Black Swans: Recapitulative Statements/VIES (VAT) & Use Tax Reciprocity (RST)

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BLACK SWANS: 
RECAPITULATIVE STATEMENTS/VIES (VAT) 
& 
USE TAX RECIPROCITY (RST)

Richard T. Ainsworth

There is fundamentally no difference between a value added tax (VAT), and a 
retail sales tax (RST) when it comes to collecting the tax on cross-border sales.1  If (under 
a VAT) a seller is allowed to “zero-rate” cross-border sales, or if (under a RST) a seller is 
exempt from collecting the tax on cross-border sales, the critical enforcement question is 
exactly the same – how does the system assure that the buyer will self-assess (and pay) 
the tax?2

The simple answer is that the tax administration audits.3  The more complicated 
answer notes that the effectiveness of the audit (by the destination jurisdiction) depends 
heavily on its ability to secure transactional data from the origin jurisdiction. Without a 
good information exchange mechanism this audit is difficult.

The EU has developed a data-sharing mechanism involving recapitulative 
statement by origin state sellers and a VAT Information Exchange System (VIES) that 
shares this information with the destination state. Could the US follow the EU’s lead? 
There is a technology-intensive proposal to do so, the Use Tax Reciprocity (UTR) 
system.4  The UTR however, suffers from what program management professionals call

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1 Assuming, of course, that the VAT we are considering is like the EU VAT, a multi-jurisdictional, multi-
stage, destination-based tax, and the RST we are considering is like the RST in the US, a multi-
jurisdictional, single-stage, destination-based tax.

2 Ben Terra, SALES TAXATION (1988) 117-133 (discussing the EU recapitulative statement/VIES solution 
three years before being adopted in the EU, contrasting it with the US use tax solution, finding that even 
though the tax problems were the same, solutions were different and suggesting that the central 
control/multi-stage nature of the EU VAT offered option in mandatory reporting structures that the US tax 
could not replicate).

3 Sijbren Cnossen, VAT Coordination in Common Markets and Federations: Lessons from the European 
Experience, 63 TAX LAW REVIEW 583 (2011) (indicating that the European experience shows that 
destination-based state consumption taxes can be successfully administered in a common market [like the 
EU or the US], and that the existence of a national consumption tax would facilitate this [but is not 
necessary], because the key to controlling cross-border fraud is to have effective cross-border audit).

4 John Buhl, Governing Board Votes to Clarify Rules on Excluding Taxes from Sales Price, TAX 

Aaron Neely of Use Tax Reciprocity offered a way for governing board states to 
go after uncollected use taxes without a congressional mandate.

Neely said his company could set up a central data facility under control of the 
governing board where states could have vendors located in their state annually submit 
data on sales where the vendor did not collect taxes. It would not require any personal 
information, only the shipping and billing address and purchase amount, Neely said. 
Each state could then use relevant sales data from other participating states to conduct use 
tax audits that would take very little time, Neely said. Rather than wait for Congress to 
approve streamlining legislation, states could collect taxes under the authority of their 
own use tax laws, he added.

"It's not relying on any federal action," Neely said.
Black Swan blindness.\(^5\) It would benefit from limitations in size, complexity, and duration of the project. It also needs contingency plans for unavoidable risks, and is in desperate need of ‘reference class forecasting’ analysis.\(^6\)

Although some believe the UTR is a viable option, this paper disagrees. The key to understanding why is in a careful consideration of the EU experience, and this, along with a discussion of Black Swans, is the purpose of this paper.

- Part 1 (A & B) presents a summary contrast of the EU and the (proposed) US tax information collection and exchange systems;
- Part 2 (A & B) considers the EU and the (proposed) US system in detail;
- Part 3 applies Black Swan theories and suggests how “reference class forecasting” analysis would be able to use the EU experience to guide a US effort; and
- Part 4 sets out conclusions.

**PART 1-A (summary)**

**EU VAT Solution – mandatory information collection & exchange**

The EU solution to the data-sharing problem is a mandatory regime. VAT registered suppliers in the EU are required to file recapitulative statements (also known as EU sales lists, or VIES statements).\(^7\) These statements (by sellers) provide sales details on business-buyers when they are located in other Member States. Data submitted on these recapitulative statements is shared among the Member States through the VIES.\(^8\)

The dominant cross-border enforcement problem in the EU VAT is missing trader intra-Community (MTIC) fraud. MTIC occurs when a buyer is able to purchase “zero-rated” goods from another Member State, re-sell domestically with VAT, and then disappear (keeping the VAT as profit).\(^9\) Recapitulative statements and the VIES are potent administrative tools in the fight against missing traders, and it is no exaggeration to say that these aspects of the EU VAT have developed largely to deal with MTIC.

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5 Bent Flyvbjerg & Alexander Budzier, *Why Your IT project May Be Riskier Than You Think*, HARVARD BUSINESS REVIEW (September 2011) 23.
9 The fraud is completed when the buyer re-sells, charges VAT, and then disappears without remitting the tax. There are two variant versions of missing trader fraud: missing trader intra-community fraud [MTIC] and missing trader extra-community fraud [MTEC]. For a discussion of MTIC see: Report from the Commission to the Council and the European Parliament on the use of administrative cooperation arrangements in the fight against VAT fraud (COM 260) 5-6 (2004). MTEC involves transactions with third-countries, rather than with other Member States. It is not picked up on recapitulative statements. MTEC is most common in tradable services. See: Richard T. Ainsworth, *VAT Fraud: The Tradable Services Problem*, 61 TAX NOTES INT’L 217 (2011).
However, over the past twenty years recapitulative statements and the VIES reporting mechanisms have not been entirely successful in curbing MTIC. The system has been continually refined. It continues to develop, but so does MTIC. MTIC losses in goods have reached the multi-billion euro level.\(^\text{10}\)

Unfortunately, this fraud is likely to get much worse because of the January 1, 2010 change in the place-of-supply rules for services. Under the new services rules even more cross-border sales will be will “zero-rated,” and more opportunities for MTIC will open up in tradable services.\(^\text{11}\)

Some of the more recent MTIC-driven changes in recapitulative statements and the VIES include the addition of services on recapitulative statements, the frequency that these statements are filed along with related VIES reports (filings are now monthly in many cases),\(^\text{12}\) and the trade details that are required on the statements (the total value of supplies to a particular buyer are listed). Invoice details including the name and address of the person who acquired the goods/services, the date of the invoice, the invoice number, and invoice totals are also available, but only on specific request.\(^\text{13}\)

Recapitulative statements are recognized as commercially burdensome,\(^\text{14}\) but the VIES that shares the collected data is an enforcement necessity (because it is one of the


\(^{12}\) PriceWaterhouseCoopers, *Study in respect of introducing a change in the requirements to the recapitulative statements – Increase of submission frequency – Final report to the European Commission* (November 13, 2007) TAXUD/2006/CC/087 (indicating that the costs to increasing frequency of submissions for businesses would be minimal).

\(^{13}\) PriceWatherhouseCoopers, *Study in respect of introducing a change in the requirements to the recapitulative statements – Increase level of detail – Final report to the European Commission* (November 13, 2007) TAXUD/2006/CC/087 at 19 - 23 (indicating that the costs to increasing the level of detail on recapitulative statements for businesses would be minimal).

