VAT Coordination in Common Markets and Federations
Lessons from European Experience

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1. Introduction

There is wide agreement that a broad-based consumption tax should be levied either in the form of a retail sales tax (RST) or a value-added tax (VAT). In theory, RST and VAT are both comprehensive, destination-based forms of consumption tax that take domestic consumer expenditures, not producer goods, as their base, and that cover the retail stage, either by definition (RST) or by design (VAT). RST excludes producer goods through the suspension technique, while VAT achieves this objective through the tax-credit invoice method. Both taxes include imports in the base but free exports of tax. Given equal coverage and tax rates, RST and VAT are identical, therefore, in their economic effects and in the distribution of their respective tax burdens. In principle, the only difference between the two taxes is the way in which the tax is collected by the tax authorities – in full from retailers under RST and fractionally throughout the production-distribution process under VAT.[1]

Important questions remain, however, about the feasibility of either tax at the state or provincial level in a common market or federation. To implement the destination principle (i.e., to effect taxation in the jurisdiction of consumption), it must be possible to apply and administer correct border tax adjustments (BTAs, for short). How can (sub-)national governments ensure that imports into their jurisdiction are included in the consumption tax base and that exports leave their jurisdiction free of tax? Since RST seems inherently destination-based, is it in this respect superior to VAT in taxing consumers and consumers only? Does the application of BTAs under state-VATs depend on an overarching tax or coordination mechanism at the central or federal level? These questions are pertinent in a common market, such as the European Union (EU), but also in the United States (U.S.) where the debate on the most appropriate form of consumption tax – at federal as well as state level – seems to be gaining momentum. If a federal VAT would be adopted, can the States follow suit if they decide to convert their RSTs into VATs? More pertinently, can States introduce VAT in the absence of a federal VAT?

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[1] It should be emphasized that this does not effect the timing of tax payments to the government, which is the same under RST and VAT. Net VAT is collected only after the consumer (or nonregistered trader) has been invoiced for the full amount of tax on his purchases, and it is this amount that is subsequently collected throughout the production-distribution process. In other words (just as under RST), no net VAT is collected within the ring of registered firms, provided, quite plausibly, that the average length of time required for remitting tax and for processing any refunds is the same as the average length of time required for settling accounts receivable and payable. See S. Cnossen, VAT and RST: A Comparison, *Canadian Tax Journal,* 35 (3, 1987), 559-615.

The experience of state-VATs in a borderless EU can be helpful in answering these questions. As background, the paper starts with a review in Section 2 of the consumption taxes that are actually levied in the G-7 countries and the reasons that led various countries to prefer VAT over RST. In practice, RST seems less effective than VAT in confining the base to consumer goods and services and in effecting correct BTAs. VAT emerges as the preferred form of broad-based consumption tax. But VAT imposes tax throughout the entire production-distribution process and therefore requires explicit BTAs for goods as well as services. Prior-stage VAT has to be refunded to exporters and VAT has to be applied to imports from other member states (and from third countries). Currently, in the EU, these BTAs, described in Section 3, are effected through the accounts of exporters and importers.

The EU BTA arrangements are susceptible to fraud. VAT may not be paid at import (or a credit may be claimed for non-existent imports) and refund claims may be filed for non-existent exports (or goods may not actually be exported). Most attention is given to so-called carousel fraud, under which an importer charges VAT to his customer on goods or services bought VAT-free in another member state, but subsequently disappears without paying the VAT over to the tax authorities. His customer can take credit for the VAT, however, and even a refund if he would subsequently export the goods bought from the importer. VAT would be refunded without having been paid in previous stages of production or distribution. Section 4 examines the nature and extent of this type of fraud and other malpractices in the EU.

The European Commission and various authors have argued that intra-EU VAT fraud can be prevented by charging VAT on exporters in exporting states and remitting the proceeds to importing states to finance the VAT credits permitted to importers. This would repair the so-called break in the VAT-collection chain at internal EU borders, but maintain the revenue allocation under the destination principle. The proposals go by the name of exporter rating and are evaluated in Section 5. Under another proposal, recently put forward by Germany and Austria, and reviewed in Section 6, carousel fraud would be defined away by putting the liability to VAT on buyers of goods and services rather than sellers. Reverse charging throughout the entire production-distribution process would transform VAT into RST. In effect, reverse charging would imply that no net VAT would be collected in any pre-retail stage of production or distribution.

Finally, Section 7 summarizes the evaluation of current and proposed BTA arrangements in the EU. For the time being, the present setup is preferred. Exporter rating would simply shift VAT fraud from the export stage to the import stage. Actually, it is not the break in the VAT-collection chain which matters to enforcement but the break in the VAT-audit trail. This audit trail should be extended across EU borders, similar to the cross-border extension of states' police and judicial powers. In the U.S., it would be possible, of course, to charge the Internal Revenue Service with monitoring the audit trail of state VATs. The paper concludes, therefore, that State VATs are feasible in the U.S., with or without a federal VAT. California, here we come!

2. Experience with RSTs and VATs

There is ample experience with RSTs and VATs at national and sub-national levels of government. Of particular interest for the U.S. debate are the reasons that countries have advanced in choosing VAT over RST, particularly as they affect interstate (and international) trade.

a. G-7 countries

Table 1 lists the consumption taxes that are levied in the G-7 countries: (a) by the U.S. and Canada – members of the North America Free Trade Agreement (NAFTA, for short) along with Mexico, (b) by France, Germany, Italy, and the United Kingdom – four of the 27 member states of the European Union (together accounting for 63 percent of the EU's total gross product), and (c) by Japan, the fourth largest trading partner of the U.S. At the national level, the EU member states, Japan and Canada impose VATs. At the sub-national level, RSTs are found in the U.S. and Canada, while the province of Québec has VAT.

[Table 1 about here]

In the U.S., RST is levied by 45 out of 50 States,[2] accounting for on average 31.5 percent of total state tax revenue (including RST-revenue collected by local governments), or 7.8 percent of total national tax revenue (2.2 percent of Gross Domestic Product; GDP, for short). The coverage of the various RSTs differs widely across States and is far from comprehensive. Most States, for instance, do not tax services, apart from the rental of tangible personal property, transient accommodation, and (selected) utility services.[3] Furthermore, while all States tax food consumed outside the home, less than half of all States tax food purchased for home consumption. Nearly all States exempt prescription drugs and several exempt clothing and footwear. Beyond that, all states include various producer goods in the tax base, which distorts the choice of production technique. Thus, half of all States explicitly tax industrial and agricultural machinery. Furthermore, nearly all States tax various dual-use goods and services, such as building materials, utility services, computers, small transport vehicles, office equipment, stationery and various other items that can be used for business as well as private purposes. Again, this distorts producer choices.

In Canada, RST is levied by five out of ten provinces. The provincial RSTs resemble those levied by the U.S. states, although the tax base generally is somewhat broader. Interestingly, the province of Québec imposes its own VAT, basically on the same

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[2] In addition, the District of Columbia levies RST, as do some 9,000 local governments, including counties, cities, school boards, and police departments. Local government RSTs are mostly piggy-backed on State RSTs. For a comprehensive treatment, see J.F. Due and J.L. Mikesell, *Sales Taxation: State and Local Structure and Administration,* 2nd ed. (Washington, D.C.: Urban Institute Press, 1994) and for up-to-date information, H. Duncan, Administrative Issues from the Adoption of a Federal VAT In Addition to Existing Federal and State Taxes (this volume).

[3] Only Hawaii, New Mexico, South Dakota, and West Virginia tax 100 services or more of 168 enumerated services. Of course, all states with RST tax the value of distribution activities, such as wholesaling and retailing, carried on in the normal course of selling goods and included in the price of the goods. Also, the value of many services, although not taxed explicitly, is taxed indirectly if rendered to businesses that use the services to produce taxable goods.

base as the federal VAT (GST).[4] The Canadian VAT resembles the EU VAT, although the rate of 5 percent is much lower than the average standard rate of 19.5 percent in the EU.[5] Noteworthy features of the Canadian VAT are the zero rating of basic groceries and prescription drugs, the partial rebates of VAT on purchases of inexpensive new homes and on purchases by the MUSH sector (municipalities, universities, schools, hospitals – recently renamed the MASH sector to reflect substitution of academic for universities) which is exempt in the EU, and VAT refunds for lower-income groups (presumptively established amounts based on previous year's incomes).

In the EU, all 27 member states – not just the four states listed in the table – levy VAT, because its adoption is a condition for membership.[6] The VATs in the EU are much more comprehensive than the RSTs in the U.S. Whereas the RST-bases cover on average 35 percent of total consumption expenditures, the harmonized EU VAT-base covers on average 67 percent.[7] In principle, all services are taxed. Exemptions are limited to services provided in the public interest (health care, education, social services) and services that are too difficult to tax for administrative reasons (tenant-paid rents and imputed rents of owner-occupied housing, insurance and banking). Food products are also taxed, often at lower-than-standard rates (exceptions are the U.K. and Ireland which tax food purchased for home consumption at a zero rate). The tax-credit invoice system comprehensively eliminates the tax on producer goods. As indicated in table 1, VAT rates in the EU are higher than RST rates in the U.S. In conjunction with the much broader base, this means that VAT collections in the EU, as a percentage of GDP, are on average more than three-and-a-half times higher than RST collections in the U.S.

The base of the Japanese VAT is also similar to that of the EU VAT, but the rate of 5 percent is much lower. A noteworthy feature is the treatment of small businesses. An unusually generous exemption excludes two-thirds of all potentially VAT-liable business firms from tax coverage. To prevent cumulative effects from occurring when these exempt firms (not being able to claim a credit for the VAT on their taxable inputs) sell their output to registered firms, the latter are permitted to compute their

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[4] For a useful account of coordinating the Québec VAT with the federal VAT, see R.M. Bird and P-P. Gendron, Sales Taxes in Canada: The GST-HST-QST-RST "System" (this volume). Oil-rich Alberta is the only Canadian province that levies neither RST nor VAT. This is also the situation in the three northern territories: Northwest Territories, Nunavut, and Yukon.

[5] Of course, the provincial GST or RST rates have to be added for the comparison. In Québec, for instance, this results in a combined rate of 12.88 percent, because the federal VAT of 5 percent is levied on prices inclusive of the provincial VAT of 7.5 percent. The HST rate in the Atlantic provinces, on the other hand, is levied jointly with the federal GST and revenues are allocated to the provinces on the basis of consumption statistics.

[6] The VATs of the EU member states have been harmonized under the Sixth Directive on Value Added Tax agreed to by the Council of the European Economic Community in 1977. For an up-to-date and consolidated version, see Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax, *Official Journal of the European Union* L347, 49 (December 11, 2006).

[7] For the U.S. states, see Due and Mikesell, *supra* note 3; for the EU, see S. Cnossen, Evaluating the National Retail Sales Tax from a VAT Perspective, in G.R. Zodrow and P. Mieszkowski (eds.), *United States Tax Reform in the 21st Century* (Cambridge, UK: Cambridge University Press, 2005), 215-244, Table 2.

input tax credits on the basis of presumptively tax-inclusive prices.[8] As a result of this arrangement more tax than actually has been paid is refunded at the point of export and more tax than is actually being paid with respect to similar domestically produced goods is imposed on imports, possibly in violation of the WTO treaty.

b. Considerations affecting the choice between VAT and RST

Experience indicates that most countries, when faced with the choice, have favored VAT over RST, taking the view that in practice VAT would be more broadly based than RST, better equipped to free producer goods of tax and to apply correct BTAs, and easier to enforce. This can be illustrated by the experience in the EU, Norway, Canada, New Zealand, and Australia.

