored exemptions in areas such as residential housing and financial services. Appropriate treatment of these sectors is an important part of designing a VAT, as together they represent a substantial part of economic activity. Further, as an entity-based tax, even a sophisticated subtraction-method VAT may be vulnerable to WTO challenge if imposed on a destination basis. Avoiding double taxation and non-taxation in the area of cross-border services

through international cooperation may also be more likely in a credit-invoice method VAT than in a subtraction-method VAT. Similarly, the potential for coordination with state sales taxes may be higher under a credit-invoice method VAT. Finally, a credit-invoice method VAT alongside the corporate income tax seems less vulnerable to amendment to include features of the corporate income tax than a subtraction-method VAT. Credit-invoice method VATs thus seem, on balance, more likely than subtraction-method VATs to be adopted with VAT design best practices. This is perhaps unsurprising, as those practices were developed based on fifty years of worldwide experience with credit-invoice method VATs. As one author at this conference has written previously, if a VAT were to be adopted to supplement or partially replace the income tax, it is not clear why it would be desirable to try to “reinvent the wheel.”<sup>167</sup>

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<sup>167</sup> Reuven S. Avi-Yonah, *Comment on Shay and Summers: Selected International Aspects of Fundamental Tax Reform Proposals*, 51 U. MIAMI. L. REV. 1085, 1086 (1997).