\(^{14}\) The administrative costs of submitting recapitulative statements are estimated at €706 million per year, which will be increased by €204 million with the introduction of monthly reports. EU Project on Baseline Measurement and Reduction of Administrative Costs – Final Report – Measurement data and analysis as specified in the specific contract 5&6 on Modules 3&4 under the Framework contract No. ENTR/06/061 Report of the Tax Law (VAT) Priority Area (March 5, 2009) at 126-130 available at: http://ec.europa.eu/enterprise/policies/smart-regulation/files/abst09_taxlaw_en.pdf Communication from
few sources that destination jurisdictions have of critical transaction data from origin jurisdictions). This was made very clear when significant and simultaneous changes were made to recapitulative statements, the VIES requirements, as well as to the place-of-supply rules for services on January 1, 2010. The magnitude of these changes and their intended impact on enforcement seems to have caught the attention of individuals seeking to enhance the collectability of the US Use Tax.\(^\text{15}\)

**PART 1-B (summary)**

**US RST Solution – voluntary information collection & exchange**

The American solution to the collection of cross-border sales taxes is the use tax. The use tax is a companion levy (identical to the sales tax in rate and base) imposed on the in-state use of taxable supplies that were purchased from out-of-state vendors who did not collect the sales tax (on behalf of the destination state). The use tax is self-assessed and notoriously difficult to collect.

The use tax yields about 10% of combined sales and use tax revenues, and has long been considered the “weak link in state sales tax administration.”\(^\text{16}\) How do destination states in the US currently secure data on sales made into the state from non-resident sellers? In many cases they don’t, the data is simply not available. But in some instances reciprocal agreements allow for the exchange of sales and use tax information among the revenue authorities of several jurisdictions. These exchange programs also encourage the voluntary registration of vendors who will collect use taxes on out-of-state sales. These are taxes that the vendors cannot be compelled to collect, but which they agree to collect anyway in exchange for being granted a single multi-state audit.\(^\text{17}\)

These programs echo (at a considerable distance) the EU’s recapitulative statement/VIES solution. They are all there is. But, that may be about to change, if a new compliance regime is adopted. The regime is voluntary at the state level.

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The Use Tax Reciprocity (UTR) system\textsuperscript{18} closely resembles the recapitulative statement/VIES system in the EU. It will use third-party service providers under the Streamlined Sales Tax (SST) to construct a state-by-state digital compliance (exchange of information) network that would be centralized with the Streamlined Sales Tax Governing Board (SSTGB). States joining the UTR would require taxpayer in their states to file the equivalent of a recapitulative statement (although the statements would be granular, or transactional not aggregated as in the EU). The UTR mimics the EU’s recapitulative statement/VIES regime, and promises better results than current audit efforts or state-by-state exchange of information agreements.\textsuperscript{19}

PART 2-A (detail)

Recapitulative Statements and the VAT Information Exchange System (VIES)

There are three stages in the development of the VIES:\textsuperscript{20} the initial goods-based phase (1993 through 2003); the consolidation phase (2003 through 2010); and the expansion into services phase (2010 through the present).

Throughout this period the EU has been expanding. Twelve Member States in 1993,\textsuperscript{21} became fifteen in 1995,\textsuperscript{22} expanded to twenty-five by 2004,\textsuperscript{23} and then twenty-seven by 2007.\textsuperscript{24} The VIES expands along with the EU.

This relentless expansion of the EU has created problems for technology-intensive solutions – demands are being made on local infrastructure that are sometimes difficult to meet.\textsuperscript{25} One gets the impression that if the political structure had been more stable over these years that the EU’s recapitulative statement/VIES regime would have benefited greatly.

\textsuperscript{19} Aaron Neely, Proposal to the States and Streamlined Sales Tax Governing Board, (October 6, 2011) http://www.streamlinedsalestax.org/uploads/downloads/Presentations/Use%20Tax%20Reciprocity%20Aaron%20Neely%20GB%20Seattle%20WA%202011.ppt
\textsuperscript{20} It is important to note that this “development” was neither intended nor anticipated. The VIES was set up as a very short-term solution to what was perceived to be a potential problem area. No one at the time imagined that it would still be in operation twenty-years later.
\textsuperscript{21} The twelve are: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the NETHERLANDS, Spain, the United Kingdom and Portugal.
\textsuperscript{22} Austria, Finland and Sweden joined the EU.
\textsuperscript{23} The ten additions are: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovenia, and Slovakia.
\textsuperscript{24} Bulgaria and Romania joined the EU.
\textsuperscript{25} Radu Lixandroiu, An Analysis of Combating VAT Fraud in the European Union Using New IT Technologies, 2 BULL. OF THE TRANSILVANIA, U. OF BRASOV 105, 107 (2009) (referencing a Romanian study indicating that only 81.9% of Romanian organizations have computers; 64.16% use the internet; 27.97% of Romanian organizations have websites; and only 7.15% use online shopping).
Initial phase (1993-2003). The first EU rules on exchanges of VAT information predate the VIES by about fourteen years. The early information exchange rules come from a 1979 Directive that simply extends (into the VAT) another Directive on mutual assistance that applied only to direct taxes. This arrangement simply allowed government-to-government requests for tax-related information.

The automated VIES arrived much later. It was created by a 1992 regulation, effective the following year (the 1993 VIES).

January 1, 1993 was a momentous time for the EU VAT. This is the day the internal customs borders were removed. When this happened the Commission felt that a more robust exchange mechanism was needed. An up-tick in cross-border fraud was expected, and a digital information exchange throughout the EU was thought necessary to meet the challenge.

The 1993 VIES served a dual (business and government) purpose: (1) for businesses it allowed companies selling goods to taxpayers in other Member States to quickly determine if their customer held a valid VAT registration number in the other state (this supported the zero-rating of the supplies); and (2) for tax authorities it stored (in its collective network of databases) the value of all intra-EU taxable supplies of goods. The VIES was therefore able to assist tax authorities as they audited buyers. It was a simple matter to match the VIES data with the reported purchases on VAT returns. It also allowed the authorities to perform risk assessments on traders who might be tempted to go missing.

The source of a Member State’s VIES data comes from recapitulative statements filed by registered taxpayers making cross-border sales of goods. Two sets of records are provided:

- VAT identification numbers of cross-border sellers and buyers, and
- The total value of all intra-Community supplies of goods made (during the reporting period) by a specific seller to an identified buyer.

Even though the VIES is a computerized system, the VIES itself does not maintain a cross-border transaction database. The VIES forwards any inquiry it

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29 VIES provides a real-time answer to anyone seeking to verify an EU VAT registration number for a specific firm in a specific country. See: http://ec.europa.eu/taxation_customs/vies/vieshome.do?selectedLanguage=en
30 Donato Raponi, International Exchange of VAT information within the EU, (powerpoint) slide 3 of 22 (the Head of the Unit for Administrative Cooperation and Fight against Tax Fraud, European Commission in a presentation on the history of the VIES in the EU).
31 Council Regulation 218/92, supra note 28.
32 Radu Lixandroiu, supra note 25, at 107.
receives to the appropriate Member State. Independently maintained databases in the Member States answer the inquiry. On receipt of an answer the VIES will forward the information to the inquirer.

