VAT missing trader intra-Community fraud: the effect on Balance of Payments statistics and UK National Accounts

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1. Summary

Data for UK trade released on 9 July 2003 includes revisions to imports and the balance of trade in goods for the period since 1999 to reflect initial adjustments for the impact of VAT missing trader intra-Community (MTIC) fraud. These revisions will also have some effect on GDP which will be taken into account when revised National Accounts estimates up to and including 2003 quarter two are published on 30 September.[1] In the meantime this article gives an approximate estimate of this effect. These revisions will be incorporated in the *Quarterly National Accounts and Balance of Payments* First Releases and the *United Kingdom Economic Accounts* (UKEA) datasets to be released on 30 September 2003. These datasets will be consistent with the 2003 *Blue* and *Pink Books* to be published on 24 October 2003.

This particular type of VAT fraud was highlighted in November 2001 in the HM Treasury and Customs and Excise paper, *Tackling Indirect Tax Fraud*, published with the *2001 Pre-Budget Report.* In this paper, MTIC fraud was described as follows:

> "VAT intra-Community missing trader fraud is a systematic criminal attack on the VAT system, which has been detected in many EU Member States. In essence, fraudsters obtain VAT registration to acquire goods VAT free from other Member States. They then sell on the goods at VAT inclusive prices and disappear without paying over the VAT paid by their customers to the tax authorities. The fraud is usually carried out very quickly, with the fraudsters disappearing by the time the tax authorities follow up the registration with their regular assurance activities."

The 'carousel' version of the fraud occurs when goods that have been imported into the UK are sold through a series of transactions before being re-exported to another EU Member State. They may then be re-imported back into the UK.

The fraud impacts on intra-EU trade statistics as these are collected via the VAT system. Whilst 'carousel' transactions are captured in export data, the acquisition of the goods in MTIC frauds is not included in import data. Imports are, therefore, under-recorded. This fraud is also a factor contributing to the recent widening asymmetry between UK and other EU Member States' trade data – the difference between what other EU Member States record as exports to the UK and what the UK records as imports from other Member States, and correspondingly for UK exports.

The purpose of this article is to explain how the fraud causes the trade deficit to be understated, how the Office for National Statistics (ONS) has made the revisions, and what their impact is on the UK National Accounts and EU asymmetries.

The revisions involve upward adjustments to imports of £1.7 billion in 1999, £2.8 billion in 2000, £7.1 billion in 2001 and £11.1 billion in 2002. There are corresponding downward revisions to the balance on trade in goods.

The revisions to imports also impact on estimates of total GDP and its expenditure components. The imports revisions will be incorporated in the full National Accounts in September at the same time as other new data. However, as GDP estimates are derived using information from production and income as well as expenditure, GDP revisions will be much smaller than those to imports.

A preliminary analysis suggests that the impact of the trade revisions on GDP would be negligible in 1999 and would reduce GDP growth by 0–0.2 per cent in both 2000 and 2001. However, other revisions being made for the *Blue Book* are expected to offset these downward adjustments, leaving GDP broadly unchanged compared with currently published estimates (apart from the effects of annual chain-linking). Estimates of growth for more recent quarters, from the beginning of 2002, will not be affected as they

are made using primarily data on output which are not affected by revisions to imports.

As with the National Accounts, there will be other revisions in the *Balance of Payments* First Release on 30 September consistent with the 2003 *Pink Book*. Current indications are that there will be upward revisions to the balance on trade in services of the order of £1–2 billion a year. This will offset a significant proportion of the effect on the overall trade balance of the revisions introduced here to account for the impact of MTIC fraud in 1999 and 2000, but only a small proportion subsequently.

Following the National Statistics Code of Practice and Protocols on Revisions and Release Practices, these revisions are being published as early as possible, consistent with avoiding creating uncertainty for these market sensitive statistics. However, it will not be possible to incorporate the revisions into the published National Accounts until all the analysis undertaken for the *Blue Book* has been completed, the results of which will be published on 30 September. One unavoidable consequence of publishing as early as possible is, therefore, that there will be a temporary inconsistency between estimates of UK trade in goods and the National Accounts. During this period, the ONS's best estimates of total GDP will be those published successively on 27 June, 25 July and 22 August. In order to help users, however, and to minimise uncertainty surrounding these market sensitive statistics, this article contains an approximate estimate of the effect of the revisions to imports on GDP, drawing on the analysis carried out so far in preparing the *Blue Book* (*see* Section 6 below), and also gives an indication of the effect of other *Blue Book* revisions.

2. Background

The VAT system and EU trade statistics

The measurement of trade in goods within the European Union is based on the Intrastat system which relies on the VAT system.

As part of the VAT return which firms complete each quarter, there is a declaration of the total value of exports of goods to customers in other EU Member States and the total value of imports of goods from suppliers in other EU Member States. These returns provide a direct estimate of the size of UK exports to and imports from the EU. They are also used to underpin a requirement to fill in a more detailed, monthly Intrastat return (if the value of the declarations on the VAT return exceed a given threshold – currently £233,000 per annum in the UK).

The Intrastat system therefore relies on the VAT returns providing an accurate and comprehensive record of trade flows.

VAT missing trader fraud

In recent years a particular type of cross-border fraud, based on the VAT system, has come to light which is now known to have caused the trade deficit to be understated. This EU-wide fraud is known as VAT missing trader intra-Community fraud (MTIC fraud).

This type of VAT fraud was highlighted in November 2001 in the HM Treasury and HM Customs and Excise paper, *Tackling Indirect Tax Fraud*, which was published as part of the *2001 Pre-Budget Report*. In this paper, MTIC fraud was described as follows:

> "VAT intra-Community missing trader fraud is a systematic criminal attack on the VAT system, which has been detected in many EU Member States. In essence, fraudsters obtain VAT registration to acquire goods VAT free from other Member States. They then sell on the goods at VAT inclusive prices and disappear without paying over the VAT paid by their customers to the tax authorities. The fraud is usually carried out very quickly, with the fraudsters disappearing by the time the tax authorities follow up the registration with their regular assurance activities."

