

9. VAT fraud and evasion

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Summary

- VAT revenue losses through evasion jumped sharply in 2005–06, reaching £12.4 billion or 14.5% of potential VAT revenues. HM Revenue and Customs estimates that missing trader and carousel frauds account for less than a quarter of these losses, but that they have been growing rapidly despite its best efforts.
- HMRC estimates that the VAT gap increased by £2.7 billion in 2005–06, with missing trader fraud increasing by around £1 billion. If the jump in the VAT gap is genuine, either missing trader fraud is significantly higher than HMRC suggests or there has been an abrupt, significant and unexplained rise in other VAT fraud.
- Carousel frauds exploit opportunities provided by the VAT zero-rating of exports. The vulnerability of the VAT systems of EU member countries has increased as a result of the abolition of internal EU frontiers at the end of 1992.
- The UK government has sought EU agreement to extend reverse charging for certain categories of transaction, and, if agreed, this may help to check the growth in carousel fraud. But the underlying problem is unlikely to be resolved without a fundamental reform to the VAT treatment of international transactions, which would end the zero-rating of exports.

9.1 Introduction

Shortfalls in VAT receipts have torn holes in the Chancellor's Budget arithmetic. For the financial year 2005–06, the eventual £72.9 billion VAT revenue out-turn was £4.4 billion (almost 6%) lower than the revenue forecast made only two years earlier, in the 2004 Pre-Budget Report (Table 9.1). Even the 2005 Pre-Budget Report, which made a substantial downward revision of the revenue projection for 2005–06, based on data for actual receipts in the first eight months of the year, overestimated 2005–06 revenues by £1.5 billion. The revenue estimates for 2006–07, likewise, have been adjusted downwards from the £77.3 billion projected in the 2005 PBR to £76.2 billion in the 2006 PBR. What has been going on, and is the experience of 2005–06 good reason to be sceptical about the substantial increase in VAT receipts (to £80.1 billion) projected for 2007–08? Equally importantly, how can the underlying problem causing these revenue shortfalls be fixed?

The over-projection of VAT revenues is, it should be noted, a recent phenomenon. As the data for earlier years in Table 9.1 show, the VAT projections for 2004–05 were quite close to the final revenue out-turn, while those for 2003–04 were actually pessimistic, under-predicting revenues by a significant margin.

Table 9.1. The evolution of VAT revenue estimates

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
PBR 2006				72.9	76.2 ^e	80.1 ^p
FSBR 2006			73.0	73.7 ^e	76.5 ^p	
PBR 2005			73.0	74.4 ^e	77.3 ^p	
FSBR 2005		69.1	72.3 ^e	76.3 ^p		
PBR 2004		69.1	73.5 ^e	77.3 ^p		
FSBR 2004	63.5	69.7 ^e	73.1 ^p			
PBR 2003	63.5	69.0 ^e	72.2 ^p			
FSBR 2003	63.6 ^e	66.6 ^p				

Notes: ^e denotes full-year estimates based on actual receipts for part of the year only. ^p denotes revenue projections. Sources: HM Treasury Pre-Budget Report 2006, annex B, table B13; corresponding tables in previous FSBRs and PBRs.

In this chapter, we focus on one explanation for the VAT revenue lost to fraud and evasion, namely the large-scale ‘carousel’ frauds that have hit the headlines in recent months. In Section 9.2, we outline the existing VAT system (see Box 9.1) and explain the particular ways in which VAT is vulnerable to evasion and large-scale organised fraud, and Section 9.3 discusses the evidence on the scale of VAT revenue losses from this source. Section 9.4 assesses the range of policy options available to tackle VAT evasion and fraud.

9.2 The vulnerability of VAT to evasion and fraud

Like all taxes, VAT is subject to evasion. For example, traders may fail to register for the tax, they may under-report sales or, where different goods are subject to tax at different rates, they may reduce their tax payments by misclassifying sales into the category subject to a lower rate (or zero rate) of tax. In some respects, the particular structure of VAT may reduce its exposure compared with other systems of sales taxation. In particular, the gradual cumulation of the tax at each stage of the chain of production and distribution may reduce the amount of tax at stake at each stage, and hence the gains to be made from making untaxed sales. This does not make the VAT ‘self-enforcing’, as sometimes claimed, but it does reduce its exposure to evasion compared with alternative single-stage sales taxes levied at a comparable rate, such as the retail sales taxes common in the US.