Three types of exchanges are facilitated by the VIES: (1) assistance on request (where the initiative lies with the applicant); (2) automatic assistance (where both the applicant and the requesting party have agreed in advance that certain types of information will be collected and exchanged automatically); and (3) spontaneous assistance (where one party takes the initiative to make an exchange without being requested to do so).

Limitations in the VIES were exposed as Member States began to use the 1993 VIES. The three most significant problems were (a) the narrow focus of the VIES, (b) the quarterly reporting period, and (c) the need to process all exchanges through competent authority.

The narrow focus – the 1993 VIES is concerned only with cross-border goods transactions (it does not consider domestic supplies, nor does it include services). As a result, tax inspectors who needed a comprehensive understanding of transactions had to fall back on the 1979 mutual assistance Directive. This was not a smooth transition for a lot of reasons, not the least of which was that the individuals overseeing VIES exchanges were frequently not the same as those who dealt with the 1979 Directive. There were also procedural differences to access the data, differences on the use to which the data could be put, and time period differences on when the origin state needed to respond.

The lengthy reporting period – the VIES relies on recapitulative statements, and up until 2010 these statements were quarterly. This made the 1993 VIES a quarterly exchange mechanism at best. But further, a jurisdiction responding to a specific VIES request was allowed an additional three months to reply.

33 Council Regulation 218/92, supra note 28, at art. 4(1) (requiring the competent authority of each Member State to maintain an electronic database).
34 Id., at art. 5(1) (indicating further in Article 5(2) that additional information can include invoice numbers, dates, and values in relation to individual transactions, and also in Article 6(3) the name and address of the person to whom a VAT identification number is issued).
35 Id., at art. 4(2).
36 Id., at art. 12.
38 When it was first proposed the target was missing trader fraud prevention:
   The maintenance of the destination principle in the VAT field for a transitional period will increase the opportunity for certain types of frauds and it is likely that there will be a greater volume of fraud-related requests for cooperation. …. Under the transitional system these procedures will be equally necessary, to ensure that goods for which zero-rating is claimed are duly shipped across frontiers and bought under fiscal control in the member State of destination.
39 VAT Directive, supra note 7, at art. 22(6)(b) and Council Regulation 218/92, supra note 33, at art. 4(1).
40 Council Regulation 218/92, supra note 33, at art. 4(4).
Thus, it was not uncommon for the data underlying an important 1993 VIES inquiry to be six months old (or more) by the time it got to the tax inspector who needed it.\textsuperscript{41} When one realizes that a full MTIC cycle can be completed in an afternoon and the money from the fraud can be on deposit within thirty days, it is not surprising that the 1993 VIES was not very effective in the fight against missing traders.\textsuperscript{42} Fraudsters could disappear long before the tax authority secured the records of suspect transactions.

The competent authority bottleneck – the VIES (as well as the 1979 mutual assistance Directive\textsuperscript{43}) must pass all information through the competent authority.\textsuperscript{44} This is a bottleneck that slows exchanges to a crawl. There are no “work arounds.” If this procedure is violated the information is not considered valid, and cannot be used against a fraudster.\textsuperscript{45}

\textsuperscript{41} But the situation was clearly much worse than six months. The Commission reported in 2000 that the backlog of requests for which the 3 month deadline had expired was larger than the number of new requests each quarter.

There has been a steady increase in the number of requests made under these legal bases, for which the maximum 3 months deadline has expired. This is extremely worrying, particularly as the number of requests outstanding now exceeds the number of requests made each quarter. (emphasis in original)


\textsuperscript{42} At the height of the UK MTIC fraud in computer chips the Guardian newspaper interviewed a fraudster. [MTIC fraud] is Britain's fastest-growing criminal enterprise, ... Among the [criminals is] a man who likes to be known as Colin, a genial wheeler dealer, ... and his mate "Andy", said to be "a bit of an anorak" when it comes to computers. "He's the technical expert," Colin explained. "I'm into banking, investments, things like that." Each afternoon, hunched over a couple of PCs in his apartment ... Andy spins the wheels of carousel fraud, ... "You can turn the carousel in just 10 minutes, and then you just have to wait 30 days for the money to come in," says Colin. "You can run it round five companies but there are up to 300 that can be used. Each spin can give you up to 200,000 pounds. The longest it stays in any bank account is two hours. ... You can move money so fast. The scale of it is beyond comprehension, you have no idea how much money is being made.” ... The downside, as Colin and Andy discovered late last year, is that carousel fraud is becoming increasingly attractive to violent criminals. ... “Andy had a knock on his door [one day] and then he found he was having to pay out to some really heavy people ... I thought he was going to get cracked. He didn't get cracked, but, ...” [said Colin].

Ashley Seager & Ian Cobain, Carousel fraud: Bogus deals keep Customs in a spin: Smart criminals stay ahead of investigators Russian mafia and IRA linked to swindles, GUARDIAN (May 9, 2006) available at: http://www.guardian.co.uk/uk/2006/may/09/ukcrime.ashleymcginn


\textsuperscript{45} There are “work-arounds” in both instances. Regulation (EEC) 218/92 (Article 12(1)) and Directive 77/779/EEC (Article 9(2) authorize competent authorities of Member States to permit, by mutual agreement, the tax authorities, or event the fraud enforcement units to communicate directly with each other in specific or certain kinds of cases. This has reportedly been the case with some jurisdictions.
Consolidation phase (2003-2010). MTIC fraud was reaching epidemic proportions by the mid-2000s, after rising to notoriety in the late 1990s. Disturbingly, as MTIC grew the VIES did not appear to contain it. Even though the intent from the beginning was to design a system that would deal with exactly this kind of fraud by providing destination jurisdictions with the critical transaction data they needed to stop the fraud.\textsuperscript{46} In fact, in a Report to the Council and European Parliament in 2000 the Commission found that the VIES failed to stop MTIC because Member States were not using it.

When the Commission asked about the status of the VIES regimes in 2001 the answer it got was that Member States were “… unwilling (or unable) to provide details of additional tax discovered as a result of the information exchanged over the VIES.”\textsuperscript{47} When it dug deeper the Commission found that even though MTIC fraud was accelerating, “… Member States’ use of the possibility to request information from other Member States has not increased significantly …”\textsuperscript{48} Thus, the VIES was not being used, because it was not useful. It needed to change, and MTIC was driving the change.\textsuperscript{49}

making the anti-fraud unit a competent authority, with others the fiscal representative in their embassies are allowed to exchange information directly, and in some instances there are controllers appointed to coordinate multilateral exchanges. Direct communication among tax authorities is permitted in most cases. Nevertheless, the system is not uniform and easy to use.