The *2002 Pre-Budget Report* provided an update on the situation.

There are two main types of VAT MTIC fraud: acquisition and carousel fraud:

Acquisition fraud is where the goods are imported from the EU into the UK by a trader who then goes missing without completing a VAT return or Intrastat declaration. The 'missing trader' therefore has a VAT free supply of goods, as they make no payment of the VAT monies due on the goods. He sells the goods to a buyer in the UK and the goods are available on the home market for consumption.

Carousel fraud is similar to acquisition fraud in the early stages, but the goods are not sold for consumption on the home market. Rather, they are sold through a series of companies in the UK and then re-exported to another Member State, hence the goods moving in a circular pattern or 'carousel'.

Carousel fraud is currently regarded as the dominant type in terms of loss of government revenue. For reasons explained later, the adjustments described in this article relate only to part of the carousel variant. The fraud is not exclusive to the UK. Because these VAT arrangements apply throughout the European Union the fraud can be perpetrated between any two or more Member States.

The impact of MTIC fraud on the trade statistics

As discussed earlier the intra-EU trade in goods statistics rely on the VAT forms being a correct record of trade transactions. MTIC fraud affects the measurement of trade in goods through the role of the missing trader.

The carousel fraud is illustrated in Figure 1. The UK Trader B imports goods from the EU supplier A. Trader B should pay VAT on sales to Trader C and fill in a VAT return. Trader B ceases operation as soon as it has sold the goods on to Trader C, keeping the VAT and hence not filling in VAT forms. Without the VAT form there is no record of the transaction for UK import statistics. The carousel then involves various traders selling the goods on (in this example, C and D) until the goods reach Trader E. Trader E exports the goods to non-UK Trader A; Trader B imports them again from Trader A, and the carousel continues. The transaction of the UK exporter E will be recorded alongside his VAT return because insufficient evidence of export would result in the exporter being required to charge and account for VAT on his onward sale. The VAT system (and therefore the Intrastat collection of trade statistics) picks up the exports of any 'carouselled' goods, but does not pick up the associated import at the time the carouselled goods entered the UK. The balance of trade, exports minus imports, is therefore overstated.

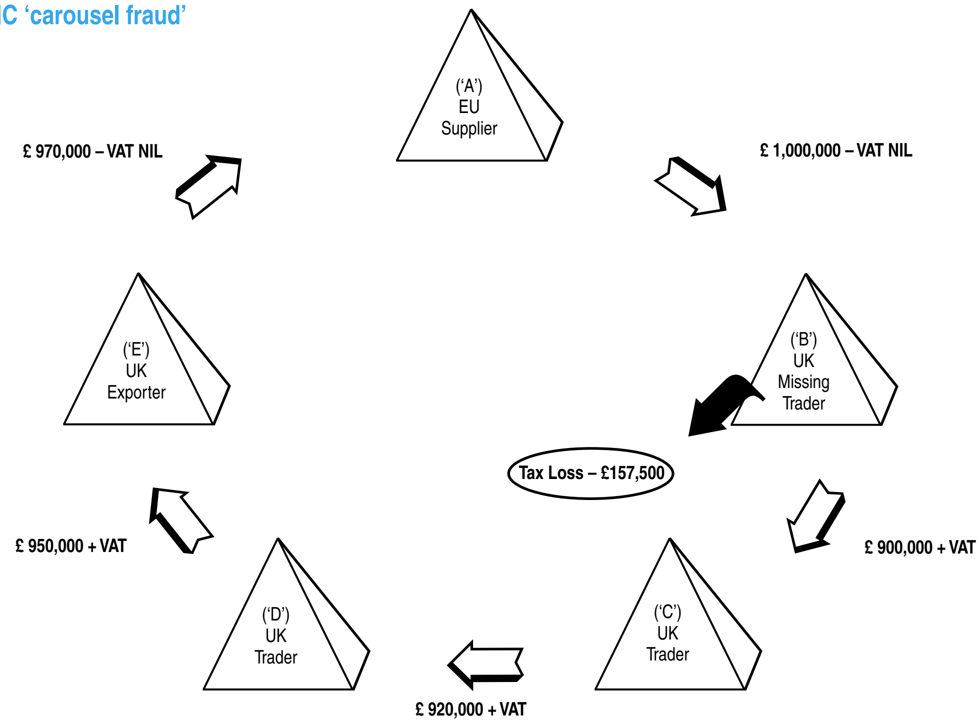
The treatment of this imbalance in the trade statistics is guided by the European System of Accounts methodology. This is described in more detail at Section 6 below. Since the conclusion drawn for National Accounts purposes is that adjustments for fraudulent activity such as this be included in the accounts, it was concluded that any revisions to account for the impact of MTIC fraud in the trade statistics should be added to the imports and therefore included in turn in the National Accounts.

3. Estimation of the impact of MTIC fraud on trade statistics

The measurement of illegal activity is by definition an inexact science; statisticians are required to estimate figures in areas where traders are seeking to conceal their identity or otherwise to trade covertly. At present there is no internationally approved methodology for including adjustments for the impact of MTIC fraud in the trade figures and the National Accounts.

ONS in partnership with HM Customs & Excise have developed a methodology to estimate these adjustments. The method used relies heavily on information uncovered during HM Customs & Excise's operational activity. As such it cannot be detailed for risk of prejudicing current activity, including criminal investigations and prosecutions, and more generally undermining HM Customs & Excise's ability to tackle the fraud effectively. The method is applied only to some of the transactions involving mobile phones and computer components – the commodities of choice of the fraudsters. It specifically excludes other commodities and adjustments for the acquisition variant of the fraud which cannot be quantified at present.