In other respects, however, VAT offers distinctive opportunities for evasion and fraud, especially through abuse of the credit and refund mechanism. Revenue may be lost through exaggerated claims for credit for VAT paid on inputs to production. Moreover, the opportunity exists for outright fraud through the construction of business activities with the sole purpose of defrauding the exchequer, because some categories of business can be entitled to net refunds of VAT from the revenue authorities. These can include firms selling predominantly zero-rated goods (see Box 9.1) while claiming credit for significant amounts of VAT paid on standard-rated production inputs. While zero-rated domestic sales can create opportunities of this sort, the main point of vulnerability in the current system arises because of the VAT zero-rating of exports.

Box 9.1. A brief VAT primer

Value added tax (VAT) is levied on the sale of goods by registered businesses (those with annual turnover above a minimum threshold, currently £61,000). VAT is applied to sales both to private consumers and to other businesses (in contrast to the retail sales taxes levied in the US, which generally tax sales to final consumers only).

Business purchasers are, however, able to offset the VAT they have paid on their purchases ('input VAT') against their 'output VAT' liability on their sales. The result is that no net revenue is collected from the taxation of intermediate goods sales (business-to-business or B2B sales), but the tax revenue is collected gradually, throughout the chain of production and distribution. This reduces the scope for evasion compared with a retail sales tax levied at the same rate on sales, and it avoids the need for businesses and the revenue authorities to draw a distinction between the taxation of a firm's sales to final consumers and to other businesses.

For example, consider a simple chain of production consisting of two firms. Firm X makes sales of £30,000 to final consumers and no B2B sales. In the course of production, it uses inputs purchased from Firm Y at a cost of £10,000 plus VAT. Firm Y makes no sales to consumers and uses no taxed inputs; its entire £10,000 output is sold to firm X.

If the sales of both firms are subject to VAT at the UK standard rate of 17.5%, Firm Y will be liable for £1,750 in VAT on its sales to X. Firm X will be liable for output VAT of £5,250 on its sales of £30,000, but can offset the £1,750 tax paid on its inputs against this, giving a net VAT liability of £3,500. The VAT collected from Firm Y is thus, in effect, refunded to Firm X. Total VAT collected from the two firms taken together is £1,750 + £3,500 = £5,250, which is equivalent to 17.5% of the (tax-exclusive) value of the sales made to final consumers.

Where goods are VAT **zero-rated**, the seller charges a VAT rate of zero on its sales but is still entitled to credit for the input VAT paid. This can lead to negative VAT payments (i.e. refunds) where firms sell zero-rated goods but have standard-rated inputs. *For example, if the sales of Firm X in the above example are zero-rated, while Firm Y's sales are standard-rated, Firm X would charge no VAT on its sales and would be due a refund of the £1,750 VAT paid on its purchased inputs.*

Where goods are **VAT-exempt**, the firm's sales are not subject to VAT but the firm does not have the right to reclaim the VAT paid on its inputs. *If Firm X in the example is selling VAT-exempt goods, it would charge no VAT on its sales but would not be able to reclaim the £1,750 VAT paid on the inputs purchased from Firm Y. Firm X's sales would thus indirectly bear some VAT, in the form of the VAT charged earlier on the inputs purchased from Firm Y. This VAT would 'stick', and the price at which Firm X makes its sales would need to reflect this input tax.*

The VAT systems of the member states of the European Union tax trade transactions (both between member states and with the rest of the world) on a 'destination' basis. Exported goods are VAT zero-rated, meaning not only that a tax rate of zero is applied to their sale but also that the seller is entitled to reclaim the VAT paid on taxed production inputs. Symmetrically, imported goods are taxed on their full value by the importing country.¹ Businesses that make a high proportion of sales to customers abroad can thus be entitled to net payments from the exchequer. The level of VAT refunds can be a high proportion of gross VAT receipts – in the UK (which zero-rates around 13% of consumer expenditure – including items such as food, books and newspapers – as well as zero-rating exports), refunds amount to about 40% of gross VAT receipts.²