In the UK, levels of MTIC fraud have risen since it was first identified and measured in the late 1990s. However, like any criminal activity its nature makes it difficult to measure, and we have been presented with a variety of different estimates of the size of the activity. HMRC’s estimates are contained in table 1:

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated size of MTIC fraud – HMRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999/00</td>
<td>£1.5 – £2.4bn</td>
</tr>
<tr>
<td>2000/01</td>
<td>£1.3 – £2.5bn</td>
</tr>
<tr>
<td>2001/02</td>
<td>£1.7 – £2.5bn</td>
</tr>
<tr>
<td>2002/03</td>
<td>£1.5 – £2.3bn</td>
</tr>
<tr>
<td>2003/04</td>
<td>£1.1 – £1.7bn</td>
</tr>
<tr>
<td>2004/05</td>
<td>£1.1 – £1.9bn</td>
</tr>
<tr>
<td>2005/06</td>
<td>£3.5 – £4.75bn</td>
</tr>
</tbody>
</table>

Jasper Copping & William Langley, \textit{The £30 billion money-go-round}, THE TELEGRAPH (August 20, 2006), (indicating that the UK-Dubai export/import trade was apparently very lucrative in the mid-2000s, until it was realized that this was a favored MTIC route for traders. “The total loss since the mid-1990s, when the fraud first emerged, is estimated to be as much as £30 billion.”)

\textsuperscript{47} COM(28) 23 (2000) supra note 41, at 21.

\textsuperscript{48} Id.


In the opinion of the officials responsible for controls in the Member States and the Commission, the VIES system and the strengthened administrative cooperation introduced by Regulation (EEC) No 218/92 are effective instruments of control.
Working with a set of ten charts\textsuperscript{50} the Commission observed: if there are 1.5 million taxable persons making intra-community acquisitions (B2B cross-border transactions in goods) and if there are 30,000 VAT officials in the Community, then over a three year period (1996-1998) requests for administrative cooperation were made for only 2\% of the traders, and that each EU VAT official was making less than one request for administrative cooperation in each three year period.\textsuperscript{51}

A second set of charts sought to understand why this was occurring. Specifically, it sought to understand why there had not been a significant increase in requests under Article 5 of Regulation No. 218/92.\textsuperscript{52} Article 5 is the provision that allows a request for more detailed information about a taxpayer through the VIES.

Heavy use of Article 5 would indicate that the VIES was being used in substantive examinations rather than simply being used to confirm the validity of a VAT identification number or to confirm whether or not a taxpayer made any intra-community sales. When the Commission found that Article 5 usage was minimal,\textsuperscript{53} it concluded: Member States have consistently complained about the quality of the VIES data, so it is difficult for the Commission to understand how VAT control of intra-Community acquisitions can be properly controlled using incomplete data. The low number of requests made per control official as indicated in Figure 7 and the low number of requests made per control as indicated in Figure 8 indicates that Member States still have a lot of work to do to ensure that control officials make the best use of the possibilities made available to them for the purpose of controlling taxable persons making intra-Community acquisitions. Figure 9 demonstrates the low likelihood of intra-Community traders having their transactions verified.\textsuperscript{54}

It was clear. The VIES needed to change, and the change occurred in 2003. Council Regulation (EC) No. 1798/2003 replaced Regulation (EEC) No. 218/92. Thus, we move to the 2003 VIES. The thrust of the 2003 revisions was to unify legal provisions and assimilate critical elements of the 1977 mutual assistance Directive into

\textsuperscript{50} Id., at 37-42.
\textsuperscript{51} Id., at 21 & charts 1-5 at 37-39.
\textsuperscript{52} Id., at 39-41.
\textsuperscript{53} Id., at 6-9.
\textsuperscript{54} Id., at 22.
A new unified framework was intended to make the VIES a more effective weapon against MTIC. In particular:

1. **a single legal basis was established for all information requests** – under Regulation 218/92, Article 5 goods-based requests could be made with respect to specific invoice numbers, dates and values of a specific transaction, but if something more or different was needed under the 1993 VIES, then Article 2 of Directive 77/779 had to be used. This would no longer be the case under the 2003 VIES, where a comprehensive and complete request for information could be made under Regulation 1798/2003;

2. **simultaneous controls** – Regulation 1798/2003 set out a new structural framework for multilateral control that (it was believed) would be more effective at preventing MTIC than separate national controls;

3. **intensified exchange of relevant information** – by merging old Regulation 218/92 and Directive 77/779 the new regulation provided a structure for broad-based intra-Community information sharing on MTIC issues;

4. **legal grounding and mechanisms to facilitate third country information sharing and exchange** – broad information exchange authorization was allowed among all Member States and third countries on VAT matters; and

5. **digital exchange** – all exchanges were to be made (as far as possible) by electronic means.

The 2003 VIES did not deal with all the known problems. It dealt primarily with perceived areas of structural confusion caused by the overlap of Regulation 218/92 and Directive 77/779.

Regulation 1798/2003 did not deal with the time period for a substantive information turn-over under the VIES. The time frame for a VIES exchange that concerned more than the contents of a recapitulation statement remained six months or longer. Fraudsters still had a considerable head start on the tax administration.

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56 Id., at art. 5.
57 Id., at arts. 12-13. Because MTIC is a cross-border fraud the use of multilateral controls (coordinated controls of the tax situation of one or more taxable persons with common interests in multiple jurisdictions) is central to the enforcement effort. However, these kinds of controls were falling in use. The Commission cannot but be alarmed at the fall in the number of such controls, which was already low, despite their being financed by the budget of the Fiscalis programme. Only three controls were organised in the whole European Union in 2003, four in 2002 and eight in 2001 (compared with 15 in 2000, a figure which was already low when set against the 1,500,000 businesses engaged in intra-Community transactions).


59 Id., at art. 36.
60 Id., at art. 37.
61 Id., at arts. 8 & 25. However in paragraph 2 of Article 8 an exception applies where “the requested authority is already in possession of that information, the time limit shall be reduced to a maximum period of one month.”
Additionally, nothing in Regulation 1798/2003 dealt with cross-border service transactions. Services were not included on recapitulative statements, and as a result they did not flow through to the 2003 VIES. However, by 2003 MTIC was already morphing from a goods-based to a services-based fraud. The need for service transaction data was real, but the Commission did not recognize it. By 2003 MTIC had deeply penetrated the VoIP market, and we know from hindsight that it would soon enter and nearly destroy the CO2 market. However, the 2003 VIES was simply not ready to handle MTIC as MTIC was developing – the fraudsters were way ahead of the tax officials.

Expansion into services phase (2010-present). A third set of VIES revisions came in with the 2008 VAT Package. They were effective January 1, 2010.

Council Directive 2008/8/EC, which is generally concerned with the place of supply rules for services, added language to Article 262 of the VAT Directive that for the

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64 CO2 MTIC/MTEC is the 2003 VIES’ perfect storm. Not only are CO2 certificates deemed to be services (and outside the scope of recapitulative statements) but CO2 MTIC/MTEC takes less than 15 minutes to complete on the BlueNext Exchange. An individual at a Parisian café needs only a laptop to be an effective CO2 fraudster. See generally: Richard T. Ainsworth, CO2 MTIC Fraud – Technologically Exploiting the EU VAT (Again) 57 TAX NOTES INT’L 357, 358 (January 25, 2010).