Figure 1
Simple MTIC 'carousel fraud'



This adjustment has been assessed for coherence with other data. In particular ONS Supply and Use balances, used for the construction of GDP estimates, have been used to validate and inform the relevant sizes of adjustments on the specific products that are predominantly used to carry out the fraud. The asymmetry analyses (*see* Section 5 – EU asymmetries, below) have also been used as further input to this process. The revisions for the impact of MTIC fraud on the trade statistics are, however, just one of a number of factors influencing the asymmetry discrepancies. These other factors are listed in the Annex.

The analysis has led to the following adjustments for the impact of MTIC fraud, which have been added to existing UK import figures. Table 1 shows the adjustments for the impact of MTIC fraud at both current and constant prices expressed both in £ billion and as percentages of imports of goods and services.

Table 1: Adjustments for the impact of MTIC fraud on imports of goods and services

	Current prices		Constant 1995 prices	
	£ billion	% of imports	£ billion	% of imports
1999	1.7	*0.7*	2.1	*0.7*
2000	2.8	*1.0*	3.4	*1.0*
2001	7.1	*2.4*	8.5	*2.5*
2002	11.1	*3.8*	14.0	*4.0*

It is notable that constant price impacts are larger than current price impacts because the goods favoured by fraudsters are the goods that are high value and low volume such as computer components and mobile phones, where prices have been falling relative to other prices in the economy.

As discussed, the nature of the activity means that any adjustments made for the impact of the fraud are necessarily subject to a large margin of error. This was particularly so prior to 2002 when less transaction data were available. Nevertheless there is no doubt that the adjustments improve the coherence of the trade statistics and National Accounts. While the Balance of Payments and the UK National Accounts will be adjusted to account for the impact of MTIC Fraud, the Overseas Trade Statistics (OTS) published by HM Customs & Excise will not be adjusted. Trade statistics on a Balance of Payments basis include a number of adjustments, for example estimates of alcohol and tobacco smuggling, which are not included in the detailed data published by HM Customs & Excise.

It may be necessary to update calculations as part of future *Blue Book* processes. An updating of these calculations may involve an adjustment for carousel fraud in other commodities and for acquisition fraud. As stated, the present adjustments relate only to mobile phones and computer components. It is likely that this constitutes a sizeable proportion of the carousel fraud, but a fuller assessment has not been possible at this stage.

From the particular perspective of the estimation of GDP and UK National Accounts as a whole, acquisition fraud is a lesser concern. Consumer demand is likely to be understated in the case of both carousel and acquisition fraud, but more so in the case of acquisition fraud since carousels are generally selling to other businesses, not to consumers. In the case of acquisition fraud, consumer demand may be understated since households may not declare all of these purchases in consumer surveys and, similarly, the sellers of the goods are less likely to be captured by retailing enquiries. Therefore, total domestic expenditure and imports will be mis-stated by similar amounts. However any acquisition fraud missed would impact on the current account.

4: Adjustments to trade in goods due to the impact of MTIC fraud

The revised annual profiles of trade in goods figures and associated balances are illustrated in Figures 2 to 8. Due to the methodology available to produce the revisions, it should be noted that revisions prior to 2002 are less robust than those for 2002 (and future revisions). Figure 2 shows imports of goods from 1990 onwards both including and excluding the revisions to account for the impact of MTIC fraud as well as exports of goods.

Figure 2
Imports and exports of goods (BoP basis)

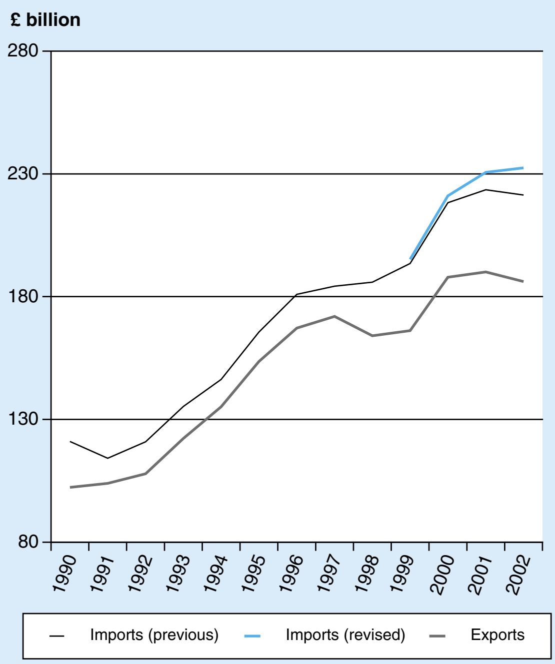


Figure 3 shows the balance on trade in goods from 1990 onwards both including and excluding the revisions to account for the impact of MTIC fraud.

Figure 3
Balance on trade in goods (BoP basis)

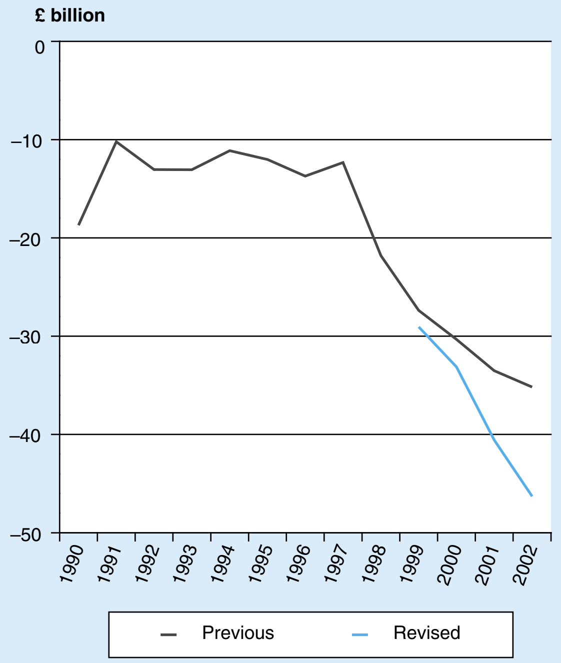


Figure 4 shows the balance on trade in goods as a percentage of GDP at current prices both including and excluding the revisions to account for the impact of MTIC fraud.