In the 1960s, the then member states of the EU opted for VAT because, unlike the cascade type of turnover tax levied previously, VAT permits the precise and unambiguous computation of export rebates and compensating import taxes.[9] Correct BTAs are considered to be an indispensable feature of any tax on goods and services that enter intra-EU trade. Subsequently, therefore, the adoption of VAT became a condition for EU membership. Although RST was considered by the Neumark Committee,[10] appointed to study the most appropriate consumption tax, it was rejected "on practical technical grounds … (given particularly the large number of small retailers of whom the majority are unable to maintain precise bookkeeping)."

Denmark and Sweden switched from RST to VAT even before they became member of the EU[11] and Iceland, Norway and Switzerland, all non-EU European countries, have also done so.[12] These countries cited foreign trade considerations as the main reason for the switch. The prices of both exports and import-competing goods included RST on certain producer goods and other business purchases. This implied that the equal-rate compensating import tax and the export rebate were insufficient to fully offset the burden of RST on domestic products. More generally, VAT's ability to tax goods and services more broadly and neutrally than RST, and an expectation that a shift to VAT would result in increased revenues – ostensibly, in many cases, as part of a general shift in emphasis from direct to indirect taxes – were cited in support of the switch.

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[8] This approach, which effectively exempts the value added by nonregistered firms, contrasts sharply with that of the usual VAT that increases the tax burden on nonregistered firms selling their output to registered firms, inducing them to register and pay VAT.

[9] See S. Cnossen and C.S. Shoup, Coordination of Value-Added Taxes, in S. Cnossen (ed.), *Tax Coordination in the European Community* (Deventer, the Netherlands: Kluwer Law and Taxation Publishers, 1987), 59-84.

[10] Neumark Committee, Report of the Fiscal and Financial Committee, in *The EEC Reports on Tax Harmonization* (Amsterdam: International Bureau of Fiscal Documentation, 1963).

[11] C.S. Shoup, Experience with the Value-Added Tax in Denmark, and Prospects in Sweden, *Finanzarchiv*, 28/2 (March, 1969), 236-252.

[12] J.F. Due, The Swiss Value-Added Tax, *Canadian Tax Journal*, 45 (2, 1997), 260-268.

Norway is the only country in which the debate on the relative merits of VAT vs. RST continued long after VAT was introduced in 1970.[13] Opponents of the VAT claimed that it was more costly for business firms and the tax administration than RST had been. The majority of a government-appointed committee that reported in 1975 supported their views. The committee also believed that the opportunity for fraud was somewhat greater under VAT. Accordingly, it recommended that the government revert to RST. Subsequently, the Norwegian Treasury[14] was instructed to review the issues. Reporting in the mid-1980s, it concluded in favor of VAT, pointing out that the exclusion of producer goods was more comprehensive under VAT; that a large part of the tax was collected upstream from large firms with well-organized accounting systems, whereas under RST much of the tax would have to be collected from small retailers; that VAT had had a beneficial effect on accounting standards, with spillover benefits for the income tax and the property tax; that the number of businesses that had to be registered under VAT was not significantly larger than the number that had been registered under RST; that the transitional costs of a return to RST would be high; and, finally, that the claim that VAT was more costly to administer and to comply with than RST was ill-founded. At the end of the 1980s, the controversy was settled in favor of VAT.

Initially, the Government of Canada did not take an explicit position on the relative merits of a national RST vs. a national VAT. In June 1987, it put up for discussion the alternative of an integrated RST combining the existing provincial RSTs with a new federal RST or a separate national VAT[15] without any link with the provincial RSTs. Despite extensive negotiations with the provinces, the integrated RST proved to be beyond reach. It was simply not possible to reform nine different RST regimes and consolidate them into one unified system. Perhaps this was not surprising, because as the Minister of Finance opined: "this had never been accomplished before anywhere in the world." In April 1989, therefore, the Government went ahead with the introduction of a federal VAT.

The choice between RST and VAT has also been debated in New Zealand and Australia. The Government of New Zealand, which introduced VAT in 1987, took the view that VAT would be more effective than RST in ensuring compliance, owing to its multistage collection feature, its inclusion of imports in the tax base, and the more complete audit trail that the tax provided. Retailers, the least reliable participants in the collection process, would not be accountable for the full amount of the tax. Moreover, as in the EU, small taxpayers could be excluded by reference to their turnover, yet they would still pay tax on their inputs (being exempt, they would not be

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[13] J.F. Due and U. Brems, The Controversial Norwegian Value Added Tax, Bureau of Economic and Business Research, *Faculty Paper no. 1245* (University of Illinois at Urbana-Champaign: April 28, 1986).

[14] Norwegian Treasury (1985), *Om merverdiavgifts-systemet* (English summary prepared by Ulla Brems) (Oslo: St. meld, Nr. 54, 1985).

[15] This left open the question whether the direct subtraction method (taxation of the difference between sales and purchases) or the indirect subtraction method (credit for tax on purchases against tax on sales) should be used. The study group appointed by the Minister of Finance initially favored the direct subtraction method (called business transfer tax, or BTT) which, because of its resemblance to a business income tax, would minimize overlap and conflict with the provinces (with their RSTs).

entitled to take credit for tax on purchases). This arrangement would minimize administrative and compliance costs. The Government also concluded that, given a comprehensive tax base and a single rate, VAT would be a more flexible revenue instrument than RST[16]

In Australia, the RST vs.VAT debate waxed and waned for more than 20 years. The 1975 Asprey Committee[17] which was, perhaps, influenced by the recent introduction of VAT in the United Kingdom, favored VAT over RST, arguing that RST was more susceptible to evasion. In contrast, the 1985 Australian Government's Draft White Paper[18] argued that RST had significant administrative and compliance advantages relative to VAT. The Government believed that the self-policing properties of VAT (i.e. the ability to cross-check invoices) had been overstated. While it accepted the argument that producer goods and exports could be more readily freed from tax under VAT than under RST, the longer lead-in time of VAT persuaded it that RST was the right choice. Subsequent governments, however, leaned towards VAT which, finally, emerged as the consumption tax of choice in 1998, largely on the basis of the same arguments as used earlier in New Zealand.[19]

c. Conclusions

This review shows a clear preference of VAT over RST. VAT is the first consumption tax that has successfully integrated the taxation of goods with the taxation of services.[20] VAT is also better able to exclude business inputs, including dual-use goods and services, from the tax base, and thus to effect more even and complete BTAs. Beyond this, VAT is a more robust tax by requiring (large) pre-retail firms to collect the bulk of the tax from retailers, administratively the weakest link in the tax-collection chain.[21] The pre-taxation of business inputs, moreover, implies that VAT can afford a much larger small-business exemption than RST for the same amount of revenue foregone, which lessens collection and compliance costs.

Prima facie, the main advantage of RST is that it is inherently destination-based. RST does not appear to require the explicit BTAs necessary under VAT, i.e., refunds of prior-stage tax upon export and the imposition of an equal-rate tax upon import. In actual fact, the widespread taxation of business purchases means that RSTs contain a

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[16] New Zealand, *White Paper on Goods and Services Tax* (Wellington: Government Printer, 1985).

[17] Asprey Committee, Taxation Review Committee, *Full Report: 31 January 1975* (Canberra: Australian Government Printing Service, 1975).

[18] Australian Government, *Reform of the Australian Tax System: Draft White Paper* (Canberra: Australian Government Printing Service, 1985).

[19] Howard Government's Plan, Tax Reform: *Not a New Tax – a New Tax System* (Canberra: Australian Government Printing Service, 1998).

[20] J.A. Kay and E.H. Davis, The VAT and Services, in M. Gillis, C.S. Shoup, and G.P. Sicat (eds.), *Value Added Taxation in Developing Countries: A World Bank Symposium* (Washington, D.C.: World Bank, 1990), 70-82.

[21] Presumably, the rationale of this arrangement is that taxable retailers are less likely to default on tax invoiced by their suppliers than on tax payable directly to the tax authorities as is the case under RST.

significant origin-based component. Moreover, it would not be simple or practical to apply BTAs that would accurately reflect the RST hidden in the prices of domestic products. Furthermore, the ease with which goods and services can be bought out-of-state increasingly calls the presumed advantage of "no BTAs" into question. VATs score higher on this point, at least with respect to business-to-business (B2B) transactions. It may be that state VATs in the U.S. would be more neutral and robust tax instruments than current RSTs are. In this respect, European experience and debates about VAT coordination may be instructive for U.S. policymakers.

3. VAT Coordination in the European Union

In discussing the arrangements for BTAs in the EU, this paper makes a distinction between goods and services.[22] *Prima facie*, arrangements for BTAs on goods can not deal effectively with (non-tangible) services whose location of supply or purchase is difficult to ascertain.

a. Cross-border transactions in goods

From 1993 onward, physical controls for VAT on goods at interstate borders in the EU have been replaced by accounting controls at the first instate stage of the production-distribution process under what is known as the deferred payment system,[23] because VAT does not have to be paid upfront at the border.[24] Deferred payment had proven its feasibility in the Benelux. Its members – Belgium, the Netherlands and Luxembourg – successfully applied the system to most of their interstate and international trade ever since they introduced the VAT in the late 1960s and early 1970s.[25]

Deferred payment places the charge to VAT on the acquisition of imported goods rather than on the physical import itself. The charge is reversed, as it were, by making the importer/buyer liable to tax, rather than the exporter/supplier. Registered firms of taxable imported goods have to include these goods (intra-community acquisitions are deemed to be a separate chargeable event) in the return due for the period in which the goods are imported. The VAT is self-assessed and a credit is provided at the same

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[22] In EU VAT legislation (Article 24 of the 2006 VAT Directive), "supply of services" is defined simply as any transaction which does not constitute a supply of goods.

[23] S. Cnossen (1983), Harmonization of Indirect Taxes in the EEC, in C. E. McLure, Jr. (ed.), *Tax Assignment in Federal Countries* (Canberra: ANU Press, 1983), 150-168.

[24] Although correct if looked at from the border-VAT point of view, deferred payment is a misnomer when viewed in the domestic context, because it treats imported goods exactly on par with domestic goods, i.e. the right to a tax credit arises at the same time that the VAT on supplies is accounted for – and this is as it should be.

[25] As early as 1982, the European Commission proposed the EU-wide introduction of deferred payment (Draft Fourteenth VAT Directive), although border controls were to remain in place. In fact, importers of VAT-liable goods still had to hand over VAT documentation to customs authorities at the point of importation without actually being assessed for VAT at that point. Prior to 1993, deferred payment was also practiced for some time in Ireland and the UK where it was called postponed accounting. Obviously, this involved a one-time loss of revenue in the year of introduction, just like the withdrawal of deferred payment involved a one-time (perhaps politically opportune) revenue gain.

time. Accordingly, no net VAT is due and payable (unless the acquisition is made by an exempt firm). This situation is depicted in Figure 1.