65 The “VAT Package” is a series of measures that change the VAT rules relating to services. It introduces a Directive on the place of supply of services, and a new VIES-based reporting obligation for cross-border services (a Regulation), a mini one-stop-shop for telecom, broadcasting and e-commerce, and a Directive that announcing a new process for recovering VAT through existing international refund mechanisms. Agreement on the VAT Package was reached on December 4, 2007, although the provisions within it were not effective until January 1, 2010. Europa Press Release, VAT Package: Commission welcomes adoption by the ECOFIN Council of new rules on the place of supply of services and a new procedure for VAT refunds, IP/08/208 (December 2, 2008) available at: http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/208
first time included services in recapitulative statements. As a result services are now automatically included in the 2010 VIES.

In addition, Council Directive 2008/117/EC changed the time frame for recapitulative statements from quarterly to monthly with the following exceptions:

- Quarterly filings are still possible (at the discretion of the Member State) for taxpayers who supply less than 50,000 euro in goods in a quarter;
- Quarterly filings are still possible up to December 31, 2011 (at the discretion of the Member State) for taxpayers who supply less than 100,000 euro in goods in a quarter; and
- All service providers are allowed to submit quarterly statements.

The first two exceptions are understandable as they target businesses engaged in a small amount of cross-border trade. The third exception is a mistake. The proposal by the Commission would have required monthly recapitulative statements regardless of the nature of the supply (goods or services). This was rejected. The perception among the Member States (an erroneous one) was that MTIC was a goods problem, not a services problem. The difficulty here is that tradable services is exactly where MTIC is headed with VoIP and CO2 permits only the most visible examples. The reaction of the UK Treasury however is typical:

An [Italian] judge … ordered the arrest of 56 people, including one of Italy's richest men as part of an international probe into an alleged $2.7 billion money-laundering and tax-evasion scheme involving two major Italian telecommunications providers. Prosecutors allege billionaire Silvio Scaglia was part of a ring with mafia ties … between 2003 and 2006, according to a copy of the arrest warrant seen by The Wall Street Journal.

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Every taxable person identified for VAT purposes shall submit a recapitulative statement of the following …
(c) the taxable persons, and the non-taxable legal persons identified for VAT purposes, to whom he has supplied services, other than services that are exempted from VAT in the Member State where the transaction is taxable, and for which the recipient is liable to pay the tax pursuant to Article 196.

67 The Commission refers to the 2010 VIES as VIES II.
72 It is interesting to note that the largest VAT fraud in Italian history was a MTIC fraud in services that was carried out with the assistance of three to five UK firms in the years just prior to this statement by the UK Treasury. This fraud cost the Italian fisc €33,933,798 in 2003. Stacey Meightry & Sabrina Cohen, Billionaire Is Sought In Sweeping Fraud Probe, WSJ at B1 & B4 (Feb. 24, 2010) indicate that the tax losses were in excess of €400 million.
… although the Government could see the benefit of requiring goods to be reported on a monthly basis, as this is where missing trader intra-Community [MTIC] fraud is almost entirely concentrated, it could not see the same justification for applying it to services.\textsuperscript{73}

The current state of reporting under the 2010 VIES includes the following items from recapitulative statements:\textsuperscript{74}

- VAT identification number of the taxable person in the Member State in which the recapitulative statement must be submitted, and under which a zero-rated supply has been made under Article 138(1) for goods, and under which he has made a taxable supply of services under Article 44.
- VAT identification number of the person acquiring the goods or receiving the services in a different Member State.
- VAT identification number of the taxable person in the Member State in which the recapitulative statement must be submitted under which he has carried out a transfer to another member State under Article 138(2)(c) [triangulations], and the number by which he is identified in the Member State in which the dispatch or transportation ended.
- Total value of goods, and total value of services per recipient.
- Total value of goods transferred to another Member State per recipient under Article 138(2)(c) [triangulations].
- The amounts of adjustments made pursuant to Article 90 [cancellations, refusals, total or partial non-payment].

**Final assessment of the 2010 VIES** – Article 2 of Council Directive 2008/117/EC required the Commission to evaluate the impact of the new VIES and recapitulative statement provisions with respect to the Member States’ capacity to fight MTIC. The report was due no later than June 30, 2011. It is eight months overdue.

Early in 2011 the Commission explained to Parliament that the Article 2 assessment would be delayed until the end of 2011. As of February 2012 the report has not been issued. The Commission explained to Parliament that:

According to Article 2 of Directive 2008/117/EC the Commission shall present, no later than 30 June 2011, a report assessing the impact of Article 263 on Member States' ability to fight against VAT frauds and the usefulness of the options.

At the time being, according to the information collected by the Commission from Member States, 26 of them have transposed the


\textsuperscript{74} VAT Directive, *supra* note 7, at art. 264.
directive in their national legislation. The transposition in the remaining Member State will be only completed in June 2011. Due to the fact that not all Member States had implemented this legislation in time in their domestic VAT legislation and the fact that the Commission finds it more appropriate to present a complete report, this report should be published by the end of 2011.75

**PART 2-B (detail)**

*Use Tax Reciprocity System – voluntary information collection & exchange*

The Use Tax Reciprocity (UTR) proposal was taken up (but not acted upon) by the Streamlined Sales Tax Governing Board on October 6, 2011. The UTR seems to derive from EU developments, if not then the timing uncannily coincidental.

The UTR proposes “… a mechanism to collect use tax already owed on internet purchases76 that was previously uncollectable.”77 The intent is to mandate origin state reporting of inter-state sales and then use technology to facilitate a data exchange with destination states without federal action and without streamlining (harmonizing) state tax laws. A central data facility is planned that will be accessible by all use tax states that voluntarily join the UTR.78

Each state joining the UTR will impose reporting requirements on all businesses with nexus in their state.79 Businesses with nexus will be required to report (in considerable detail) all inter-state sales data on (at least) an annual basis. A business would not be required to meet this reporting requirement, if it could certify (a) that it collected sales tax on all of its sales, and (b) that it made no other sales. Although it has a broader sweep, this reporting requirement imitates the recapitulative statement.80 The intent under the UTR (as it is under the EU VAT) is to gather a record in the origin state of taxable sales made into other (destination) states.


76 Although the text does specify that the UTR targets “internet purchases” there is nothing in the materials that presents this limitation. The proposal seems to broadly encompass all sales transactions whether made through an online vendor or not. In fact, at Aaron Neely, *supra* note 19, at slide 17, the materials indicate that the UTR “creates the ability to collect almost all of the use tax owed,” which suggests that the UTR is intended to be broader than just “internet purchases.”

77 Aaron Neely, *supra* note 19 at slide 2.

78 *Id.*, at slide 3.

79 *Id.*, at slide 6.