Figure 4
Balance on trade in goods as a percentage of GDP current prices

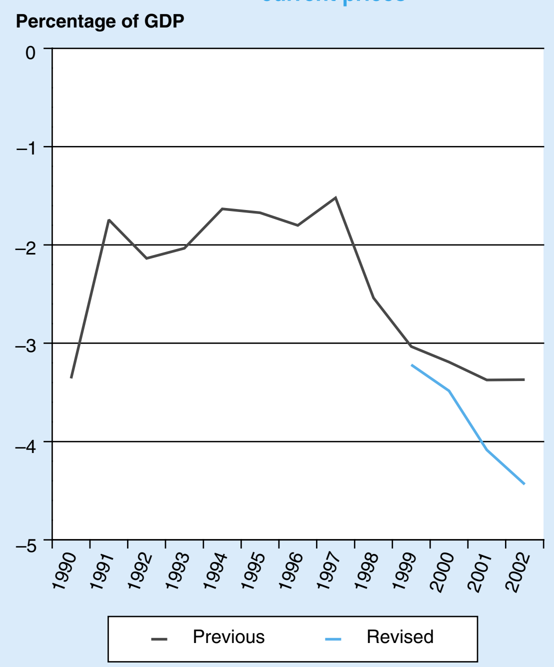


Figure 5 shows the balance on trade in goods, both including and excluding the revision to account for the impact of MTIC fraud, as a percentage of GDP at constant 1995 prices, as published in the *Quarterly National Accounts* First Release on 27 June 2003.

Figure 5
Balance on trade in goods as a percentage of GDP constant (1995) prices

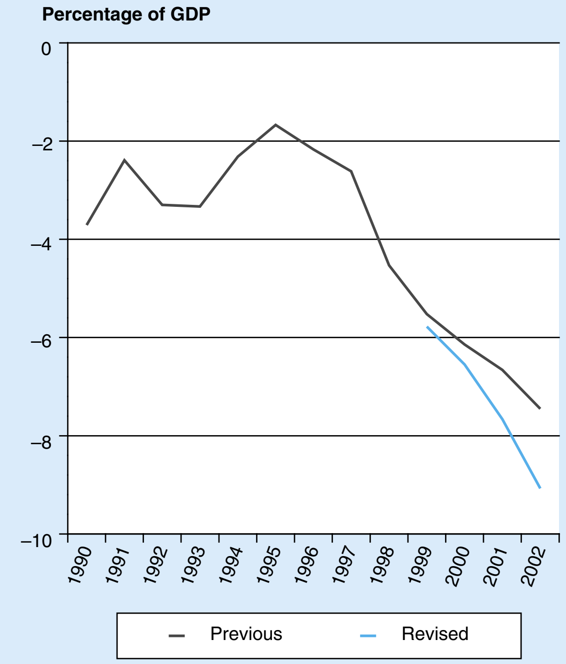


Figure 6 shows the balance on the current account from 1990 onwards both including and excluding the revisions to account for the impact of MTIC fraud.

Figure 6
Current account deficit

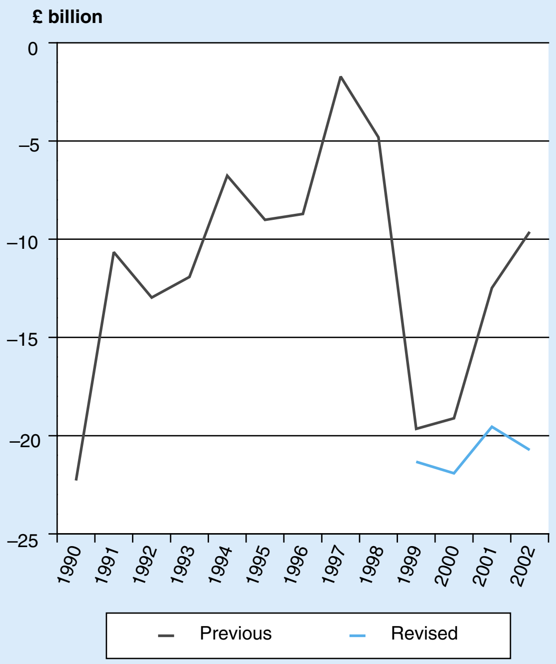


Figure 7 shows the current account as a percentage of GDP at current market prices both including and excluding the revisions to account for the impact of MTIC fraud.

Figure 7
Current account deficit as percentage of GDP

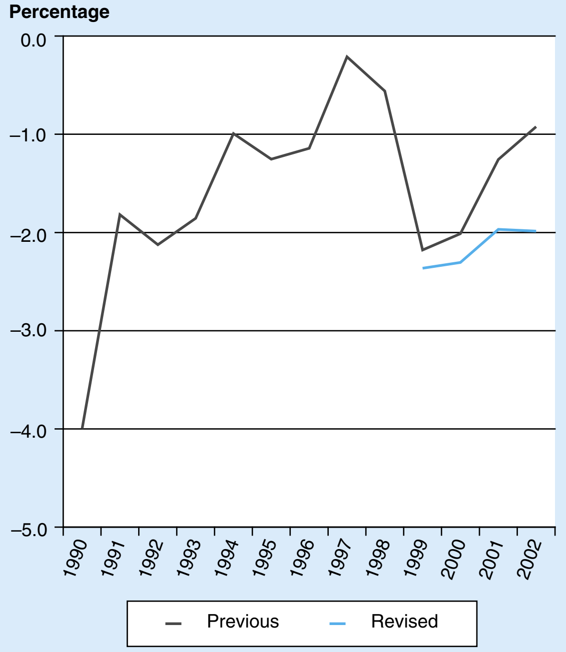
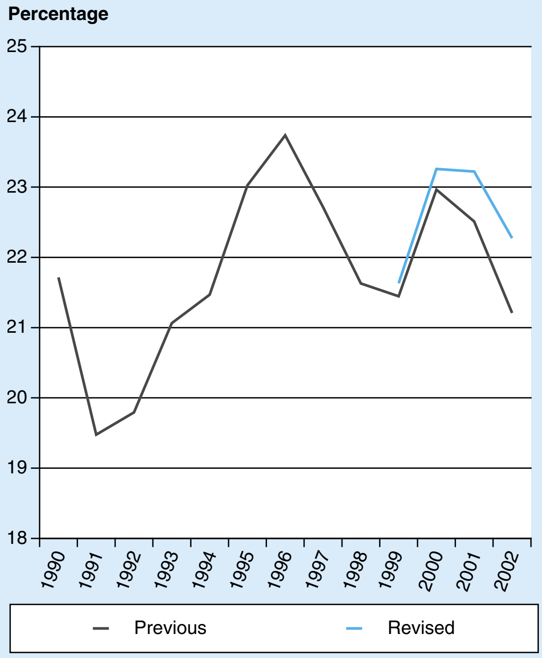