'Missing trader intra-community' (MTIC) frauds, of which 'carousel frauds' are the best-known example, exploit the refund of VAT to exporters to milk the VAT system of revenues through a series of contrived transactions. Box 9.2 illustrates the mechanism involved with a simple example; in practice, many layers of additional complexity are added to the simple structure in order to obscure the fraud. The two key features of the VAT that are exploited in the carousel fraud in Box 9.2 are the *VAT zero-rating of exports* and the system of '*deferred payment for VAT on imports*', adopted in the EU since the removal of fiscal frontiers in 1992.³ Under deferred payment, VAT on imports from one member state into another is levied not at the border but at the time of the importer's next periodic VAT return. As a result, there may be a considerable time lag between the date at which the importing firm (Company B in the example) imports the goods and the time at which the VAT authorities seek payment of the VAT due. In the mean time, the goods are sold on, via complicit – or perhaps unwitting – 'buffer' companies in the UK, to Company D, which exports the goods, claiming a refund of the VAT that it paid when it purchased the goods from Company C. In the basic carousel illustrated, the exported goods are then re-imported by Company B, and so on, following a cycle in which VAT refunds are claimed repeatedly whenever the goods are exported, while the corresponding import tax liability accumulates but is never paid. After a while, Company B, which would be liable to a substantial level of VAT on its imports, disappears, without paying any VAT.

As noted above, the basic structure of the fraud may be concealed by further complications. Indeed, innovation has been a constant feature of these forms of fraud, as those perpetrating them seek to stay one step ahead of the authorities' ability to detect fraudulent transactions.

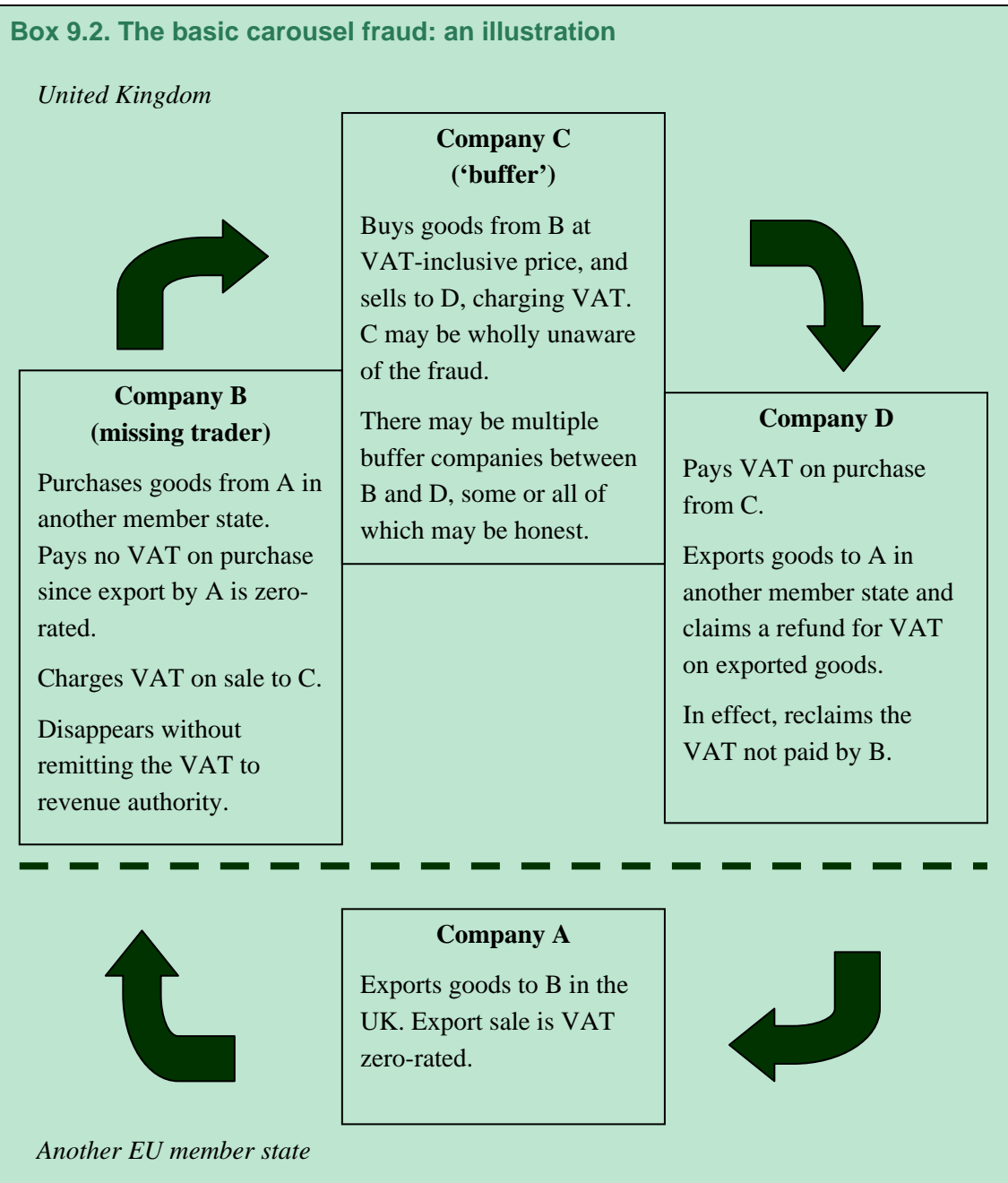
The problems for enforcement are compounded by the difficulty of identifying which of the traders are actively and knowingly involved. With the exception of the key player, the eventual missing trader, and the exporter, to whom the financial benefit of the fraud accrues in the form of VAT refunds, the other participants need not be knowingly involved in the