80 This requirement is designed to over-collect sales data. It sweeps into the net not only cross-border sales data for which a use tax is due in the destination state, but also cross-border sales data for non-taxable goods and services. Domestic non-taxable sales are also included. The collected data will be sorted into useable classes later. However, this collection requirement under the UTR differs from the EU’s recapitulative statements. Under the EU VAT transactional data is pre-sorting by the seller. Recapitulative statements only include transactions where the buyer will be required to perform a reverse charge in the destination jurisdiction.
Sales data is to be digitally reported\(^8\) first to the resident state.\(^8\) From there the data will be transferred to a secure server operated by the Streamlined Sales Tax Governing Board (SSTGB). The data will include (at least) the four following items:\(^8\)

- Billing name and address of the purchaser;\(^8\)
- Shipping address of the purchaser;
- Brief description of the goods; and
- The sales price of goods.\(^8\)

The use tax due on each transaction will be determined by the SSTGB,\(^8\) which will be appointed as an agent for each participating state.\(^8\) Under contract with the SSTGB a certified service provider (CSP)\(^8\) will perform the actual calculations. The SSTGB could (if it wanted to) install a certified automated system (CAS)\(^8\) in its datacenter to perform the calculations.\(^9\)

The SSTGB will notify the destination state of use taxes determined to be due to it by residents reportedly living there. The notices will be in aggregate per resident. Although the SSTGB will receive discrete transactional data from origin states and determine use tax due on this basis, the UTR requires that the SSTGB aggregate these calculations and determine a “total use tax due”\(^9\) per resident. The state will in turn issue an aggregate use tax notice to the resident who would be expected to pay these taxes.

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8 The text does not specify this point precisely, but the overall context as well as some descriptive language indicates that this is the intent. However, as the SSTGB will not receive the data directly from the sellers, it is possible that the state could receive vendor submission on paper, convert the data to digital form, and then submit it to the SSTGB. See: Aaron Neely, supra note 19 at slide 8 (“Companies will use their sales database to extract a sales summary into a file (.txt or .csv) [and the data will then be] … uploaded to a secure server …”).
8\(^2\) Id., at slide 9 & 19 (including a suggestion that states only require companies to report sales that are destined for states that have also joined the UTR – that is, both the seller’s state and the buyer’s state participate in the UTR). .
8\(^3\) Id., at slide 7.
8\(^4\) Although not stated, it is assumed that the data-set provided will include identifying characteristics of the seller. It should include the name, address and shipping point of the seller.
8\(^5\) There is no discussion of services in the proposal. In this respect the UTR proposal resembles the 1993 and 2003 recapitulative statements and VIES which also applied only to goods. It is clear that there is a range of state responses to the taxability of services. Some states tax very few, like California (21), Colorado (14) Illinois (17), Massachusetts (18), Montana (18), Nevada (18), New Hampshire (11), and Oregon (0); but there are others that tax a lot if not most services, like Delaware (143), Hawaii (160), New Mexico (158), South Dakota (146), West Virginia (158) and Wisconsin (105). Federation of Tax Administrators, FTA Survey of Services Taxation – Update (2007) available at: http://www.taxadmin.org/fta/pub/services/btn/0708.html#table
8\(^6\) Id., at slide 7.
8\(^7\) Id., at slide 7.
8\(^8\) Streamlined Sales and Use Tax Agreement § 501(B), available at: http://www.streamlinedsales.tax.org/
8\(^9\) Streamlined Sales and Use Tax Agreement § 501(C).
8\(^9\) Id., at slide 15 (reasoning that there are privacy concerns with a central database that records the spending/shopping habits of individuals the UTR passes data in aggregate from the SSTGB to the destination state, and further restricts a subsequent audit of this aggregate determination in cases of a contested assessment to “an outside agency” that can “certify that they do not know the person contesting the [use tax] bill”).
taxes on their state income tax return. The UTR recognizes that states without a use tax have “little incentive to participate.”

PART 3
Black Swans

As currently designed, the UTR proposal is not workable. One only needs to consider its immediate antecedent – the EU’s recapitulative statement/VIES information exchange system – to understand why.

For twenty years the EU has struggled with, rethought, invested in, and reinvested in its cross-border information exchange system. It still does not work well. Admittedly, part of the problem has been the relentless expansion of the EU (from the twelve Member States that were part of the EU when the information exchange network was put in place to twenty-seven Member States that use it today). Excuses aside, the network was designed to curb MTIC fraud – and MTIC has gotten worse, not better over the years.

The EU’s information exchange is failing largely because auditors in the Member States refuse to use it. Structural fine-tuning continues, better technology and more comprehensive databases have been added to be sure, but the real problem is one of trust. The system does not guarantee accurate and timely information. As a result, auditors go elsewhere. The Commission may eventually get this system to work as advertised, but it is not there yet.

In program management literature, this is called a Black Swan – a program characterized by extraordinary cost overruns, extreme schedule delays, and dramatic shortfalls in realized benefits. Black Swans have an average cost overrun of 200%, and an average schedule overrun of 70%. If planners believe they are looking at an IT project that is potentially a Black Swan the following questions should be asked:

- Can the program absorb the hit if this (major) IT project goes over budget by 400%?
- Can the program survive if only 25% to 50% of the projected benefits of this (major) IT project are realized?

92 Id., at slides 6, 9 & 10 (unexpectedly the UTR does not explain what would be done in the case of the six states that do not have a state personal income tax: Alaska, Florida, Nevada, South Dakota, Texas and Washington. In the case of Alaska this is less of a problem as there is no state-level income tax. It may be that in these cases a distinct use tax assessment will be sent to the resident to be paid independently).
93 Id., at slide 17 (there are five states in this category, Alaska, Delaware, Montana, New Hampshire and Oregon).
94 This is the same kind of “relentless expansion” that the UTR will experience as state join the UTR (if the UTR is successful). However, because the UTR is a voluntary program, there will probably be instances where states will withdraw from the program as well. This will bring the same kind of instability to the UTR that has proven problematical to the EU’s recapitulative statement/VIES network.
96 Bent Flyvbjerg & Alexander Budzier, supra note 5, at 23 (involving a study of 1,471 IT projects with a value of over $241 billion with 92% involving IT projects at public agencies, and 83% US-based projects).
97 Id., at 24.
Can the program take the hit if 15% of the medium-sized IT projects (secondary projects related to the main project) are also over budget by 200%?98

Recent work by Bent Flyvbjerg finds that planners engaged in developing large-scale IT projects are particularly prone to Black Swan blindness. Flyvbjerg’s findings are not unique. They are reinforced by the Standish Group’s Chaos Report on high risk Information and Communications Technology (ICT) projects, and by the Function Point Estimation studies of Capers Jones.99 Taken together, this research points to a “… plummeting success rate of ICT projects with increases in size [and] … virtually no success for projects larger than six million dollars.”100

The EU’s recapitulative statement/VIES network falls squarely within this Black Swan profile. It started reasonably small (with 12 Member States); had a short life expectancy (“… in 1993, it was built to last four years …”101); and was never envisioned as a single, monolithic, centrally controlled IT program. Although it was thought to be temporary when it began, it has now become a permanent part of the EU VAT (even though it still struggles to meet expectations).102

The UTR is starting out very differently, but it looks more like a Black Swan than the EU network ever did in 1993. The UTR is a larger, more centralized, and more complex IT project that plans on doing far more than data store and facilitation of information exchanges. The UTR will sort individual taxable/non-taxable sales, determine the use tax due on the taxable portion, and then aggregate the amounts due across all sellers to determine an annual use tax assessment (per buyer).