[Figure 1 about here]

For compliance purposes, the "self-declared VAT" replaces the previous "border VAT", but no net VAT is due on the self-declaration; no "advance payment" is made. The two separate taxable events, i.e. the acquisition and the domestic sale of goods, performed by one taxable person, may require only one return if the events take place in the same tax period. In either case, the full VAT is payable to the government (and receivable from the customer) when the importer sells the imported goods to the next stage of production or distribution. At that time the net VAT liability is €27 since there is no credit for the import VAT, which has already been permitted under the self-declared VAT or not yet if the acquisition occurs in the same tax return period.

At the time the deferred payment system – called the transitional regime in abeyance of some definitive regime, discussed below – was introduced, customs controls for goods were replaced by a functionally equivalent, if perhaps less certain, VAT information exchange system (VIES).[26] VIES requires registered firms to report their intra-EU supplies (exports) to registered firms in other member states (indicating their VAT identification numbers preceded by a country code) on a quarterly or monthly (optional) basis to the VAT authorities. Similarly, the purchaser has to report the total of his intra-community acquisitions (these obligations are called the listing requirement). The information is fed into a central data bank and should enable the various VAT administrations in the EU to match total intra-community acquisitions per trader against individually reported supplies. VIES imposes differentially higher compliance costs on interstate traders – a source of discrimination and trade distortion.[27]

Obviously, the removal of physical border controls made cross-border shopping by consumers more attractive. Although this was considered a price worth paying for the psychological benefit of a border-free EU, the member states agreed to make exceptions for the following three main items.

- Means of transport, such as motor vehicles, boats and airplanes, not bought through registered dealers, are taxed in the member state of registration, which is usually the same as the state of destination.

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[26] See Council Regulation 218/92/EEC on administrative cooperation in the field of value added tax, subsequently replaced by Council Regulation 1798/2003/EC of 7 October 2003, *Official Journal of the European Union*, L 264. Furthermore, a statistical data collection system, referred to as the Intrastat system, was set up to collect trade data on goods between member states (Council Regulation 3330/91/EEC, replaced by Council Regulation 638/2004/EC, which extended the regulation's coverage to services). Recently, the Intrastat obligations have been simplified. See Regulation of the European Parliament and of the Council amending Regulation (EC) NO 638/2004 on Community statistics relating to the trading of goods between Member States (COM(2008)58 final).

[27] See E. Verwaal and S. Cnossen, Europe's New Border Taxes, *Journal of Common Market Studies*, 40 (2, 2002), 309-330. The authors point out that most of the differential costs should be attributed to Intrastat obligations (see footnote above), not to compliance with VAT obligations.

- Mail order firms with intra-community exports of more than €100,000 per member state per annum have to charge and remit the VAT of the destination state. Below that amount, firms have a choice between an origin and a destination basis of taxation.

- Exempt entities are subject to the VAT of the destination state if their cross-border purchases exceed €10,000. Purchases by exempt entities in excess of €10,000 are zero rated in the member state of origin and taxed as self-supplies in the destination state.

b. Cross-border transactions in services[28]

The deferred payment system for goods introduced after 1993 had always been applicable to business-to-business (B2B) services.[29] Article 43 of the 2006 VAT Directive (previously Article 9 of the 1977 Sixth VAT Directive) prescribes that services should in principle be taxed in the state where they are performed. Highly significant exceptions, however, are made for services rendered by banks, insurance companies, professional firms, advertising agencies and various other establishments – nearly all involving B2B transactions. Upon export, these services are zero-rated ("exempt," in EU jargon, with the right to a credit for the VAT in respect of any inputs used in performing the services). In the importing state, furthermore, the services are treated as if they are inputs supplied by the importing firm itself (Article 21) and taxable as such via reverse charging. In 2004, the VIES reporting obligations for goods were extended to services.

To put the cross-border treatment of services fully on par with the treatment of goods, recently, new rules (which will take effect in 2010) for the place where services are deemed to be rendered have been promulgated with the primary goal of taxing services as much as possible at the place of consumption or use.[30] Basically, the exceptions have become the main rule: B2B services are deemed to be provided where the customer carries on his business.[31] As is the case with goods, the VAT identification number will play a crucial role in verifying compliance. Also, the

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[28] For reviews of the situation in the EU, see B.Terra, European Proposals for New Rules Regarding the Place of Supply of Services, in R. Krever and D. White (eds.), *GST in Retrospect and Prospect* (Wellington, NZ: Thomson/Brookers, 2007), 369-386; and R. Millar, Cross-border Services: A Survey of the Issues, in R. Krever and D. White (eds.), *GST in Retrospect and Prospect* (Wellington, NZ: Thomson/Brookers, 2007), 317-368.

[29] Sinn predicted a wave of cross-border purchases of consumer goods after 1993, even though this "wave" was already a non-issue for services prior to 1993. In fact, the treatment of border-crossing services, before and after 1993, indicates that the implications of the break in the VAT-chain for goods when border controls were abolished were not unfamiliar phenomena. See H-W. Sinn, (1990), Tax Harmonisation and Tax Competition in Europe, *European Economic Review*, 34 (2-3, 1990), 489-504.

[30] See Council Directive 2008/8/EC of 12 February 2008 amending Directive 2006/112/EC as regards the place of supply of services.

[31] Services that hitherto were taxable in the state of the provider, but will now be taxable in the state of the customer include management services, arbitrage services, merchant and investment banking, rating and recruiting services, as well as intermediation services, intra-community transportation of goods, and services provided to movable property.

correct determination of the place of establishment of the user of B2B services (and the place of the provider of business-to-consumer (B2C) services) will become more important.

As shown in table 2, overriding exceptions are provided for immovable property, cultural services and education, restaurants and catering, transportation of persons, and short-term rentals of vehicles – all of which are deemed to be provided where the services are actually performed. The new main rule should reduce compliance costs, because out-of-state taxpayers will not anymore have to file refund claims for VAT currently charged with respect to out-of-state services provided to them. Compliance costs, on the other hand, will increase through the listing requirement for cross-border services.

[Table 2 about here]

The main rule for B2C services is that they are deemed to be provided at the place where the provider of the services carries on his business (including a permanent establishment). This resembles the VAT treatment of cross-border consumer purchases of goods which are taxed, with minor exceptions, on an origin basis. Again, various overriding exceptions are provided (see table 2). To limit administrative costs, furthermore, a mini one-stop-shop arrangement will be provided for telecommunication, radio and television services (effective 2015).[32] In the event, the provider of the services does not know the individual user or consumer. Accordingly, the tax on these services will be payable in the state where the services are provided. Subsequently, that state distributes the VAT revenue to the member states where the customers are located according to an agreed formula.

c. Conclusion

After 1993, conventional intra-EU customs controls for VAT on goods were replaced by accounting controls, which applied already to B2B services. The previous controls served as an effective backstop for country-specific VAT verification and enforcement. In lieu of these controls, VIES was introduced which should enable member states to cross-check intra-community acquisitions against supplies and vice versa. Whether this information and verification system works should be reflected in the extent of VAT evasion attributable to the new arrangements to which we now turn.

4. VAT evasion in the European Union

As a transactions-based but accounts-controlled tax, VAT should be at least as susceptible to fraud as other accounts-controlled taxes, such as the income taxes.[33]

[32] The later effective date for this provision represents a side payment to Luxembourg, whose origin-based low VAT rate has attracted many telecommunication, radio and television providers. Furthermore, Luxembourg will be able to skim off a declining percentage of the VAT it collects on these services destined for other member states.

[33] The widely recognized availability of refunds under VAT – something that income taxes generally do not allow – may make the VAT more vulnerable to fraud than the income tax. The VAT base, i.e. business transactions, on the other hand, is much more obvious than the income tax base, which should make fraud less likely.

This section discusses various forms of VAT fraud, especially cross-border fraud, i.e. claiming false refunds on exports or not remitting VAT on imports.[34]

a. Forms of VAT evasion

VAT fraud comes in various guises, but the following main types can be distinguished – listed in their most likely order of importance.[35]

- Shadow economy fraud – genuine individuals and businesses with a turnover above the registration threshold that deliberately do not register for VAT. In many member states, this phenomenon comprises a large number of individuals who render all kinds of services "VAT-free," often by using or buying taxable inputs from their own or employer's business. Examples of VAT-free services are plumbing, carpeting, painting, gardening, catering, hairdressing, car repairs, and various other services (sometimes rendered on a barter basis).

- Suppression fraud – genuine businesses that understate their sales or falsely inflate their claims for VAT on purchases,[36] including individuals who "consume through the business", i.e. withdraw goods and services from their own or their employer's business for personal consumption without being charged for them, while the business takes credit for the VAT on inputs.

- Insolvency fraud – genuine businesses (operating in the domestic market only) that purchase taxable goods, which they sell on (often at inflated prices), providing high tax credits to (related) purchasers, and that subsequently go insolvent without paying their VAT liabilities.

- Carousel fraud, also called Missing Trader Intra-Community (MITC) fraud – where fraudsters register for VAT, buy goods VAT free from another member state, sell them on at VAT inclusive prices and then disappear without paying the VAT due.[37] Unless the context implies otherwise, in this paper, carousel fraud also encompasses other kinds of cross-border VAT fraud.

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[34] For reviews of VAT fraud, see G. Harrison and R. Krelove, VAT Refunds: A Review of Country Experience, *IMF Working Paper* No. 05/218 (Washington DC: International Monetary Fund, 2005), and M. Keen and S. Smith, VAT Fraud and Evasion: What Do We Know and What Can Be Done, *National Tax Journal*, 59 (4, 2006), 861-887. For an interesting comparison of VAT and income tax fraud based on the Danish experience of cross-border shopping and income shifting, see R.H. Gordon and S.B. Nielsen, Tax Evasion in an Open Economy: Value-added vs. Income Taxation, *Journal of Public Economics*, 66 (1997), 173-197. This study suggests that Denmark, which has a high uniform VAT rate of 25 percent, could reduce the real costs of evasion activity by relying more on VATs.

[35] This draws on the distinction made by the UK National Audit Office, *HM Customs and Excise: Tackling VAT Fraud* (2005); available on the internet.

[36] According to UK National Audit Office, *supra* note 36, around a third of traders in the UK under-declare their VAT liability for a variety of reasons.

[37] For a useful, simple example of carousel fraud, see Keen and Smith, *supra* note 35. According to the European Commission (COM(2004)260 final) at least 40 sectors have been identified as subject to MITC fraud.

- Bogus traders – where fraudsters register for VAT, make false claims for repayments (paid out by the VAT office!) and then abscond.

b. Scale of the problem

Attempts to estimate VAT fraud can be distinguished in top-down or national accounts approaches and bottom-up or operational and intelligence analyses. Under the top-down approach, the full-compliance VAT is calculated from national accounts data on taxable consumption and intermediate inputs of exempt sectors, corrected for VAT revenue foregone on account of the small-business exemption.[38] This full-compliance VAT is then compared with actual collections and the difference, expressed as a percentage of full-compliance collections, is called the VAT gap. Operational or intelligence analyses, on the other hand, project country-wide VAT evasion from the results of individual or sector-wide investigations.