¹ Tax is imposed on import from goods imported from non-EU countries, and a deferred payment mechanism applies for imports from other EU member states, under which any VAT due is included in VAT accounting and payments of the importing firm.

² G. Harrison and R. Krellove, 'VAT refunds: a review of country experience', IMF Working Paper WP/05/218, 2005 (<http://www.imf.org/external/pubs/ft/wp/2005/wp05218.pdf>).

³ There are indications that the general level of VAT revenue losses rose by about one-third by the mid-1990s compared with pre-1992 levels (table 2.1 of HM Customs and Excise, *Measuring Indirect Tax Losses*, 2002, <http://www.hm-treasury.gov.uk/media/389/E5/admeas02-297kb.pdf>). It is unclear what has sparked the recent sharp growth in organised, large-scale fraud.

process. Some may have their suspicions, and some may be more actively engaged – for example, in adjusting prices so as to transfer the benefit of the VAT refunds to other players in the carousel.



9.3 Estimates of losses through evasion and fraud

How much revenue is lost through VAT evasion in general and through carousel fraud and other MTIC fraud in particular?

Since 2002, the UK government has published an annual estimate of VAT losses, based on a comparison between actual VAT receipts and an estimate, largely from National Accounts

data on household spending, of the hypothetical VAT revenue that would be obtained with full compliance: the ‘theoretical total VAT liability’ (VTTL) – see Table 9.2.

In principle, the approach adopted by HMRC in calculating this ‘VAT gap’ is straightforward, although in practice a number of steps involve significant judgement and imprecision. The methodology was scrutinised in 2004 by the National Audit Office, which concluded that it was the best available approach.⁴ The starting point is aggregate data on consumer spending, with a commodity breakdown corresponding to the pattern of VAT rates. The UK applies a standard rate of 17.5% to most goods and services, but a reduced rate of 5% to domestic energy expenditures, and a zero rate to food, children’s clothing, books and newspapers, and various other items. These zero-rated items correspond to about 13% of all consumer expenditure. A further 30% of total consumer spending is VAT-exempt (see Box 9.1), including items such as financial services and some health and education services. Applying the relevant tax rates to each spending category gives an initial estimate of VAT revenue.