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98 Id., at 25 (the questions are based on Flyvbjerg’s study of 1,471 projects).
99 Capers Jones, ESTIMATING SOFTWARE COSTS: BRINGING REALISM TO ESTIMATING (2007).
101 (COM 260) 5-6 (2004), supra note 9, at 9.
102 A commitment made in 1967 to establish a definitive VAT system operating within the EU in the same way as it would in a single country, based on the principle of taxation in the country of origin has recently been abandoned. The recapitulative statement/VIES information exchange system was envisioned as a temporary measure largely because it was felt that an origin system was coming soon. This network was only needed as long as the EU maintained a destination VAT.

Thus, the Commission has come to the conclusion that there are no longer any valid reasons for keeping this objective, and will propose that it should be abandoned. Indeed, maintaining this commitment while not making progress on this track politically would affect the credibility of the European decision-making process. Abandoning the origin principle makes it possible to launch substantial efforts to devise alternative concepts for a properly functioning destination-based EU system of VAT. No work has been done in this area since 1993, because that option had been discarded in favor of a commitment to the origin principle.

Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee on the future of VAT – Towards a simpler, more robust and efficient VAT system tailored to the single market, (COM 851) 5 (2011) 851.
Flyvbjerg would suggest that the UTR is moving in exactly the wrong direction. In several papers,103 Flyvbjerg explains how to avoid Black Swans in major IT projects. According to Flyvbjerg’s analysis the UTR will have difficulties meeting expectation, coming in on time and within budget:

… smart managers … avoid IT black swans. They break big projects down into ones of limited size, complexity, and duration; recognize and make contingency plans to deal with unavoidable risks; and avail themselves of the best possible forecasting techniques – for example, ‘reference class forecasting,’ a method based on the Nobel Prize-winning work of Daniel Kahneman and Amos Tversky. These techniques, which take into account the outcomes of similar projects conducted in other organizations, are now widely used in business, government, and consulting and have become mandatory for big public projects in the UK and Denmark.104

Most notable in Flyvbjerg’s assessment (as applied to the UTR) is that there is absolutely nothing in the UTR proposal that even hints at comparative analysis. There is no indication that the authors of the UTR have considered, learned from, or advanced from the EU’s experience with its information exchange network. The UTR appears to be another Black Swan in the making.

Stated another way, the EU system appears to be part of the “reference class” for the UTR, but the planners do not recognize this. Kahneman and Tversky would call this taking the “inside view.” The critical perspective is to try to get an “outside view” of the project. As Flyvbjerg indicates:

Kahneman and Tversky uncovered a systematic fallacy in planning and decision-making under which people underestimate the costs, completion times, and risks of planned actions, whereas they overestimate the benefits of the same actions. This would later be known as “the planning fallacy”, and Kahneman argued that this fallacy stems from actors taking an “inside view” focusing on the constituents of the specific planned action rather than on the outcomes of similar actions already completed. Kahneman also identified a cure to the fallacy, namely taking an “outside view” on planned actions using distributional information from previous, similar ventures. Distributional information is here understood as data on variation from the expected outcome for instance as expressed in common statistical measures such as standard deviation and variance. Doing so in a systematic fashion is called “reference class forecasting.” A reference class forecast of a given planned action is based on knowledge about

103 Bent Flyvbjerg, Curbing Optimism Bias and Strategic Misrepresentations in Planning: Reference Class Forecasting in Practice, 16 EUROPEAN PLANNING STUDIES 3 (January 2008); Bent Flyvbjerg, Massimo Garbuio & Dan Lovallo, Delusion and Deception in Large Infrastructure Projects: Two Models for Explaining and Preventing Executive Disaster, 51 CALIFORNIA MANAGEMENT REVIEW 170 (February 1, 2009) CMR 423.
104 Bent Flyvbjerg & Alexander Budzier, supra note 5, at 25.
actual performance in a reference class of comparable actions already carried out. (emphasis added)\textsuperscript{105}

Flyvbjerg’s work indicates that that the size, complexity and duration\textsuperscript{106} of the UTR project should be examined, as well as contingency plans for unavoidable risks.\textsuperscript{107} A reference class forecasting study is also needed. Three of these elements (size, complexity and the reference class study) have been reflected in parts of the UTR proposal and are considered below, others cannot be addressed without more data.

Size – the UTR is a much larger IT project than the EU’s recapitulative statement/VIES information exchange system. Given how the EU has struggled with its information exchange system, the size of the UTR project makes this a risky endeavor. Two aspects of the UTR raise alarms.

First, the EU’s recapitulative statement/VIES information exchange system is a decentralized network of independent computer systems and databases. VIES at its core is simply a web-application that shares this data among the twenty-seven Member States. The UTR in contrast is a centralized computer system that will hold a national database of (nearly) all US cross-border sales. This is a very large IT project.

Secondly, the UTR will process several hundred times more data than the entire EU network. The EU’s recapitulative statement/VIES system is a limited B2B system. The UTR in contrast sweeps in all cross-border transactions, whether B2B or B2C.\textsuperscript{108}

The impact of these observations is clearer when real world figures are inserted in the discussion.

By 2004 the number of VAT registered businesses engaged in cross-border B2B trade\textsuperscript{109} was 1.5 million.\textsuperscript{110} In percentage terms, the number of businesses filing recapitulative statements was 4% of the businesses liable to report VAT. In addition, 9% of the VAT registered businesses made intra-community acquisitions.\textsuperscript{111}

\textsuperscript{105} Bent Flyvbjerg, Curbing Optimism Bias and Strategic Misrepresentations in Planning: Reference Class Forecasting in Practice, 16 EUROPEAN PLANNING STUDIES 4 (January 2008)
\textsuperscript{106} There is no indication in the UTR documentation about how long the planners expect the installation of the system to take.
\textsuperscript{107} There is no contingency plan in the UTR documentation for dealing with unavoidable risks.
\textsuperscript{108} In studies based on revenue yield the common observation is that roughly 40% of the RST is derived from B2B transactions (the tax is imposed of producers), and 60% is B2C. Raymond J. Ring, Consumers’ Share and Producers’ Share of the General Sales Tax, 52 NATIONAL TAX JOURNAL 79 (March 1999)
\textsuperscript{109} For example, in 2000 the fifteen EU Member States had cross-border trade of approximately €930 billion. There were about 24 million VAT registered traders, and about 100 million VAT declarations filed annually. COM(28) 16 (2000), supra note 41.
\textsuperscript{111} Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee concerning the need to develop a co-ordinated strategy to improve the fight against fiscal fraud COM(254) 6 (2006).
Thus, if traders make *quarterly* recapitulative statements (as they did before January 1, 2010), then approximately six million statements will be filed EU-wide. If *monthly* statements are filed then eighteen million statements will be filed.

The UTR differs. It receives separate transactions (not monthly or quarterly aggregates) directly from vendors. The UTR processes this data by *sorting* taxable/non-taxable sales, *determining* the use tax due on taxable sales, and then *aggregating* use tax amounts due across all sellers to determine an annual use tax assessment (per buyer).

Consider what this means in the context of one seller – Amazon.com. Amazon is the only seller mentioned by name in the UTR documentation. Amazon publically reports *revenue* from gross online sales through SEC filings, but it is rare to find an Amazon reference to its *unit sales* figures. There are two notable exceptions. Amazon did document unit sales once in 2012 and at one earlier time in 2010.