Based on old data, averaged for the period 1994-96, Gebauer, Nam and Parsche[39] have calculated the top-down VAT gaps for 10 EU member states. The VAT gap of 2.4 percent in the Netherlands, a small and open economy, is surprisingly small.[40] In Italy, on the other hand, the gap is more than one-third of potential collections.[41] Not surprisingly perhaps, the size of the VAT gap is roughly correlated with the size of the shadow economy. The European Commission estimates VAT fraud for the whole EU at €60 billion.[42]

Gebauer, Nam and Parsche pay special attention to the situation in Germany. They report a rapid growth in VAT evasion in the three years since the abolition of border controls, culminating in an annual evasion rate ranging from 6 percent to 8 percent in 1996, which increased further to nearly 10 percent in 2001. In the latter year,

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[38] The national accounts data include corrections for the shadow economy, calculated using the currency-demand approach discussed in F. Schneider and D. Ernste, Shadow Economies: Size, Causes, and Consequences, *Journal of Economic Literature*, 38 (2000), 77-114. The demand-currency approach postulates that countries with a high ratio of currency to GDP have a larger shadow economy and a lower tax compliance ratio than countries with a lower currency-GDP ratio. For an analysis which relates the level of the VAT rate to the extent of evasion and avoidance, see K. Matthews, VAT Evasion and VAT Avoidance: is there a European Laffer curve for VAT? *International Review of Applied Economics,* 17 (1, 2003), 105-114.

[39] A. Gebauer, C.W. Nam, and R. Parsche (2005), VAT Evasion and Its Consequence for Macroeconomic Clearing in the EU, *FinanzArchiv*, 61 (2005), 462-487.

[40] UK National Audit Office, *supra* note 36, reports that the Netherlands set up a carousel fraud unit in 1998, which adopted a strategy of focusing primarily on identifying those firms which were committing the fraud. Reportedly, one of their main sources of information is the VIES data.

[41] For a recent analysis of VAT evasion in Greece (not included in the study), estimated at 25 percent of VAT revenue, see G. Agapitos, VAT Evasion: Overview of Greek Experience, *Journal of Modern Greek Studies*, 17 (1, 1999), 151-162.

[42] Commission Working Paper TAXUD/1804/06. Commissioner Lazlo Kovac increased this figure to €100 billion in a speech introducing the adoption of a "European strategy to combat fraud" on May 31, 2006.

approximately one-fourth of the estimated evaded VAT could be attributed to "the fast expansion of the so-called (tax avoiding) daisy-chain businesses (Karusellgeschäfte)."[43] It is not clear, however, how this figure is arrived at or what the breakdown of the remaining amount of evasion is.

Subsequently, Rüdiger Parsche provided figures to the European Parliament on VAT evasion in Germany. These figures are shown in Table 3 along with similar data reported for the UK. It should be noted that the data are only broadly comparable and that the VAT revenue loss through insolvencies may only be partially related to VAT evasion, although evading VAT by going broke (after charging VAT to customers), practiced long before 1993 (sic!), is the typical domestic variant of intra-community carousel fraud. Table 3 clearly indicates that shadow economy and suppression tax fraud – in other words, "domestic fraud" – account for the lion's share of VAT fraud. By contrast, carousel fraud makes up 10 percent of total fraud in Germany and 25 percent in the UK.

[Table 3 about here]

In its latest publication, UK Revenue & Customs[44] estimates the VAT gap at 14.2 percent in 2006-07, down from 16.1 percent in 2002-03. Using operational data (which are not revealed as this may have a detrimental effect on compliance activity), the loss from MTIC VAT fraud – of which carousel fraud is the most serious form – is estimated at ₤1-2 billion, or 12 percent of the total net VAT revenue loss for 2006-07. This is less than the revenue loss associated with the illicit market in cigarettes and hand rolling tobacco, which is estimated at ₤1.6-3.2 billion in 2005-06. Again, MTIC VAT-fraud in the UK, as well as Germany, although serious, is only a fraction of the total VAT fraud committed in either country.

c. Measures to combat fraud

Member states have taken various legal measures to combat VAT fraud (including carousel fraud), among others by refusing the right to tax credit on the ground that the transaction is devoid of economic substance (abuse of rights doctrine). In Optigen,[45] the European Court of Justice (ECJ) ruled that the doctrine could not be applied to taxpayers acting in good faith, but in Halifax[46] and Kittel it held that, subject to

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[43] D. Dziadkowski, A. Gebauer, W.C. Lohse, C.W. Nam, and R. Parsche (2002), Entwicklung des Umsatztsteueraufkommens und finanzielle Auswirkungen neurerer Modelle bei der Umsatzbesteurung, *Ifo Forschungsberichte* 13 (München: Ifo, 2002).

[44] UK Revenue and Customs (2007), *Measuring Indirect Tax Losses* (October, 2007); available on the internet.

[45] See Optigen Ltd v Commissioners of Customs & Excise in joined cases C-354/03, C-355/03 and C 484/03 of January 12, 2006 (ECR I-00483). For a useful review of the ECJ cases and other measures to combat fraud, see W. Balcerowicz, How to Stop the Carousel Fraud? Methods of Combating the Missing Trader Inter-community Fraud in the European VAT System, *Thesis for the degree of Master of European Studi*es, College of Europe, Academic Year 2007-2007.

[46] See Halifax plc, Leeds Permanent Development Services Ltd and County Wide Property Investments Ltd v Commissioners of Customs & Excise of February 2006 (ECR I-01609) and Axel Kittel v Belgian State in joined cases C-439/04 and C-440/04 (ECR I-06161). In Kittel, the ECJ opined that "…where it ascertained, having regard to objective factors, that the supply is to a taxable person

certain conditions, *mala fide* taxpayers could be denied the right to tax credit. The ECJ has also confirmed the validity of measures requiring specified traders to provide financial security, e.g. for charging VAT which results in a credit, although it stipulated that security for a VAT liability due from another taxpayer can not be required.[47] Furthermore, various member states have introduced joint and several VAT liability rules under Article 205 of the VAT Directive if, at the time of the transaction, taxpayers knew or had reasonable ground to suspect that some or all of the VAT payable in respect of the supply would go unpaid. According to the European Commission, this measure "has had a clear deterrent effect and seems to be effective."[48]

At the EU level, VIES-II has been launched, which will improve the reliability, scope and speed of information exchange regarding intra-EU transactions subject to VAT.[49] In addition, under the new system of administrative cooperation, Central Liaison Offices have been set up in the member states to facilitate information exchange, among others, on irregular (carousel) transactions.[50] Importantly, member states can second their auditors to investigation units in other member states. The European Commission has also issued a helpful risk management guide for tax administrations, which was prepared by tax officials from the member states as part of the Fiscalis Risk Analysis Project.[51]

Apparently, member states do not make sufficient use of the available legal and administrative arrangements. While the European Commission opines that "the Community legal framework in the field of administrative cooperation on VAT…appears to be satisfactory…and offers real possibilities for cooperation between Member States,"[52] the latter do not make sufficient use of the instruments due to language problems and lack of specialized resources. Perhaps more can be done to provide the right kind of training and financial incentives for participating staff.

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who knew or should have known that, by his purchase, he was participating in a transaction connected with fraudulent evasion of value-added tax, it is for the national court to refuse that taxable person's entitlement to the right to deduct."

[47] See Commissioners of Customs & Excise and Attorney General v Federation of Technological Industries and Others in case C-384/04 of May 11, 2006 (ECR I-0419).

[48] European Commission, *Report from the Commission to the Council and the European Parliament on the Use of Administrative Cooperation Arrangements in the Fight Against VAT Fraud* (Brussels: Com(2004) 260 final, 2004).

[49] For a useful description of the purposes, legal mechanisms, workings and rules governing international information exchange, see G. Perez-Navarro, International Information Sharing (undated); available on the internet.

[50] This is facilitated through Eurocanet, a program of mutual assistance between member states' fiscal and law enforcement authorities.

[51] European Commission, *Risk Management Guide for Tax Administrations* (Brussels: 2006); available on the internet.

[52] European Commission, *Communication from the Commission to the Council in accordance with Article 27(3) of Directive 77/388/EEC* (Brussels: COM(2006) 404 final, 2006).

d. Conclusion

In reviewing the figures on VAT fraud and evasion, one must concur with Keen and Smith's lament that "there is strikingly little hard evidence – publicly available, at least – on the extent of non-compliance (including outright fraud) under the VAT"[53] in the EU. What seems clear, however, is that shadow economy and suppression fraud are much more important than carousel fraud, which gets so much attention. No doubt, the reason is that shadow economy and suppression fraud generally involve a large number of low-profile cases involving small amounts of VAT. By contrast, insolvency and carousel fraud, although occurring much less frequently, often involve large amounts of VAT, which catch the limelight and appeal to the imagination.

Keen and Smith refer to current arrangements as "*ad hoc* enforcement strategies,"[54] rejecting them in favor of their deep solution which would "fix the VAT chain by ending the zero-rating of trade between member states." In their view and that of the Commission, intra-community supplies should be taxed (called exporter rating) rather than zero-rated, while the recipients of these supplies in importing states should be permitted a tax credit for an equivalent amount. To restore the revenue allocation under the destination principle, the exporting state should be obliged to pay the VAT collected on exports to importing states. These proposals are examined in the following section.

5. Exporter Rating Proposals

The exporter rating proposals can be usefully distinguished between those made by the European Commission and proposals found in the tax literature.

a. European Commission proposals

Exporter rating was first proposed by Cnossen in 1983,[55] who suggested that export-VAT collections and import-VAT credits should be settled through an EU-wide clearing house system. In essence, only net balances (the excess of VAT collections on exports over VAT credits on imports) would have to be settled between member states. In 1985, the proposal was adopted by the European Commission in a paper known as the Cockfield White Paper;[56] it forms the organizing principle of subsequent exporter rating proposals.

The workings of exporter rating, involving the exportation of goods or services from Austria to Estonia, is shown in Figure 2. The Austrian export sale is taxed at 20 percent and the corresponding VAT amount is allowed as a tax credit to the importer in Estonia. If the importer sells the good at €150 in the same tax period in which he imported it, he pays a net VAT of €7. On the other hand, if he would keep the good in

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[53] Keen and Smith, *supra* note 35.

[54] Keen and Smith, *supra* note 35.

[55] Cnossen,, *supra* note 24.

[56] Commission of the European Communities, *Completing the Internal Market*, White Paper from the Commission to the European Council, COM(85) 310 final (June 14, 1985).

stock (and not make any taxable sales), he would receive a refund of €20, but would have to file a return. Furthermore, Austria pays the VAT it has collected from its exporter to Estonia, which uses it, as it were, to finance a tax credit for the same amount allowed to its importer. Importantly, VAT revenue allocation between the two countries is the same as under a system, such as deferred payment, which zero rates exports.