Various adjustments are then made to this initial figure to compute the hypothetical maximum level of VAT revenue (VTTL):

- Amounts are deducted in each taxed spending category to reflect sales by small businesses with turnover below the VAT registration threshold. Small firms with annual turnover below the VAT registration threshold (currently £61,000 per annum) are not required to register for VAT, so their sales do not directly generate VAT revenues. However, these firms also cannot recover input VAT, so may experience an effective rate of VAT likely to be in the order of 3–6% depending on sector.
- An adjustment is made to reflect the effective rate of VAT on supplies of explicitly exempted items, such as the financial sector, health and education services, and clubs. Again, this reflects the inability of businesses to recover input VAT.
- Timing adjustments are needed to reflect the average lag of approximately one quarter between a transaction and the corresponding VAT receipt. Roughly speaking, this means that the VAT theoretical liability calculated on a calendar-year basis can be compared with fiscal-year receipts (the fiscal year beginning at the start of April).

Table 9.2. HMRC’s estimates of the ‘VAT gap’

Time period	Net VTTL £bn	Net VAT receipts £bn	Revenue loss £bn	VAT gap % <i>PBR06 (PBR05)</i>
2001–02	72.1	61.0	11.1	15.4% (15.7%)
2002–03	75.6	63.6	12.0	15.9% (16.8%)
2003–04	78.8	69.1	9.7	12.4% (13.5%)
2004–05	82.4	72.7	9.7	11.7% (13.5%)
2005–06	85.5	73.1	12.4	14.5% (n.a.)

Source: HM Revenue and Customs, *Measuring Indirect Tax Losses – 2006*, available at <http://www.hmrc.gov.uk/pbr2006/supplementary.htm>.

⁴ National Audit Office, *HM Customs and Excise: Tackling VAT Fraud*, Report by the Comptroller and Auditor General, HC357, Session 2003–2004, 3 March 2004.

Estimates of the VTTL, the revenue shortfall and the percentage revenue ‘gap’ from the 2006 exercise are shown in Table 9.2. In the most recent financial year, 2005–06, the VAT gap is estimated at some 14.5% of the net VTTL, corresponding to a revenue loss from all forms of VAT evasion of some £12.4 billion. Changes to the data and the methodology mean that the figures for 2004–05 and earlier years have been revised downwards compared with those given in the 2005 publication. But the broad time profile of the figures remains unchanged: the percentage VAT gap appeared to peak at nearly 16% of potential revenues in 2002–03, but then dropped sharply, perhaps because of the additional resources that HMRC began to devote to tackling VAT fraud. The estimates for 2005–06 show a marked reversal of the downward trend, and a sharp jump of nearly £3 billion in the amount of revenue lost compared with the previous year. This increase in evasion losses could thus account for perhaps two-thirds of the shortfall in forecast revenues for 2005–06 seen in Table 9.1.

Much of this VAT gap reflects revenue lost through relatively mundane forms of fraud and evasion – under-declaration of sales, exaggeration of input VAT, non-registration and the like. The high-profile missing trader frauds, including carousel fraud, may have accounted for less than a quarter of the total revenue loss of £12.4 billion. HMRC estimates that *attempted* missing trader (MTIC) fraud in 2005–06 was likely to have been £3.5–4.75 billion, of which a proportion would have been thwarted as a result of investigation work. The final loss in revenue in 2005–06 from MTIC fraud would, according to HMRC, be of the order of £2–3 billion. The basis of the estimate of MTIC fraud is not fully disclosed, and it is difficult therefore to assess its robustness and likely margin of error. It is higher than the corresponding estimate for 2004–05, when losses through MTIC frauds were assessed at £1.12–1.9 billion. Part of the increase can be explained by a change in HMRC’s method for estimating losses through MTIC fraud,⁵ and it is possible that the MTIC fraud estimate for 2004–05 understated the true level of such fraud. However, even if all of the difference (of some £1 billion) between the estimates of MTIC fraud for 2004–05 and 2005–06 reflects growth in the level of this fraud over the past year, this would still be insufficient to explain the £2.7 billion jump in the VAT gap between the two years. If the jump in the VAT gap is genuine, and not simply a statistical artefact, one of two things must be true: either the rise in MTIC fraud losses is substantially higher than HMRC’s figures suggest, or else there has been an abrupt, significant and unexplained rise in other forms of VAT non-compliance.