In 2012 Amazon released enough data so that the media could estimate the unit sales for Kindle Fire. Most agree that six million units were sold from September 2011 through January 2012. Two years earlier, in 2010, Amazon had announced that it achieved a record-breaking single day sales volume on November 29, 2010. Amazon said that it sold 13.7 million items that day at a pace of “158 items per second.”

Thus, if we assume that the six million Kindle Fire sales are made to separate individuals (B2C purchases), then we know that within five months Amazon processed as many discrete transactions for this one product as the EU received in recapitulative statements for the entire year (assuming the statements are filed quarterly). If we further assume that the Kindle Fire was primarily sold in the US, and that Amazon only collected sales tax in the five states where it has nexus, then (based on relative population density) roughly 87.2% of the Kindle Fire sales (or 5.2 million transactions) should

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112 Aaron Neely, *supra* note 19 at slide 16 (although the heading is “Amazon Laws,” the text discusses Amazon.com).

113 For example, even major research institutions like Forrester Research will reports that online retail sales in the US will reach $279 billion by 2015, but it does not estimate the number of US unit sales from online commerce. Robin Wauters, *Forrester: Online Retail Industry in the US will be worth $279 billion in 2015*, *Tech Crunch* (February 28, 2012) *Available at*: [http://techcrunch.com/2011/02/28/forrester-online-retail-industry-in-the-us-will-be-worth-279-billion-in-2015/](http://techcrunch.com/2011/02/28/forrester-online-retail-industry-in-the-us-will-be-worth-279-billion-in-2015/)


117 Using US census data for the five states without a sales tax (Alaska, Delaware, Montana, New Hampshire and Oregon) of 7.7 million people, and adding this to the population in the five states where Amazon collects sales tax (North Dakota, New York, Washington, Kansas and Kentucky) of 32.2 million, there are roughly 40 million people. Dividing 40 by the total US population of 311 million indicates that 12.8% of the US population either lives in a jurisdiction where Amazon collects the sales tax or lives in a
have attracted a use tax liability. In other words, in this instance the UTR would need to issue (through the tax administration of the destination States) 5.2 million use tax assessments.

Moving to the second unit sales disclosure we can look more closely at the line between Amazon’s domestic and international sales. Amazon’s 2011 Annual Report indicates that roughly 55% of its sales are in North America.\textsuperscript{118} If most of these sales are in the US (assume 40% out of the 55%), then on November 29, 2010 Amazon completed 5.5 million US sales in all product categories, and 4.8 million of these sales should have attracted a use tax.\textsuperscript{119} This means that it would take a little more than three days (at Christmas time) for Amazon (by itself) to exceed the number of hits that the EU system receives when recapitulative statements are submitted \textit{monthly}.

\textit{Complexity} – the UTR is far more complex than the EU’s recapitulative statement/VIES network. The EU system has no data processing function. Statements are submitted, and are placed without modification into the Member State’s database. Auditors can access the statements, but there is no classification of transactions, no taxability determinations, no tax calculations, and no preliminary assessment as would occur under the UTR.

The UTR is not a simple automated data processing proposal. Of course each use tax calculation (considered by itself) is relatively straightforward. However, performing the 4.8 million calculations that Amazon will send through the system day-after-day is surely a daunting task for any system.

In this data processing activity it will be critical for the UTR to match the tax determination with the name and address of the purchaser. Errors will lead to protests, audits, and considerable resource commitments. It is critical for the UTR to get it right the first time. It will need an accuracy rate in excess of 99%. A 1% error rate on just Amazon sales will lead to 55,000 contested use tax assessments \textit{each day}.

\textit{A reference class forecasting study} – it is reasonably clear that before making a decision on the UTR proposal a reference class forecast is needed. This analysis is not something that can be done here, but Flyvbjerg explains that three steps that must be taken:

1. Identify a relevant reference class of past, similar projects. The class must be broad enough to be statistically meaningful but narrow enough to be truly comparable with the tested project.

2. Establish a probability distribution for the reference class. This requires

\footnotesize{\textsuperscript{118} For years ending December 31, 2011, 2010, and 2009 the sales mix between North America and International was 56/44; 55/45; 52/48. Amazon.com, \textit{ANNUAL REPORT 2011} at 24.
\textsuperscript{119} [13.7 million total sales on November 29, 2010] x [40% US sales] x [87.2% sales where tax is due, but Amazon is not obligated to collect] = 4.8 million.}
access to credible, empirical data for a sufficient number of projects within
the reference class to make statistically meaningful conclusions.

3. Compare the tested project with the reference class distribution, in
order to establish the most likely outcome for the specific project.\textsuperscript{120}

Reference class forecasting does not try to forecast the specific uncertain events
that will affect the particular project, but instead places the project in a statistical
distribution of outcomes from the class of reference projects. In this paper some of the
potential members of UTR’s reference class can be imagined, but their selection would
depend on data availability (see the probability distribution step above).

The most obvious (potential) member of the reference class is the EU’s
recapitulative statement/VIES network. Others have been suggested above:\textsuperscript{121} the New
York/New Jersey Reciprocal Agreement of the State of New Jersey, and the State of New
York Providing for the Exchange of Tax Information and Cooperative Tax
Administration; the Tri-State Compact for Sales-Use Tax Enforcement that includes the
states of Massachusetts, Connecticut and Rhode Island; the Federation of Tax
Administrators, Uniform Exchange of Information Agreement that is in force in forty-four
states and the District of Columbia; and the Streamlined Sales and Use Tax Agreement.

PART 4
Conclusion

Destination-based consumption taxes in a federation – the European Union, the
US States, or the Canadian Provinces – always have a problem with cross-border sales if
the vendor (in one jurisdiction) is not obligated to collect the tax from buyer (in the other
jurisdiction). Fraudsters have utilized this enforcement gap whenever they can to
increase their profits at the expense of the tax system.

Every federation with a destination consumption tax has seen this problem and
tried to solve it. There is a large body of materials about these efforts. The EU has
worked on this problem for twenty years with a system of recapitulative statements and
the VIES. The effort has not been an unqualified success, and the EU continues to refine
its solution.

At first blush it would seem that modern technology should be able to solve this
problem easily. It is a simple matter of gathering data in the origin jurisdiction and
delivering it quickly, accurately and efficiently to the tax authorities in the destination
jurisdiction. Audits or the threat of an audit should be sufficient to assure compliance if
the technology could deliver on its promise.

For some reason however, it seems very easy for planners to underestimate costs,
completion times and the unavoidable risks inherent in reaching for this kind of large-
scale IT solution. Benefits are overestimated, and contingency plans for dealing with

\textsuperscript{120} Bent Flyvbjerg, Curbing Optimism Bias, supra note 105, at 8.
\textsuperscript{121} Supra note 17.
unavoidable risks are (for the most part) non-existent. What is needed is “reference class forecasting.” What we are trying to prevent is Black Swan blindness.

This paper considers the Use Tax Reciprocity proposal in the US and compares it with the EU’s effort to solve the same problem with recapitulative statements and the VIES network. It argues that the UTR is not ready now, and probably is too large, too costly and too risky to every be ready for adoption. Planners need to ask why the EU is still working on a very similar program twenty years out, why the EU has not achieved the success that was promised in 1993, and what the difference is with the UTR that will change the outcome.