Figure 8 shows imports of goods as a share of gross final expenditure at current market prices both including and excluding the revisions to account for the impact of MTIC fraud.

Figure 8
Imports of goods as a percentage of GDP current prices



The annual revisions have been broken down into monthly and quarterly components in the monthly *UK Trade* First Release for the purpose of introducing the adjustment into the published figures in this release only. In the future, as with other balance of payments adjustments, ONS will make annual adjustments available with the publication of the *Pink Book* each year. Monthly and quarterly figures and commodity and country breakdowns will not be made available as the quality of the estimates obviously deteriorates at more detailed levels of disaggregation. Furthermore, HM Customs & Excise advise that publication of detailed adjustments is likely to affect their ability to tackle the fraud effectively and reveal information which risks prejudicing ongoing and future criminal investigations and prosecutions. Within these constraints, ONS and HM Customs & Excise are considering what might be done to help users interpret short-term movements in exports and imports.

Analysis of effect of the revisions on interpretation of exports

The appropriate treatment of the revisions being introduced is to adjust imports upwards by the relevant amounts. This is in accordance with National Accounts and Balance of Payments methodology. However, given that exports of carouselled goods are being recorded in the export figures, the profile of the import adjustments to account for MTIC fraud could be used to inform analyses of export trends.

Figure 9 shows the quarter on quarter growth in exports of goods at constant prices. It compares total export figures with exports adjusted to exclude the MTIC adjustments (i.e. applying the adjustments described in this article to exports rather than imports).

Figure 9
Exports of goods (Volumes) quarter on quarter growth rates

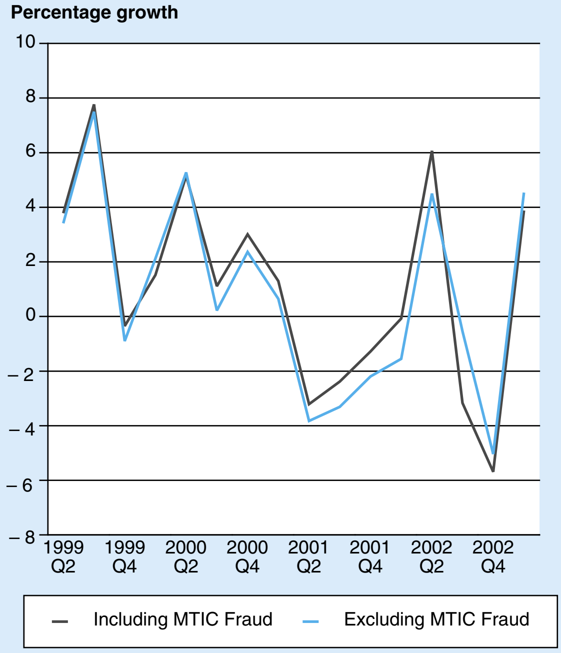
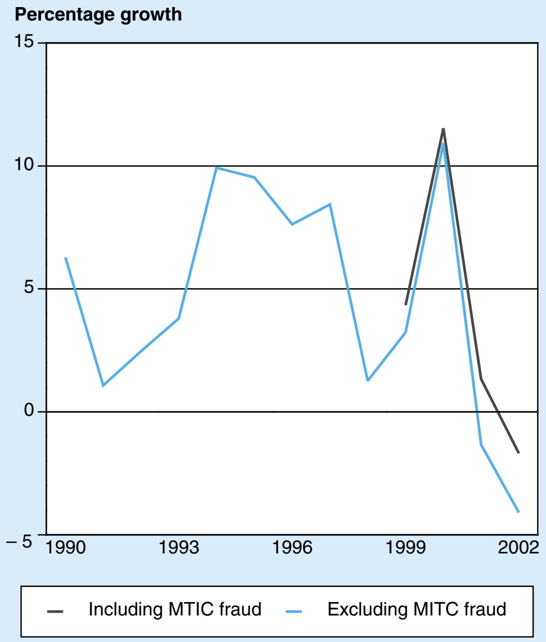


Figure10 shows a profile of the annual growth of exports, again with unadjusted and adjusted data. Due to the methodology available to produce the revisions, it should be noted that revisions prior to 2002 are less robust than those for 2002 (and future revisions). This should be taken into consideration when analysing the effects on export growth.