An indication of the enormous volatility of the level of missing trader fraud in the UK is provided by recent adjustments made by the Office for National Statistics (ONS) to published trade data.⁶ These show a sharp growth in the trade flows associated with fraudulent activity, from £2.6 billion in 2004, to £11.2 billion in 2005, and a staggering £24.8 billion in the first half of 2006. From the start of the third quarter, however, the adjustments to trade statistics for trade associated with VAT fraud have dropped sharply, to barely £3 billion in the five months to November 2006.⁷ For the year as a whole, this might suggest total exports associated with MTIC fraud of around £26 billion, and, applying the UK standard VAT rate

⁵ Using the previous methodology, MTIC fraud in 2005–06 would have been estimated at £1.4–2.4 billion.

⁶ See the discussion of these trade adjustments on page 23 of Bank of England, *Inflation Report*, August 2006 (<http://www.bankofengland.co.uk/publications/inflationreport/ir06aug.pdf>).

⁷ Page 8 of National Statistics, *First Release: UK Trade*, November 2006 (<http://www.statistics.gov.uk/pdfdir/trd0107.pdf>).

of 17.5%, associated revenue losses of some £4.5 billion, about 5% of VTTL. This is about 50% higher than the upper bound of HMRC's estimate of the revenue lost through missing trader fraud in 2005–06, although broadly similar to HMRC's estimate of *attempted* MTIC fraud in 2005–06.

Whether these trends in the UK have been accompanied by similar increases in VAT fraud elsewhere in Europe is difficult to assess. The UK revenue authorities have been particularly open about their assessment of VAT revenue losses, and the annual publication of this estimate may have raised the profile of the issue. Similar estimates are not routinely published by the revenue authorities of other EU countries, and there are no reliable comparative studies of rates of VAT evasion and MTIC fraud in different member states.⁸ It is, however, evident that the revenue authorities in some other member states have concerns about the vulnerability of the VAT system to organised fraud.

9.4 Policy options to tackle VAT evasion and fraud

Key design features of the VAT system influence the extent to which it is exposed to systematic missing trader frauds. Many of these, such as the stylised carousel fraud illustrated in Box 9.2, exploit opportunities provided by the VAT zero-rating of exports to claim fraudulent refunds for contrived transactions, while at the same time failing to pay VAT due on imports. Aspects of the VAT system that affect the scope for profitable carousel fraud include the extent to which the system allows intending missing traders (such as Company B in Box 9.2) to register for VAT, and the relative timing of VAT payments and receipts. These design features play a critical role in preventing revenue loss through carousel fraud. *Ex post* audit and investigation, while important, is unlikely to forestall considerable loss of revenue, because the essence of the fraud is that money is made quickly, in the time gap before the missing trader is required to remit the VAT it has supposedly charged on its sales. Once the money has disappeared into the complex web of transactions, tracing and recovering unjustified VAT refunds becomes time-consuming and costly.

Other than more vigorous investigation, two broad approaches may be taken to designing-out the opportunities for carousel fraud within the VAT system. One is essentially administrative, in the sense that it retains the zero-rating of intra-community supplies. The other, more fundamental to the structure of the tax itself, removes export zero-rating altogether.