[Figure 2 about here]

The Commission's arguments, however, failed to persuade the governments of the member states which wanted to retain full control over the VAT administration of imports and exports, and, therefore, opted for the deferred payment scheme which had proved its feasibility in Benelux, although they agreed that exporter rating should receive a second hearing. In the tax literature, moreover, Lee, Pearson, and Smith[57] criticized the Commission's clearing house proposal, pointing out that it had an adverse impact on enforcement incentives, because importing member states might not be inclined to root out fraudulent claims for import VAT credits (after all these would presumably be paid by exporting states), while exporting states would have little incentive to uncover fraudulent failure to charge VAT on exports. Solving this problem would require uncoupling the clearing house flows from taxes actually paid.

Subsequently, the European Commission[58] made another attempt to persuade the member states of the benefits of exporter rating. Since intra-EU exports are zero rated under deferred payment, the Commission noted that more than €700 billion worth of goods circulated VAT-free in the internal market, and observed that due to the break in the VAT-collection chain "some of that amount may well be diverted to the black economy."[59] The Commission placed its proposal against the backdrop of a principled critique of the 1977 VAT Sixth Directive.[60]

The fresh proposal had the following main elements. Goods and services were to be taxed at the place of business establishment of the seller instead of the location of the transaction. This implied a single place of taxation for each business (instead of two, as under the deferred payment regime), even if operating throughout the EU; hence, the reference to home-state taxation. Furthermore, zero rating of intra-EU transactions

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[57] C. Lee, M. Pearson, and S. Smith, *Fiscal Harmonisation: An Analysis of the Commission's Proposals*, IFS Report Series 28 (London: Institute for Fiscal Studies, 1988).

[58] European Commission, *A Common System of VAT: A Programme for the Single Market* (Brussels: COM 328(96), Final, 1996).

[59] In light of the fact that the time period in which VAT has to be accounted for and remitted to the authorities is generally the same as the time period in which VAT is received from purchasers, all goods and services, not just intra-community traded products, circulate VAT free within the ring of registered firms.

[60] It pointed out that the VATs in the EU were unnecessarily complex (as shown by differences in the place of supply rules, the special schemes and the rules applicable to non-residents), while VAT enforcement relied too much on physical controls. Also, there were wide differences in the application of the common VAT between member states, such as special arrangements, options, temporary or transitional derogations, which had not been repealed, shortcomings in transpositions or differences in the interpretation of common provisions. This verdict applies to this day.

would be abolished. Instead, cross-border sales would be taxed in the same fashion as domestic sales and cross-border movement of goods within the same business would go untaxed. As a collorary, importers would be able to credit the VAT on purchases from other member states against their own VAT liability. VAT revenues on intra-community transactions would be allocated between member states on the basis of statistics of aggregate consumption (instead of the aggregation of VAT on individual export and import transactions, as under the initial proposal). Also, the Commission proposed complete uniformity in the scope and definition of VAT, and very close convergence of rates.

In a trenchant commentary, Smith[61] pointed out that the new proposal would put substantial limitations on member states autonomy to set rates, require an extensive programme of legislative harmonization, cause difficulties in identifying firms entitled to be taxed in a single member state, and a flight of businesses to least-taxed locations or, if rates were the same, to states where VAT evasion would be less tightly controlled. Also, revenue allocation rules (on the basis of aggregate consumption) would undermine incentives to devote adequate resources to VAT collection and enforcement.

Again, the proposal did not leave the drawing board, but was briefly resurrected in 2004 as the one-stop shop proposal under which exporters would be able to discharge all their obligations with respect to border-crossing transactions at one place only, i.e. their place of establishment.[62] Users would only have to register once through the system and would get a single VAT number. This time clearing would not be necessary because exporters would be required to remit the gross VAT collected by them and calculated at the destination-state rate directly to the state of final destination, an idea which had earlier been proposed by Vanistendael.[63] Few details were provided.

b. Proposals in the tax literature

Viable integrated VAT (VIVAT)

In the belief that the alleged break in the VAT-collection chain threatens VAT's integrity, Keen and Smith[64] have made an imaginative, high-profile proposal for a viable integrated VAT (VIVAT), which would consist of the following elements.

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[61] S. Smith, *The Definitive Regime for VAT*, Commentary 63, (London: Institute for Fiscal Studies, 1996).

[62] Some details can be gleaned from IP/04/1331 and MEMO/04/249. The one-stop shop proposal may receive further scrutiny in the run up to the implementation by 2010 of the Services Directive (Council Directive 2006/123/EC), which calls for "points of single contact" in each member state where traders can discharge all their obligations with respect to other member states. As noted above, a mini one-stop shop has been adopted under Council Directive 2008/8/EC for telecommunication, broadcasting and electronic services supplied to consumers.

[63] F. Vanistendael, A Proposal for a Definitive VAT System. Taxation in the Country of Origin at the Rate of the Country of Destination without Clearing, *EC Tax Review*, 1 (1995), 45-53.

[64] M. Keen and S. Smith, VIVAT: An alternative VAT for the EU, *Economic Policy*, October 1996, 375-420.

- An EU-wide uniform VAT rate, administered by member states, on all intermediate (non-retail) transactions between VAT registered traders, within and between member states. Accordingly, interstate exporters would be taxed and interstate importers would be allowed a credit at the same uniform rate.

- A clearing mechanism for payments from net exporting states to net importing states, based on export and import statistics (derived from VAT returns!) and allocated to member states on the basis of consumption statistics. This would ensure the maintenance of the destination principle, except for cross-border consumer purchases.

- A surtax on retail sales to consumers (in essence, an RST-element, because it is imposed on retail sales only) for member states wishing to collect more revenue than accruing to them under the EU-rate.

- Retention of the special schemes for distance sales and means of transport, but perhaps not for exempt entities since their inputs would be taxed at the uniform rate applicable to cross-border purchases.

- Sellers to separate sales into three categories: (a) sales to registered persons within the EU subject to the EU-rate, (b) sales to unregistered persons within the EU (in- as well as out-of-state) subject to the higher member state rate, and (c) sales for export outside the EU, subject to the zero rate.

According to Keen and Smith,[65] as well as Crawford, Keen, and Smith,[66] VIVAT would bolster the destination principle (and hence state autonomy, called subsidiarity in the EU), because revenue would continue to accrue where goods and services are consumed. The commonality of the EU rate would lessen the pressure on the clearing system and enforcement. Traders would be able to report exports and imports in aggregate rather than per member state. The uniform rate would remove the incentive for strategic rate setting, i.e. the incentive member states would have under exporter rating with non-harmonised rates to tax exports higher because the VAT would anyway be creditable in importing states.[67] The hassle of the clearing system could be resolved through a one-off deal, i.e. a system of lump sum transfers between member states, obviating the need for future clearing.

VIVAT, however, would not be without problems. Uniform exporter rating may *appear* to repair the break in the VAT-collection chain, but does nothing to solve the break in the VAT-audit trail. Importing member states would still not be able to audit importers' invoices (received from exporters in other member states) for which they have no authority. This would provide a powerful incentive to produce false import

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[65] Keen and Smith, *supra* note 35.

[66] I. Crawford, M. Keen, and S. Smith (2008), VAT and Excises, Background Paper for the Mirrlees Review, *Reforming the Tax System for the 21st Century*, Draft, 24 January 2007.

[67] It is difficult to view this as an advantage of VIVAT, since any attempt at strategic rate setting would be stopped in its tracks by the ECJ on the ground that it would be a gross violation of the non-discrimination principle.

invoices, showing VAT eligible for credit instead of no VAT as under the current regime. In fact, bogus export transactions, allegedly prevalent under the current regime, might be replaced by bogus import transactions.

Furthermore, under VIVAT, member states with a greater than average preference for VAT would have to impose an additional RST. In other words, they would have to incur higher administrative and compliance costs than currently and than member states making do with the revenue collected under the VIVAT rate. Registered traders, moreover, would have to make a distinction between sales made to other registered traders (taxable at the VIVAT rate) and sales made to non-registered persons, i.e. individuals and exempt entities (taxed at the RST-inclusive rate) – "not a trivial burden," as Keen and Smith[68] admit. The RST-element would have most of the drawbacks of a normal RST, noted in the literature,[69] although most tax would be fractionally collected throughout the production-distribution stage.

Beyond that, it is difficult to envisage a uniform VIVAT rate in light of the established preference for greater rate differentials shown by the member states. Currently, moreover, reduced rates are levied on a product-specific basis. Their application (with revenue consequences) to intermediate transactions (quite a different matter) would complicate VIVAT and open up other avenues for fraud, particularly if it is not possible to audit import invoices. Politically, VIVAT would further entrench the (high) VAT rate agreement in the EU, making it more difficult to convert the differentiated rate structures into single uniform rates (advocated by Crawford, Keen and Smith![70]) or to reduce the VAT rates in individual member states at some future date.

Compensating VAT (C-VAT)

A proposal to repair the break in the VAT-*audit* trail has been made by McLure,[71] based on Versano's[72] idea for coordinating the VATs of the Brazilian states. McLure aims his proposal, which he calls compensating VAT (C-VAT) mainly at developing countries, but believes that it has also relevance for the EU. The proposal features the retention of state VATs, at differentiated rates, and the deferred payment system for interstate trade. Intra-EU trade (zero rated under state VATs), however, would be subject to an export tax administered by a central agency which would use the revenue to finance an equivalent tax rebate on imports. Accordingly, there would be no need for a tax clearing mechanism, but the C-VAT would require a uniform tax base and administration for the EU-export/import tax as well as the state VATs.

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[68] Keen and Smith, *supra* note 35, at 406.

[69] Cnossen, *supra* note 1.

[70] Crawford, Keen and Smith, *supra* note 67.

[71] C.E. McLure, Jr., Implementing Sub-National Value-Added Taxes on Internal Trade: The Compensating VAT (CVAT), *International Tax and Public Finance*, 7 (6, 2000), 723-740.

[72] R. Varsano, Subnational Taxation and Treatment of Interstate Trade in Brazil: Problems and Proposed Solution, in S. J. Burki and G. Perry (eds.), *Proceedings of the Annual Bank Conference on Development in Latin America and the Caribbean* (Washington DC: The World Bank, 1999), 339-355.

Essentially, the C-VAT solves the problem of fraudulent export and import invoices for the state VAT administrations (apparently for goods only, not for services!) by performing audits at the central level through a charge-and-refund system, but if these audits were introduced, there would seem to be no reason to adopt an additional no-revenue raising tax. In the event, it would then be better to have a less costly central audit agency to which cases can be referred on a selective basis.

As Keen and Smith[73] have pointed out, the C-VAT currently is not an option in the EU if there is to be a central administration. The same applies to the dual VAT (D-VAT) proposed by Bird and Gendron[74] based on Canadian experience, which features separate provincial VATs under the umbrella of a federal VAT.

c. Further analysis by the European Commission

So far, the basic arguments in favor of exporter rating have been that it would repair the break in the VAT-collection chain and treat intra-community exports on par with domestic transactions. A recent European Commission Staff *Working Paper* [75] elaborates specifically on the use of exporter rating as an instrument to combat MTIC fraud. In the example used in the paper, intra-community exports would be taxed at a uniform rate of 15 percent, which would be creditable by the importer in the importing member state upon the presentation of an invoice (self-declarations would still be required for imports subject to a higher or a lower rate than 15 percent). Any excess of VAT collections over VAT credits would be settled through bilateral clearing mechanisms based on microeconomic data collected from exporters and importers, preferably on the basis of monthly recapitulative statements.