Figure 10
Exports of goods revised for impact of MTIC fraud year on year volume growth



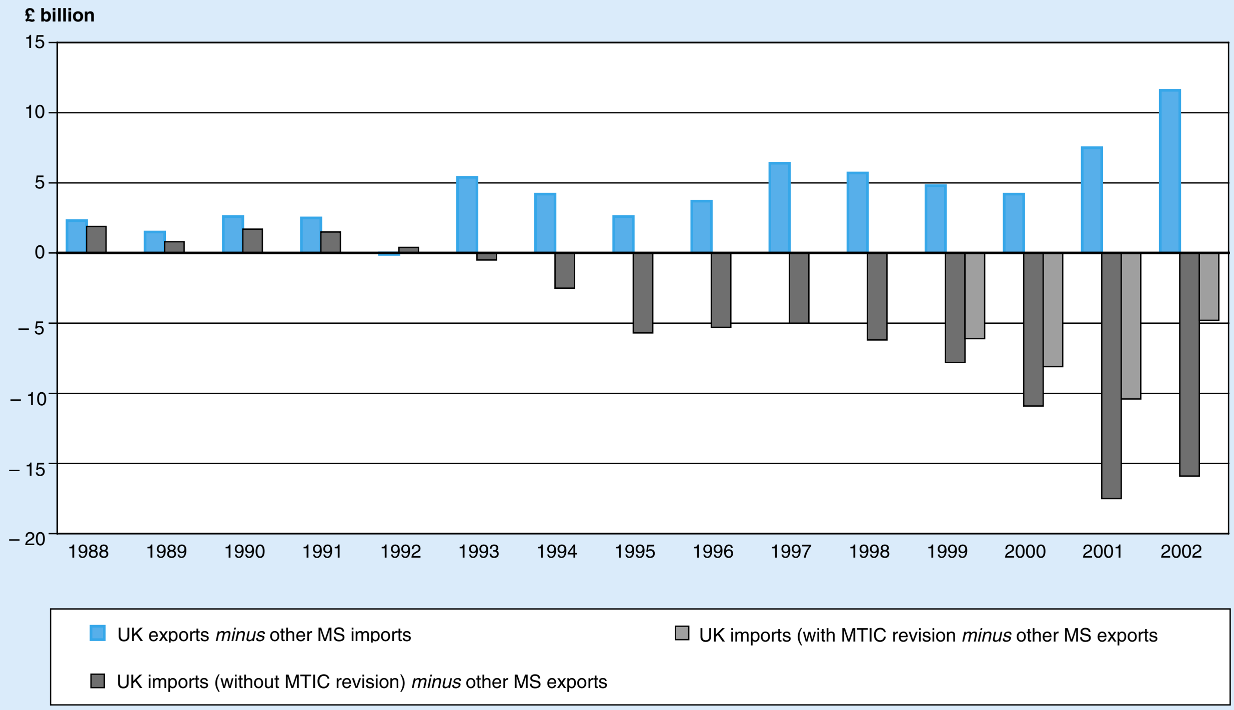
5. EU asymmetries[2]

It is now clear that MTIC fraud has made a major contribution to increased asymmetries between EU Member States trade figures.

Asymmetry analyses arise because trade can be looked at from the perspective of either of the countries involved. For example, the UK's estimate of its exports to country X should be the same as country X's estimates of its imports from the UK, and the UK's estimates of its imports from country X should be the same as country X's estimates of its exports to the UK. These types of checks are known as mirror statistics and the divergences between the mirror statistics, as asymmetries. In practice there are a number of technical and methodological reasons that means these theoretical identities will not hold. However comparisons of this type have long been recognised as helpful cross-checks on trade data (the Annex discusses a number of possible explanations of why there are non-zero asymmetries).

The Statistical Office of the European Communities (Eurostat) produces an analysis of all Member States asymmetries. Figure 11 shows the two mirror relationships for the UK. This Figure shows the import asymmetries on an Overseas Trade Statistics (OTS) basis both with and without the MTIC adjustment, although it should be borne in mind that the OTS statistics will not be revised to take account of the impact of MTIC fraud.

Figure 11
EU asymmetries (OTS basis)



The mirror statistics show both higher imports and lower exports than UK trade data. In recent years, both differences – so-called asymmetries – act in the same direction as far as its effect on the trade balance is concerned. A mirror estimate of the UK balance of trade is therefore substantially below the UK estimate as shown at Figure 12 below, which also includes an estimate of the deficit on trade in goods that takes into account the revisions to account for the impact of MTIC fraud set out in this article.

Prior to 1993 the scale of the divergence was relatively small, an average of £1.8 billion a year in the five years up to 1992. However, since the introduction of the single market in 1993, the figures have been diverging to an increasing extent. The increasing divergence is largely driven by the imports data. The dramatic divergence has meant that in 2001 the UK balance of trade deficit based on the EU mirror data was £31.5 billion, set against an estimate of £6 billion based on UK data. Following the revisions discussed in this article, the UK balance of trade in goods deficit for 2001 is now estimated at £13.1 billion. A significant part of the divergence is therefore now resolved.

More generally the Eurostat mirror statistics show that other EU member states have import and export asymmetries in the same directions as those shown for the UK in Figure 11. MTIC fraud is likely to affect the trade statistics in many EU economies because the conditions for it apply throughout the EU.

It should be emphasised that MTIC fraud is not the only cause of the EU asymmetries. Figure 11 demonstrates that the revisions to account for the impact of MTIC fraud will account for a significant amount (and the rapid increase in recent years), but the Annex describes many other causes of the asymmetries. Some of these causes are not specifically related to membership of the EU. For example, the UK has significant export and import asymmetries with the USA, and these, by definition, are not related to the MTIC fraud.