Measures that could be taken within the context of the existing system include, for example: tighter checks on firms seeking to register for VAT (for example, with an on-site visit) and requiring guarantees in dubious cases; slowing down the payment of VAT refunds relative to the collection of VAT due (although this can impose severe cash-flow burdens on legitimate businesses); adopting or strengthening joint and several liability rules by which traders can be held responsible for fraud elsewhere in the chain that they might reasonably have been expected to be aware of; and establishing better and quicker information exchange between national tax authorities (so that the country of import can become promptly aware that exports

⁸ The UK authorities have been very dismissive of figures from a Belgian government task-force, which estimated that revenue losses from VAT fraud were at least four times higher in the UK than in other large EU countries, because the figure used for UK losses (about £8.4 billion) greatly exceeds UK official estimates.

to it that have been reported in another member state have not shown up in its own VAT system). However, while measures of this sort may reduce the risk of VAT fraud, some of them may have less-desirable side-effects. More bureaucratic VAT registration procedures and slower payment of VAT refunds might harm legitimate businesses as well as discouraging fraud, and these effects may outweigh the enforcement gains. The authorities have a difficult balance to strike, between ensuring that VAT administration does not impose excessive burdens on business in general and ensuring that it is not unduly exposed to fraud. Some level of VAT evasion may well have to be tolerated in the wider business interest.

More radical measures within the context of a system that preserves zero-rating include:

- The use of **‘reverse charging’**, by which liability in a business-to-business (B2B) transaction is placed on the buyer rather than the seller. This would deal effectively with the carousel fraud in Box 9.2, because the VAT due on the sale by B (the missing trader) would become the responsibility of the buyer, C. In turn, the tax due on the sale from C to D would be the responsibility of D. The zero-rating of the subsequent export sale would then offset D’s tax liability on its purchases from C, reducing the tax payment by D but not requiring outright refunds. The opportunity to make fraudulent gains by claiming refunds of tax that have not in fact been paid would thereby be eliminated. Last year, the UK proposed applying reverse charging for mobile phones, computer chips and other particular goods that have proved popular instruments for carousel fraud, but member states have yet to agree on whether this should be permitted. More radically still, Austria and Germany have both proposed allowing reverse charging for all B2B transactions above a certain size (€10,000 in the case of the Austrian proposal and €5,000 in the German proposal). The proposals differ in terms of the scale of the reporting obligations placed on firms and their customers: the German proposal would require both parties to a B2B transaction to report it to the tax authorities, and electronic cross-checking of this information, while the Austrian proposal would place fewer reporting burdens on firms.

The difficulty of reverse charging limited to certain products – as proposed by the UK – is that MTIC frauds may simply move on to other goods, not covered by reverse charging. There would also be new enforcement issues, at the ‘boundary’ between commodities subject to reverse charging and those subject to ‘normal’ VAT. By contrast, universal reverse charging – as proposed by Austria and Germany – avoids these difficulties but, in effect, turns the VAT into something closely akin to a single-stage retail sales tax, with tax payments suspended until goods are sold to final consumers (albeit with the possibility of cumbersome reporting procedures for B2B transactions). The danger of this is obvious: by ending the gradual cumulation of VAT payments through various stages of production and distribution and instead collecting all VAT revenue at the final sale, the system is exposed to substantially greater risks of revenue loss through unreported sales to final consumers. With a retail sales tax all tax revenue is lost if a sale to final consumers somehow goes unreported, while with a VAT the losses are limited to the difference between the VAT due on the final sale and the VAT already collected at earlier stages. Extensive reverse charging might help to stem losses from MTIC frauds, but might expose the VAT to other risks of revenue loss through more mundane forms of evasion.