As the *Working Paper* acknowledges, the proposal would raise a number of political, economic and technical issues, which would require further discussion.

- Member states would become dependent on each other for some €30 billion of VAT revenue – on average, about 10 percent of total receipts. The Netherlands, Germany, Belgium and Ireland would become large net contributors to the clearing system. They would have to pay over the VAT billed to them by importing member states, irrespective of whether or not they had been able to collect it, or knowing for sure whether or not the claim was correct. Accordingly, the level of mutual trust would have to be exceptionally high. This is not likely to come about, *inter alia* in view of the variation in the levels of VAT fraud discussed above.

- The collection of the VAT on intra-community exports would imply an advance payment of tax, which the Commission's staff estimates at €360

[73] M. Keen and S. Smith, Viva VIVAT! *International Tax and Public Finance*, 7 (6, 2000), 741-751.

[74] R. Bird and P-P. Gendron, Dual VATs and Cross-Border Trade: Two Problems, One Solution?" *International Tax and Public Finance,* 5 (1998), 429-442.

[75] European Commission, On measures to change the VAT system to fight fraud, *Commission Staff Working Paper* (Brussels: COM(2008) 109 final).

billion,[76] similar to the earlier conventional system of VAT collection at internal borders. The interest charge on the pre-financed tax would most likely be passed on to consumers in the form of higher prices and should be particularly harmful to small businesses.

- The 15 percent VAT on exports might induce traders to purchase lower-rated domestic commodities over higher-rated imports, and vice versa, even though the import VAT would be fully creditable and refundable, if required.

- Compliance and administrative costs would increase on account of the extra reporting and verification requirements necessitated by the microeconomic clearing system. Extra compliance costs would be imposed on exporters who would have to make a distinction between (a) domestic supplies taxable at the normal rate, (b) intra-community supplies taxable at 15 percent, and (c) exports to third countries taxable at the zero rate.

- Mismatches between supply and acquisition listings would arise on account of reporting failures as well as differences in the chargeability rules for VAT. In theory, for the EU as a whole, acquisitions should match intra-community supplies. In sharp contrast, the excess of reported acquisitions over supplies was €80 billion in 2006. At a rate of 15 percent, the potential amount of VAT involved could be €12 billion.

- Exporter rating would provide an incentive to produce false import invoices (possibly through third countries) in order to qualify for a tax credit. Rate differences might still be exploited for fraudulent MTIC purposes, although on a smaller scale.

d. Evaluation of exporter rating proposals

Perhaps the time has come to lay the various exporter rating proposals in the EU to rest. It is hard to avoid the impression that early on the proposals were heavily predicated on the assumption that a solution had to be found for the VAT treatment of interstate trade in (physical) goods[77] – so central to the EU's 1992 programme – while the practice and experience before 1993 with deferred payment for the 'importation' of (intangible) services (as well as for goods in Benelux) indicated that deferred payment was a viable alternative. Also, the early preference for some form of exporting rating may have reflected an undue focus on the break in the VAT-collection chain.[78] It is not the break in the VAT-collection chain, however, that

[76] The estimate is based on a total value of intra-community purchases of €2400 billion made by 2.5 million businesses across the EU, approximately 9 percent of all taxpayers. The "advance payment" would be much less (and, in this author's view, might not even exist) if exporters' VAT payment terms would be same as importers' commercial payment terms (and if the claim to a tax credit or refund in importing states would be effected at approximately the same time that importers have to pay the VAT charged by exporters).

[77] See, for instance, Keen and Smith, supra note 74, who make their case for VIVAT against the background of the abolition of "effective border controls."

[78] According to Keen and Smith, supra note 65, zero-rating exports breaks "the cumulation of revenues throughout the production process…crudely put, the government gets its hands on the money sooner

weakens the efficacy of the tax's fractional multistage collection mechanism, but the break in the VAT-audit trail that proscribes the reach of each member state's VAT administration to its own jurisdiction.[79]

It is also hard to avoid the conclusion that the attention devoted to carousel fraud committed at interstate borders, so similar to insolvency fraud on the domestic scene, is out of proportion to the significance of the issue. Of course, carousel fraud should be tackled, and forcefully, but it is only one aspect of the VAT evasion picture, and apparently not the most important one. VAT revenue lost through carousel fraud appears to be dwarfed by fraud committed through shadow economy, suppression and insolvency fraud. Like other kinds of fraud inherent to taxes based on voluntary compliance, VAT fraud should be detected through verification and audit, followed up, if indicated, by investigation and prosecution. System changes rarely cure the problem of tax evasion, but rather divert attention from compliance control issues.[80] Why impose additional obligations on honest traders while carousel fraud is being undertaken by a small number of sophisticated criminal gangs?[81]

In a trenchant commentary on VAT fraud and coordination issues in the EU, the International VAT Association[82] (IVA) concludes that comprehensive (non-targeted) exporter rating is fraught with political challenges. Instead, it argues for strengthening fiscal cooperation between member states, among others by improving VIES and establishing a multi-jurisdictional VAT enforcement unit. In its view, deferred payment, despite its flaws, has contributed effectively to the collection of a destination-based VAT.

The gist of this commentary is echoed in statements by the European Commission and in the tax literature. As the European Commission (2006) opines "the solution to missing trader fraud can be found in increased VAT control based on risk analysis rather than in changing the basic tax rules..."[83] Furthermore, Gebauer, Nam, and

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rather than later." This view is incorrect, however: under VAT there is no cumulation of revenue and, in principle, the timing of tax payments does not differ from the timing under RST. See Cnossen, supra note 1.

[79] This problem would not occur in the U.S., of course, with a common tax administration in the form of the IRS.

[80] As Harrison and Krelove, *supra* note 35, opine: "Experience strongly suggests that the VAT is feasible only as a self-assessed tax, meaning that substitutes for effective risk-based approaches within a self-assessment environment cannot be expected to provide sustainable solutions to compliance problems…"

[81] UK House of Lords, European Union Committee, *Stopping the Carousel: Missing Trader Fraud in the EU: Report with Evidence* (London: The Stationery Office, 2007).

[82] International VAT Association, *Combating Fraud in the EU: The Way Forward: Report presented to the European Commission* (2007); available on the internet.

[83] European Commission (2006), *Communication from the Commission to the Council in accordance with Article 27(3) of Directive 77/388/EEC* (Brussels: COM(2006) 404 final, 2006). The previous Taxation and Internal Market Commissioner, Frits Bolkestein (IP/04/2004) believed that **"**[f]raud can be combated effectively without making drastic changes to the VAT system as long as Member States continue both to co-operate with each other and to make improvements to their individual national control arrangements."

Parsche recommend “more accurate cross-border information exchange, accompanied by joint audits among countries...”[84] And earlier, Bird and Gendron[85] allowed for a virtual, functionally equivalent D-VAT in the form of “some closely coordinated overarching administrative structure which would, for example, facilitate and insure information exchanges, development of agreed audit plans, and so on,” in order to give states the capacity to monitor cross-border transactions.

The message is loud and clear. Basically, exporter rating does not obviate the need for auditing domestic and cross-border transactions. Proper domestic and multi-jurisdictional audit, on the other hand, would obviate the need for costly design changes whose reporting requirements might be just as or more burdensome than the requirements under deferred payment. The legal and administrative-cooperation arrangements appear sufficient for the time being to tackle cross-border VAT evasion, while maintaining the explicit deferred payment system (supplemented by some targeted exporter rating rules). The problem is that member states should make better use of existing administrative cooperation arrangements and be more willing to assist other member states in their endeavor to catch VAT evaders.

Intensified cross-border audit would reduce the need for reliance on VIES. This form of information exchange (not practiced for domestic transactions or for international transactions under the corporation tax) resembles the universal cross-checking arrangements in China and Korea. Harrison and Krelove[86] report that the Korean experience showed that data capture was time-consuming, costly and prone to error. Numerous mismatches were identified but most were the result of transcription errors, incomplete data, and valid timing differences, rather than due to fraudulent claims. Indeed, this finding is corroborated by the €80 billion mismatch in the EU as computed by the European Commission.[87] Not surprisingly, Harrison and Krelove report that the Fiscal Affairs Department of the International Monetary Fund “remains of the view that large-scale cross-checking systems are a poor substitute for well-designed audit programs based on risk assessments, *selective* [emphasis added] cross-checking, intelligence gathering, and targeted fraud investigation.”[88] This conclusion might also be true for VIES.

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[84] Gebauer, Nam and Parsche, supra note 40. In a later publication, the authors point out that “ït is not evident why the financial means required for the establishment of extensive control mechanisms in a new system could not also be used for the improvement of the present system.” See A. Gebauer, C.W. Nam and R. Parsche, Can Reform Models of Value Added Taxation Stop the VAT Evasion and Revenue Shortfalls in the EU, *Journal of Economic Policy Reform*, 10 (1, 2007) 1-13.

[85] Bird and Gendron, *supra* note 75.

[86] Harrison and Krelove, *supra* note 35.

[87] European Commission, *supra* note 76.

[88] Harrison and Krelove, *supra* note 35. In a domestic context, the authors point out that the execution of a well-designed audit program is the most critical element in a program to reduce the incidence of VAT fraud. In the context of an audit risk management approach, they recommend, among others, audit of accounting systems, however time-consuming, rather than individual transaction checking, especially with large taxpayers. Close coordination of the VAT audit program with audit programs of other taxes, particularly income tax, is also required. Most of these elements should also feature in cross-border programs.

6. The German and Austrian Proposal

a. Main features[89]

Germany and Austria have argued that the opportunities for carousel fraud would be eliminated if the liability for VAT were shifted from suppliers to purchasers of taxable goods and services. Reverse charging, comprehensively applied, would suspend the VAT liability throughout all pre-retail stages of production and distribution and, in effect, transform VAT into RST. The main difference with a conventional RST would be that the proposal envisages the retention (and intensification) of the cross-checking properties of a non-tax invoice-based "VAT."

On the basis of the proposals made in Germany, Gebauer, Nam and Parsche[90] distinguish three forms of reverse charging, depending on, among others, whether or not a threshold is incorporated and whether or not cash transactions are included. All variants require the issue of a special VAT-identification number, the online verification of the identification number of the purchaser, and the reporting of all transactions by identification number, which can then be cross-checked by the tax authorities.[91] A prototype reverse charge system is shown in Figure 3 (without the complications of the threshold or the exemption of cash transactions). Clearly, no registered VAT-company pays any tax, except company C, selling to consumers or other non-registered entities.

[Figure 3 about here]

Germany and Austria have asked the European Commission to evaluate their reverse charge proposals for transactions above €5,000 and €10,000, respectively.[92] The normal charge and tax credit rules would continue to apply to smaller (cash) transactions and to transactions where the status of the purchaser can not be properly verified. Clearly, this would put a heavy burden on suppliers who would first have to verify that their customers are registered persons qualifying for application of the reverse charge, and, subsequently, whether the amount of the transaction is less than €5,000/10,000 (in which case VAT would be charged and subsequently creditable) or more than €5,000/10,000 (in which case the customer would account for VAT and be eligible for the tax credit).

b. Reverse charging vs. VAT

Apart from the proposed thresholds, the most important difference between the EU-VAT and a comprehensive reverse charging system is the way in which the tax is collected by the tax authorities – in full from the retailer under reverse charging but

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[89] For the gist of the German and Austrian proposals, see European Commission, *supra* note 84.