6. Adjustments to the National Accounts and estimates of GDP due to the impact of MTIC fraud

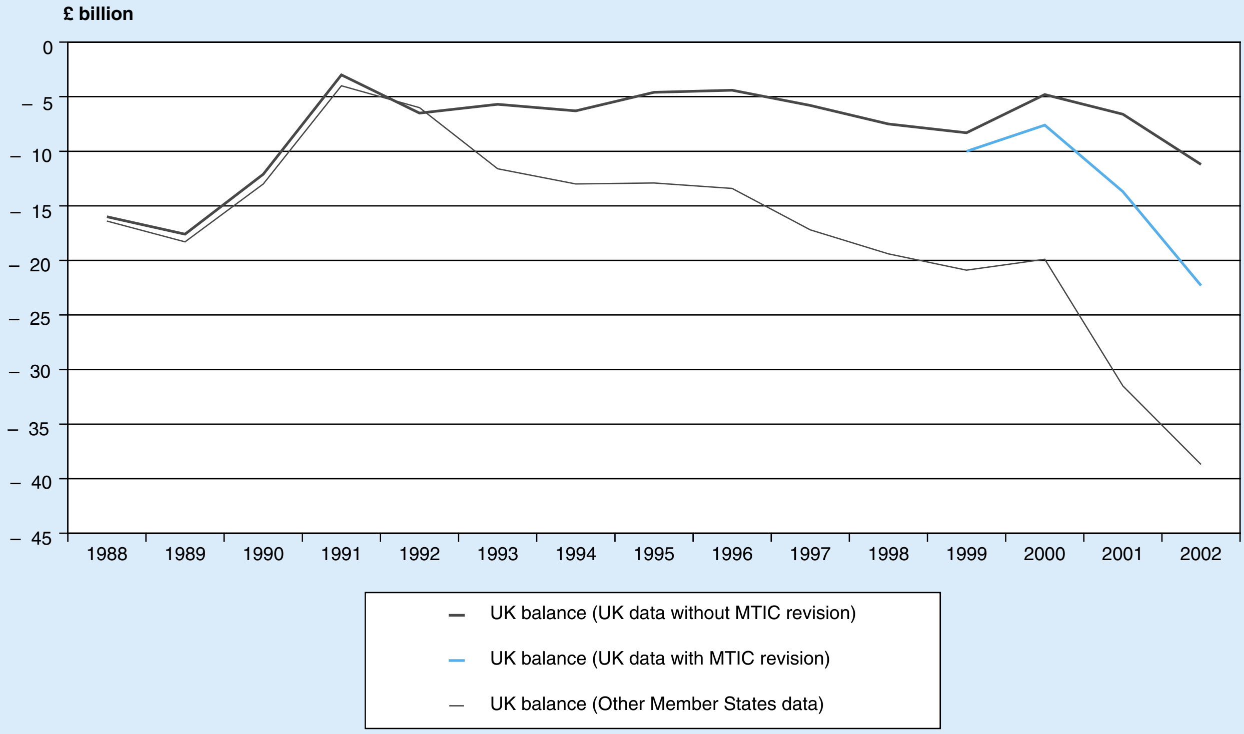
National accounting and illegal activity

National Accounts are constructed according to the European System of Accounts (ESA) 1995. The purpose of this is to give a standard so that all countries' figures are comparable against each other. At the most basic level the ESA specifies whether transactions / activities should or should not be included in the National Accounts.

The ESA took explicit account of illegal activity when considering the definition of a transaction:

"1.42. The definition of a transaction stipulates that an interaction between institutional units be by mutual agreement .... Illegal economic actions are transactions only when all units involved

Figure 12
EU asymmetries: Crude balance on trade in goods (OTS basis)



enter the actions voluntarily. Thus, purchases, sales or barters of illegal drugs or stolen property are transactions, while theft is not."

Recognising these guidelines, the UK has already taken a step towards the incorporation of illegal activity in the UK National Accounts. In *Blue Book* 2001, ONS introduced estimates for the smuggling of tobacco and alcohol into the UK involving adjustment of consumer demand, imports of goods and compensation of employees.

Incorporating an adjustment for the impact of MTIC fraud into the National Accounts involves a judgement over whether the activity should be in the accounts at all. The relevant consideration is that all involved in transactions forming part of a MTIC carousel are participating by mutual agreement (even if some may not be involved in the fraud), and so complies with section 1.42 of the ESA above. In this way, the transactions should be recorded in both import and export flows. However the non-payment of VAT by the UK missing trader is regarded as theft from the government and these transactions will therefore not be recorded. Government revenue figures will be recorded as received, and not be adjusted upwards for tax stolen.

Estimates of GDP

GDP in the UK is estimated using three approaches, by directly measuring production, by measuring the income generated by the production and by measuring the expenditure on the goods and services produced. The ONS believes that the best benchmark estimate of GDP at current prices comes from incorporating information on production, income and expenditure in a Supply Use framework *(see* below) to produce a single estimate of GDP. Short-term growth estimates, on the other hand, are best derived by estimating changes in production using indirect measures of output.

Imports are used in the estimation of GDP from the expenditure approach. They are subtracted from other expenditure components so the expenditure total only relates to domestically produced goods and services. Therefore, the substantial upwards revisions to imports of goods, as a result of adjusting for the impact of MTIC fraud, would suggest that there should be a substantial downward revision to the estimates of both GDP level and growth. However, because of the complex methods of estimating GDP using data from all three approaches, the effect is much less straightforward than the effect on imports data alone.

Benchmark estimates

Benchmark estimates for the level of GDP at current prices are estimated using income, expenditure and production approaches which are reconciled and balanced using a Supply Use framework. Within the Supply Use framework, the supply (domestic production plus imports) of 123 products is compared to the demand for those products. Simultaneously, the outputs of 123 industries are compared to the inputs into each industry. Supply and demand should be equal, as should industrial inputs and outputs. The raw data within the Supply Use table are adjusted to produce a balance which generates a single, coherent measure of GDP; i.e. in which at the end of the balancing process the GDP totals of income, expenditure and output components are all the same as each other. The adjustment process takes account of the quality of the data in each cell. This process draws on all the available data so, in effect, GDP is a weighted average of production, income and expenditure information. However, the weight given to each of the individual components varies from product to product and across time. In practice though, production data are generally considered the most reliable and are given the greatest weight.

The Supply Use balance is first published 18 to 21 months after the end of the year to which it relates. So, for *Blue Book* 2003, there will be a preliminary balance for 2001, which will include an initial adjustment for the impact of MTIC fraud. At the same time, the tables for 1996 to 2000 are being revised and rebalanced. For 1999 and 2000, the revisions will include the incorporation of initial adjustments for the impact of MTIC fraud.

The use of import data adjusted for the impact of MTIC fraud leads to higher figures for imports of goods, which need to be incorporated into the accounts. In terms of the aggregate differences between the three measures, this increases the difference between the production and expenditure measures in 1999 and 2000. However in terms of the specific products primarily used in MTIC frauds, the converse is true. Classes 73, 'electronic components' and 74, 'transmitters for TV, radio and phone' have for some time seen demand outstripping supply. In this way the existing National Accounts balance provides support for the revisions introduced to account for the impact of MTIC fraud which has the effect of increasing supply.