- **‘Reverse withholding’** schemes would tackle VAT frauds in a broadly similar way to reverse charging, by requiring the purchaser in a B2B transaction to make a direct payment to the authorities of part or all of the VAT due on its purchase. The difference is that the seller would remain liable for output VAT, receiving a credit for the amount withheld by the purchaser. Depending on the proportion of the VAT that the purchaser is required to withhold, this would diminish or even eliminate the scope to generate revenues through fraudulent refund claims, since exporting firms will themselves have paid part or all of the VAT on their purchases that they subsequently reclaim on export. The principal drawback of reverse withholding (which is quite common in Latin America but untried in Europe) would be its administrative complexity, which arises because of the need to ensure that the seller is given credit for withholding only when this has actually taken place.
- Adoption of a system of **‘VAT accounts’**, under which traders would be required to open a distinct bank account into which they would transfer the amount of VAT charged to their customers. VAT refunds would only be paid if the authorities were able to verify that the corresponding VAT payment had been made. This has been proposed by Germany’s CESifo research institute⁹ as a solution to the problem of VAT fraud, and a system of this sort has been running in Bulgaria. The key feature is that it requires the VAT payment to be made *earlier* than in the present system, so that when refunds are paid, they can be checked against past payments made. Apart from this matter of timing, however, it does not fundamentally alter the situation. It is not clear that cross-checking refund claims against past payments to a bank account would be any easier, or more reliable, than checking that past payments have been made to the revenue authorities themselves.
- The **compulsory use of a third party to guarantee VAT payments**, either in general or for particular sectors, as set out by Ainsworth.¹⁰ In the example set out in Box 9.2, Company B, the future missing trader, would be required to obtain a guarantee that its VAT payments would be made. The principal difficulty with this is the cost involved; it is far from clear that banks or other potential guarantors would be any better placed than the revenue authorities to prevent firms disappearing with outstanding VAT liabilities, and the premium required to cover this risk would place substantial burdens on honest firms operating in the sectors most subject to VAT fraud.

These various administrative solutions all have weaknesses, either in creating other opportunities for fraud and/or in increasing taxpayers’ compliance costs. In a paper in the December 2006 *National Tax Journal*,¹¹ Keen and Smith have argued that a longer-run and durable solution to the problem of missing trader fraud requires a fundamental redesign of the VAT treatment of international transactions. The opportunity to claim fraudulent VAT refunds arises principally because of the break in the VAT chain that occurs as a result of the zero-rating of exports. Export zero-rating requires substantial amounts of VAT receipts to be

⁹ H-W. Sinn, A. Gebauer and R. Parsche, ‘The Ifo Institute’s model for reducing VAT fraud: payment first, refund later’, *CESifo Forum*, 2, 30–4, 2004.

¹⁰ R.T. Ainsworth, ‘Carousel fraud in the EU: a digital VAT solution’, *Tax Notes International*, 1 May, 443–8, 2006.

¹¹ M. Keen and S. Smith, ‘VAT fraud and evasion: what do we know and what can be done?’, *National Tax Journal*, 59(4), 2006.

paid back as refunds (about 40% of gross VAT receipts are refunded in the UK), and a system that requires refunds on such a large scale creates opportunities for correspondingly large-scale revenue fraud. Ending VAT zero-rating for trade between EU member states would sharply reduce the scale of refunds and eliminate some of the most tempting opportunities for missing trader frauds.

A range of possible schemes exist that could replace the VAT zero-rating of intra-EU trade. One, proposed by the European Commission in the run-up to the abolition of internal EU frontier controls at the end of 1992, was that goods exported from one member state to another would bear the exporting member state's VAT, with credit given for this by the tax authorities of the importing member state in just the same way as if the transaction had been conducted within a single member state. This would eliminate the opportunity for the carousel fraud illustrated in Box 9.2 because it would eliminate the VAT refund paid to Company D. While member states were concerned about other aspects of this proposal, including the much greater level of administrative cooperation that would be needed between the revenue authorities of member states, and the role that would have been played by the EU in redistributing the revenues collected on exports (to compensate for the credits that member states would give on imports), the key attraction of the proposal – that it would maintain the integrity of the VAT chain across the EU's internal frontiers – was perhaps dismissed too lightly. In the face of the growing revenue losses that the UK and other member states are now experiencing from frauds that exploit export zero-rating, there is a case for revisiting this debate. In the last decade, a wider range of possible international VAT mechanisms have been developed,¹² which would retain the VAT chain across frontiers while fixing some of the less desirable features of the Commission's original proposals.

Systematic reform that eliminates the root cause of missing trader fraud would be a much more appealing long-term strategy than the combination of resource-intensive enforcement operations and ad hoc 'fixes' such as extended reverse charging, which may provide temporary relief but do not address the underlying problem.

¹² See M. Keen and S. Smith, 'Viva VIVAT!', and other symposium contributions on this issue in *International Tax and Public Finance*, 7(6), 2000.