[90] Gebauer, Nam, and Parsche, *supra* note 85.

[91] See the resume of the proposed inspection and control measures in International VAT Association, *supra* note 83.

[92] In addition, the EU's ECOFIN Council has expressed the wish to explore the potential effects of an optional reverse-charge mechanism by means of a pilot project.

fractionally throughout the production-distribution process under VAT. The choice, therefore, largely involves administrative and technical considerations.

The European Commission[93] believes that reverse charging would increase the incidence of fraud at the retail level, the abuse and hijacking of VAT-identification numbers, the creation of fake invoices, the replication of MTIC patterns on the domestic scene, and black market activity. In addition, transactions would be artificially split to circumvent the threshold. Generally, the level of reverse-charge fraud would increase the lower the amount of the threshold (the opposite applies to VAT credit fraud). The weight of tax compliance and enforcement would fall fully on the retail sector, generally the weakest link in the VAT collection chain. By contrast, under the current system more than 80 percent of VAT is remitted by less than 20 percent of all taxable persons.

These observations are supported in the tax literature.[94] In legal terms, the multistage collection feature of the VAT, in contrast to the single-stage collection feature of reverse charging, gives the tax authorities a lien, as it were, on suppliers for the tax payable by the retailer. Manufacturers and wholesalers have, in effect, been made tax collectors on behalf of the government – they remit part of the tax paid to them by retailers, namely that part which corresponds to their value added in the consumer product's price times the VAT rate. Presumably, the rationale of this arrangement is that taxable retailers are less likely to default on tax invoiced by their suppliers than on tax payable directly to the tax authorities as is the case under reverse charging.

Furthermore, the multistage collection feature under VAT transfers part of the onus of proof regarding the tax liability to the taxpayer, whereas under reverse charging the onus rests fully with the tax authorities. A basic tax law rule, namely, is that for positive items – sales – the burden of proof lies with the tax office; it must prove that a business liable to tax has understated its sales. In this respect, reverse charging and VAT are similar. But for negative items, such as tax credits claimed under VAT on the strength of purchase invoices, the *onus probandi* lies with the taxpayer, who must prove, to the satisfaction of the tax authorities, that he is entitled to the tax credits shown in his return because the goods and services purchased have been used in the course of the business.

Beyond this, under reverse charging, vendors have to verify the status of buyers purchasing for resale or business use, in contrast to VAT where the rule is that tax should always be charged. Accordingly, buyers can pretend to be registered firms and present fake identification numbers, asking the seller to send the goods to another address than shown on the online verification site. Because cheating a vendor, without doing him economic harm, presumably is less difficult than cheating the government, reverse charging places a lower price on dishonesty than VAT.

The question of whether or not tax should be charged is particularly problematic with dual-use goods and services (usable for business as well as personal purposes). Purchase by a legitimate business would subsequently require that the VAT should be self-assessed if the goods or services are used for personal purposes. Similar problems

[93] European Commission, *supra* note 76.

[94] See e.g. Cnossen, *supra* note 8.

arise with consumption "through the business." VAT denies the tax credit for purchases of food products, beverages, employee fringe benefits, and personnel transportation, even if made for business purposes, say, to entertain clients. Likewise, reverse charging would have to ensure that consumption items bought free of tax are not diverted to personal use without payment of tax. VAT seems better placed to tax these goods, because evading the tax requires taxpayers to fraudulently claim a tax credit. Reverse charging, on the other hand, induces them simply to "forget" that tax should have been self-assessed.

Finally, under VAT, intermediate traders have an incentive to join the system; under reverse charging, they might want to opt out of the system. In sum, it is hard to escape the conclusion that generalized reverse charging would throw the baby out with the bathwater.

c. Universal cross-checking and VAT bank accounts

According to the Commission, the proper enforcement of reverse charging would largely depend on the level of the additional reporting obligations that would have to be imposed, particularly the detailed monthly listings of transactions subject to reverse charging as well as transactions subject to the normal VAT. The levels of additional reporting range from no listing of transactions to global listing to transactions-based listing for both suppliers and/or purchasers. The matrix in Table 4 shows the extent to which these obligations would allegedly enable the VAT authorities to cross-check taxable transactions and pinpoint the source of any mismatch.

[Table 4 about here]

In theory, online transaction-based reporting by both supplier and purchaser (the last horizontal and vertical columns in Table 4) should enable the VAT administration to cross-check all sales and purchase invoices, and this requirement is at the heart of the German proposal. However, as argued above, the experience of Korea and China indicates that large-scale transaction matching generates considerable unproductive work and greatly increases administrative and compliance costs.[95] According to Gebauer, Nam and Parsche,[96] the one-off costs of operating the German scheme in the first year of operation would increase by approximately one-fourth, in addition to the annual increase in operational costs. Furthermore, the system would have to be introduced on an EU-wide basis if businesses engaged in cross-border trade would not have to face different tax systems.

Finally, the introduction of VAT bank accounts has also been mentioned in connection with the German and Austrian proposal.[97] Such accounts used to be required in Bulgaria, but had to be abolished upon its accession to the EU. The mechanism obliges each VAT registered person to open at least one VAT account into

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[95] Harrison and Krelove, *supra* note 35.

[96] Gebauer, Nam, and Parsche, *supra* note 85.

[97] Gebauer, Nam, Parsche, *supra* note 40.

which customers must pay the VAT charged to them by their suppliers. In turn, suppliers use the deposits to meet their VAT liabilities to the government. No credit can be taken for VAT not paid into a bank account. Harrison and Krelove[98] conclude that the scheme by itself does not detect the usual forms of VAT fraud, i.e. underreporting, false invoicing, transactions occurring outside the VAT system, etc. Hence, it is not a panacea against VAT fraud. Compliance costs, moreover, are considerable. In fact, two VATs must be administered in tandem: one based on cash accounting and one on accrual accounting.

d. Conclusion

Comprehensive reverse charging, like exporter rating, is a system change that does nothing to improve the verification and audit of existing VATs. Apparently, proponents of reverse charging have an ineradicable belief in the efficacy of cross-checking with respect to domestic as well as cross-border transactions. This flies in the face of an old military adage which holds that an obstacle not covered by fire is no obstacle to the enemy. In VAT jargon: the introduction of Stasi-like, highly intrusive and costly extensive listing requirements are no substitute for comprehensive audit.

7. Summary of Findings and Lessons for the United States

What lessons does this review and evaluation of EU tax coordination issues have for other common markets and federations, especially the U.S.?

Firstly, VAT is superior to RST in including most consumer goods and services in the base and in excluding most producer goods. Accordingly, VAT is a more neutral consumption tax and does a better job in effecting correct BTAs.

Secondly, the EU experience shows that VATs along with destination-based BTAs can be administered successfully in common markets without border controls and, by extension, in single domestic markets, such as the U.S. The replacement of deferred payment by some exporter rating scheme is not necessary, and would not solve the problem of cross-border fraud.

Thirdly, to control cross-border fraud, the focus should be on effective cross-border audit, which extends the jurisdictional reach of each state's VAT administration. Undue reliance should not be placed on extensive transaction-specific cross-border information exchange systems, which are prone to error and largely unproductive.

Fourthly, to allocate taxing rights properly in a common market or federation, it is important to define the place of supply precisely, especially with respect to services. B2B services should be taxed in the destination state and B2C services in the origin state (which generally is also the destination state). This distinction is best made by the kind of service supplied backed up by the VAT registration number or a general taxpayer identification number issued for, say, income tax purposes. Hence, it would not be necessary to issue VAT registration numbers to out-of-state buyers in non-VAT states.

[98] Harrison and Krelove, *supra* note 35.

Fifthly, the existence of a (supra)national VAT would facilitate but is not a *conditio sine qua non* for exercising compliance control over state or provincial VATs. In the U.S., for instance, the cross-border audit of state VATs can be carried out in conjunction with the Internal Revenue Service's audit of the income taxes. This implies that state VATs can be administered successfully in a common market or federation where other states do not have VATs or instead have RSTs (and/or various local RSTs).

These findings, strongly corroborated by Canadian experience, augur well for replacing state RSTs in the U.S. by state VATs with or without the umbrella of an overarching federal VAT. California here we come!

Table 1. **G-7 Countries: Consumption Taxes in 2009**

Country	Type of Consumption Tax[a]	States or Provinces	Tax Base	Rates[b]		Revenue as % of[d]	
				Standard	Lower[c]	Total tax revenue	GDP
United States							
Federal	–	–	–	–	–	–	–
State	RSTs	Forty-five out of 50 states plus DC; exceptions are Alaska, Delaware, Montana, New Hampshire, and Oregon	Goods; some services	4.0-9.25[e]	X	7.8	2.2
Canada							
Federal	VAT (GST)		Goods and services	5	0	9.2	3.1
Provincial	RST	British Columbia, Manitoba, Ontario, Prince Edward Island, Saskewatchan	Goods; various services	5-12	X	4.8	1.6
	VAT (QST)	Québec	Goods and services	7.5	0	..	..
	GST-HST	Newfoundland and Labrador, New Brunswick, Nova Scotia	Goods and services	5+8	0	..	..
European Union							
France	VAT	–	) Goods and services;	19.6	5.5	16.3	7.2
Germany	VAT	–	) common tax base	19	7	17.8	6.3
Italy	VAT	–	) and administrative	20	10	14.9	6.3
United Kingdom	VAT	–	) procedures	15	0	18.1	6.7
Japan	VAT	–	Goods and services	5[f]	–	9.2	2.6

Sources: Type of consumption tax – U.S.: H. Duncan, Administrative Issues from the Adoption of a Federal VAT In Addition to Existing Federal and State Taxes (this volume); Canada: R.M. Bird and P-P. Gendron, Sales Taxes in Canada: The GST-HST-QST-RST "System" (this volume).

a. RST=Retail Sales Tax; VAT=Value-Added Tax, called Goods and Services Tax (GST) in Canada, Québec Sales Tax (QST) in Québec, and Harmonized Sales Tax (HST) in the Atlantic provinces.
b. As percentage of the tax-exclusive value of taxable goods and services. The zero rate universally applicable to interprovincial and interstate exports is not shown.
c. The letter "X" means that essential products (mainly food items) are exempted. In addition to the lower rates shown in the Table, France, Italy, and the United Kingdom levy special lower rates of 2.1 percent, 4 percent, and 5 percent, respectively. These rates, however, are only applicable to one or two products. In France, special, generally lower rates are levied in Corsica.
d. Revenue figures, drawn from OECD, *Tax Revenue Statistics 1965-2007* (Paris: 2008), relate to 2006 and are for all levels of government.
e. Inclusive of (highest) local RST rates.
f. Inclusive of the special 1 percent local consumption tax that is levied on the same base and collected along with the VAT.

Table 2. EU-VAT: Exceptions to Main Rules for Place of Services from 2010

Type of service	Place where performed
A. Business-to-business services (B2B)	
Main rule	**Place of purchaser**
Exceptions	
Immovable property, including real estate agents and holiday accommodation	Where immovable property is situated
Cultural services, education	Where activities actually take place
- admissions to cultural services	- where activities actually performed (2011)
Restaurants, catering	Where services actually performed
- catering on ships, planes, trains	- place of departure
Transportation of persons	Place proportionate to distance
Short-term vehicle rentals (30 days or less)	Place where vehicle provided
B. Business-to-consumer services (B2C)	
Main rule	**Place of service provider**
Exceptions	
Immovable property, including real estate agents and holiday accommodation	Where immovable property is situated
Cultural services, education	Where activities actually take place
Restaurants, catering	Where services actually performed
- catering on ships, planes, trains	- place of departure
Transportation of goods and persons	Place proportionate to distance
- loading and unloading	- where actually performed
Rental of vehicles	
- short-term (30 days or less)	Place where provided
- long-term	Place of customer
Rental of pleasure boats	Place where provided (2013)
Independent agents	Place of underlying transactions
Telecommunication, radio and TV services	Place of customer (2015)
Electronic services	Place of customer (2015)

Source: Based on A.J. van Doesem, H.W.M. van Kesteren, G.J. van Norden, and I.H.T. Reiniers, De nieuwe regels voor de plaats van dienst in de BTW, *Weekblad Fiscaal Recht* 6756 (March 13, 2008), 279-291.

Table 3. Germany and United Kingdom: Estimates of VAT fraud and avoidance in 2001-02

Type of non-compliance	Revenue loss as percent of full-compliance VAT	
	Germany	UK
Shadow economy, including consumption through the business and non-registration	5.5	5.3
Suppression and insolvency fraud	2.3	3.9
Abuse of tax credits	2.1	..
Carousel fraud	1.1	3.2
Non-registration	..	0.6
Total revenue loss	**11.1**	**12.4**

Sources: Germany – figures provided by Rüdiger Parsche to the European Parliament. United Kingdom – UK National Audit Office, *HM Customs and Excise: Tackling VAT Fraud* (2005); available on the internet.

Table 4. Additional Reporting Obligations under Reverse Charging

Purchaser / Supplier	**No additional reporting obligations**	**Global listing: VAT number of supplier + global value of purchases**	**Transaction-based listing: VAT number of supplier + amount of each transaction**
No additional reporting obligations	Normal audit; no verification of transactions		
Global listing: VAT number of purchaser + global value of supplies	Rudimentary cross-check; indication of mismatch but not source	Cross-check; indication of source of mismatch	
Transaction-based listing: VAT number of purchaser + amount of each transaction	Rudimentary cross-check	Full cross-check; indication of mismatch	Exhaustive cross-checking; clear indication of mismatch

Source: Author's compilation based on European Commission, On measures to change the VAT system to fight fraud, *Commission Staff Working Paper* (Brussels: COM(2008) 109 final, 2008).

Figure 1. EU: VAT Treatment of Interstate Transactions in Goods

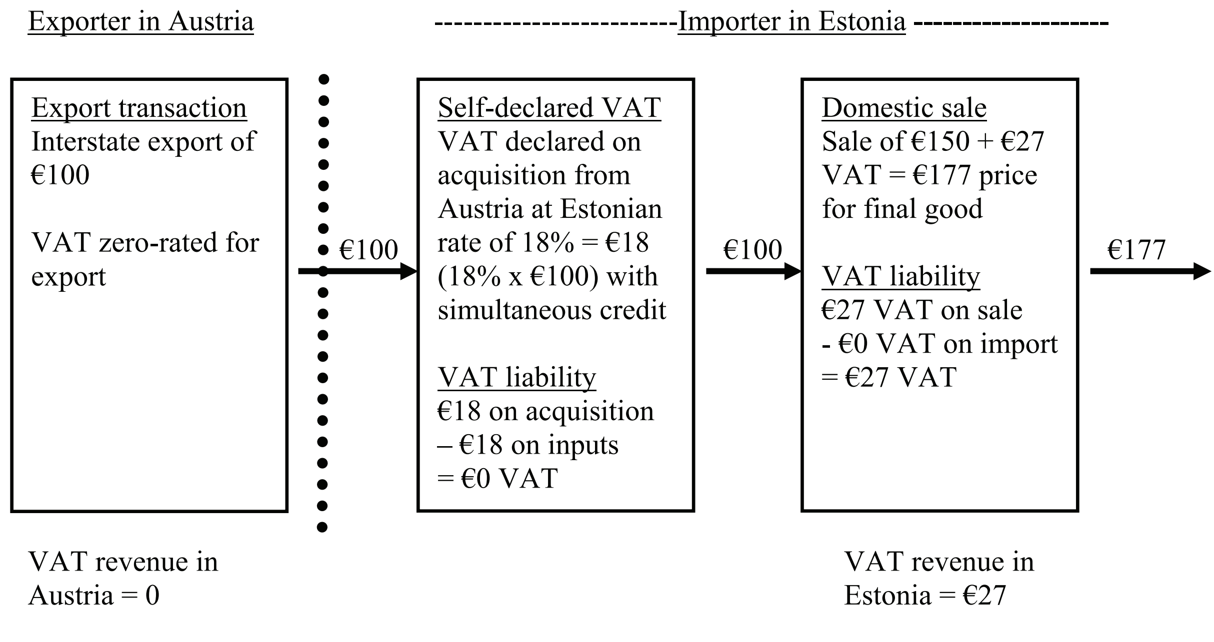


Figure 2. Exporter Rating

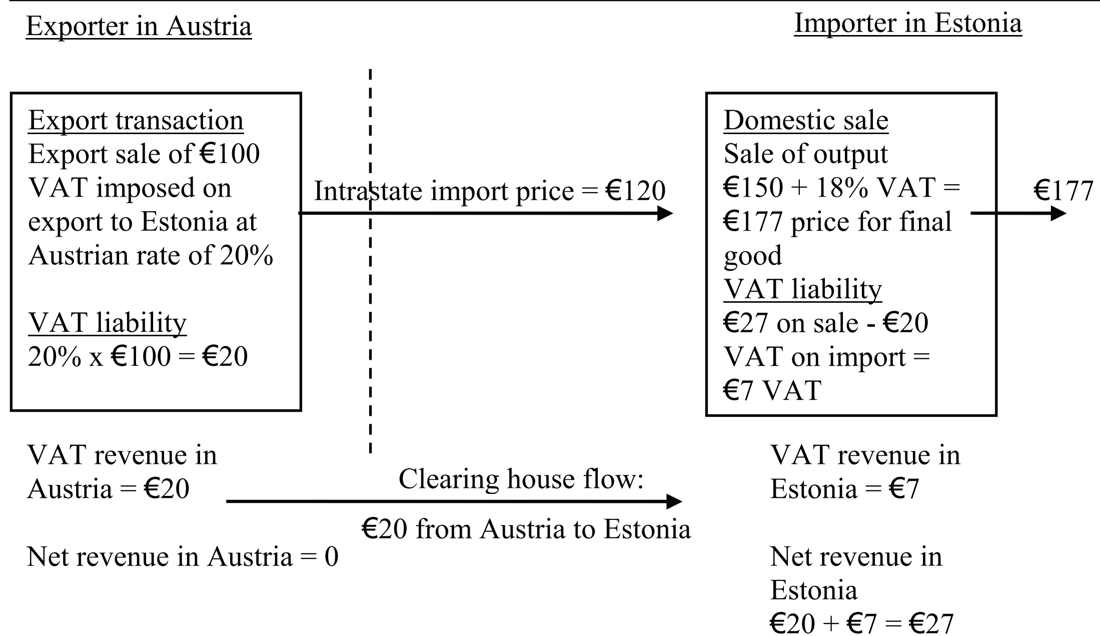
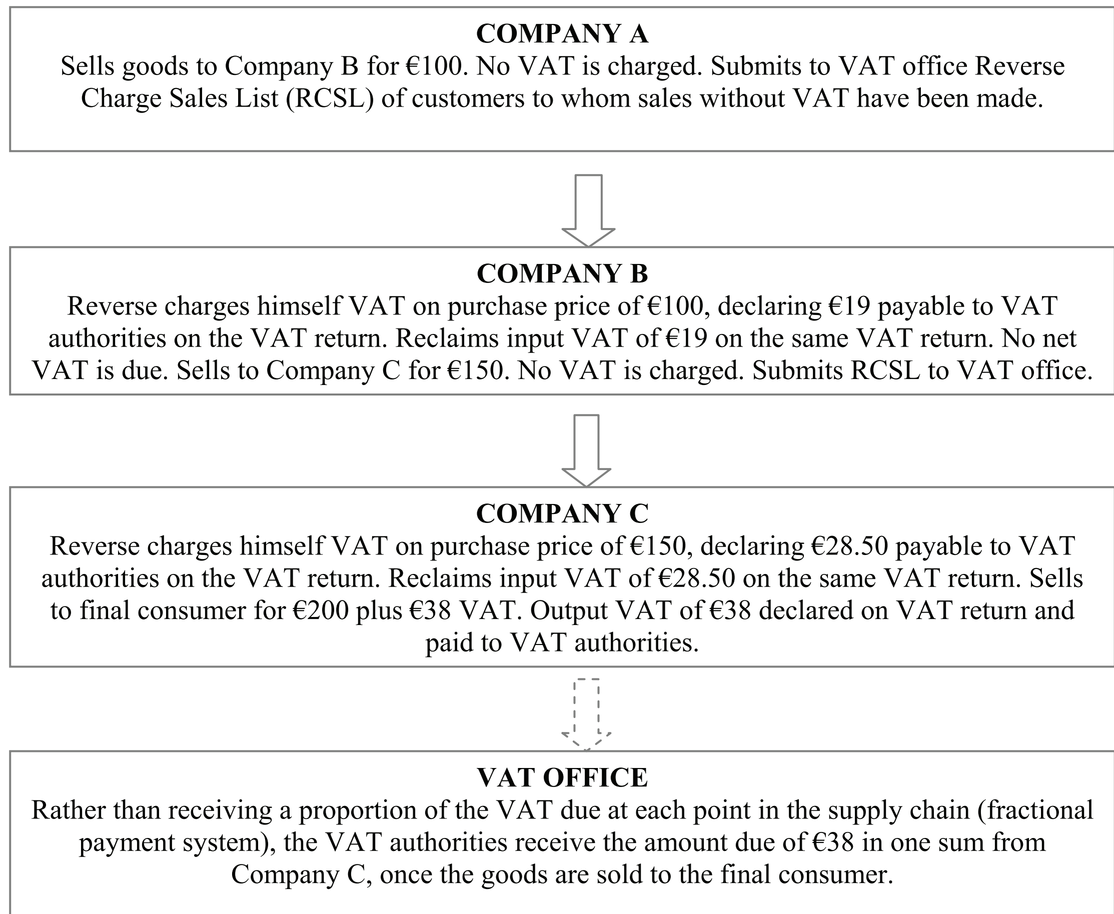


Figure 3. Example of Reverse Charge System



Source: Adapted from UK Government, House of Lords, European Union Committee, *Stopping the Carousel: Missing Trader Fraud in the EU: Report with Evidence* (London: The Stationery Office, 2007).