Constant price figures are produced by deflating the balanced expenditure estimates at current prices. The full impact on growth in volume terms is expected to be similar to the current price effect but will be confounded by the introduction of annual chain-linking at the same time. An article explaining the effects of annual chain-linking on the *Blue Book* 2002 dataset was published in the April 2003 edition of *Economic Trends* and is available on-line at www.statistics.gov.uk/CCI/article.asp?ID=328&Pos=&ColRank=1&Rank=224.

Short-term growth estimates

Supply Use tables are not compiled for the most recent periods. Instead, the ONS relies on a production based measure of GDP which is designed to measure short-term changes in output. Although expenditure and income based estimates of GDP are produced, they have little or no weight in the estimation of GDP with the income and expenditure measures being adjusted to bring them into line with the output measure.

As MTIC fraud activity is not thought to have a significant impact on the output measure of GDP, incorporation of the adjustments will have little or no effect on estimates of growth for more recent quarters since the start of 2002. However, the expenditure data that balances with the output data in these quarters has up to now, under-recorded imports of goods. When the revisions to import components are incorporated in the National Accounts for the estimates to be published on 30 September, the alignment and other adjustments that are used to help bring the expenditure measure into line with the output measure will be reviewed.

The upward revision to imports of goods to account for the impact of MTIC fraud should help to resolve the larger than usual alignment adjustments currently in place in the second half of 2002. These adjustments in part reflect the distortions in the quarterly path of expenditure data due to trends in the adjustments for the impact of MTIC fraud. The revision to import data means that the alignment adjustments required to bring the expenditure and output measures of GDP into balance will be smaller throughout 2002.

Estimates of the expected effect of the revisions for the impact of MTIC fraud on GDP

The effects of the revisions to account for the impact of MTIC fraud on GDP will not be incorporated into the National Accounts, and hence published estimates of GDP from the output, expenditure and income perspectives or their components, until the *Blue Book* 2003 consistent *Quarterly National Accounts* First Release is published on 30 September. In the meantime, approximate estimates of the effect of the adjustments on GDP are given below.

The multi-layered balancing approach to benchmark estimates of GDP described above mean that it is not possible to provide a precise assessment of the impact of the MTIC fraud revisions. Revisions are usually made following an assessment of the total change to each of the three measures of GDP due to all the revisions taken together, not for a single component in isolation. However the ONS has attempted to make an assessment of what the balance, and hence the level of GDP, would have been without the revisions in order to judge the impact of MTIC fraud.

The figures shown in Table 2 below are, therefore, approximate estimates of the impact of making adjustments for the impact of MTIC fraud on GDP levels at current prices. The table also shows an implied estimate for the effect on GDP growth at constant 1995 prices using existing estimates of the price deflators.

Table 2: Estimates of expected effect on GDP percentages

	Level at Annual current prices	growth[1] at constant prices
1999	Negligible	Negligible
2000	–0.2 to 0	–0.2 to 0
2001	–0.4 to –0.2	–0.2 to 0
2002	–0.4 to –0.2	Negligible
2003 Q1	–0.4 to –0.2	Negligible

[1] Change on year earlier.

The estimated effect of the imports adjustment on GDP is quite modest when compared to the size of the adjustment. This is not surprising because, as explained earlier, GDP is derived using data on production and income as well as expenditure. Taking on the imports adjustment has led to a reassessment of all of the components of GDP, not just those directly affected by the relevant products. Looking at GDP in terms of expenditure, the counterpart to the upward adjustment to imports is most notable in household final consumption and gross fixed capital formation, but also affects other components. However, this does not imply a direct relationship between these components and the initial adjustments for MTIC fraud. Put another way, these estimates do not represent an internally consistent analysis of the effects of the initial adjustments for the effects of MTIC fraud on GDP and its components. Rather they are indications of how ONS estimates of GDP and its components will change as a result of absorbing the revisions to imports and reviewing other aspects of the National Accounts. The effect on the level of GDP in 2002 and the first quarter of 2003 is broadly the same as for 2001 because GDP growth from the start of 2002 is determined primarily by output data.

In terms of interpretation, the estimates should be regarded as having a similar status as the estimates of revisions due to annual chain-linking that were published in the April 2003 *Economic Trends*. The eventual *Blue Book* dataset will reflect both of these revisions, but also will reflect new and updated survey data and other changes. The precise impact of all the changes, including the effect on GDP at constant prices, will not be known until the *Blue Book* dataset is released.

Other revisions

As usual, the *Blue Book* dataset will reflect other new data. In particular, for 2001 there will be information from the Annual Business Inquiry, from the Inland Revenue and from the annual International Trade in Services Inquiry (ITIS). Preliminary indications are that the impact of most of these revisions will be to increase the estimates of components of GDP. Broadly, the impact of these is thought to offset the adjustment for the impact of MTIC fraud adjustments in 2000 and 2001. Therefore, the level and growth estimates for GDP at current prices published in this year's *Blue Book* will be broadly similar to those already published. Any revisions to volume growth estimates will be mostly attributable to the introduction of annual chain-linking.

Estimates of the effect of the adjustment for the impact of MTIC fraud on the Balance of Payments Current Account

As with the National Accounts, there will be other revisions in the *Balance of Payments* First Release on 30 September consistent with the 2003 *Pink Book*. Current indications are that the main other revisions will be upward revisions to the balance on trade in services of the order of £1–2 billion a year. This will offset a significant proportion of the effect on the overall trade balance of the adjustments for the impact of MTIC fraud in 1999 and 2000, but only a small proportion subsequently.

7. Conclusion

The figures presented in the latest *UK Trade* First Release and shortly to be presented in the 2003 *Blue Book* contain revisions to imports of goods due to the introduction of an adjustment for the impact of MTIC fraud. Such an adjustment is necessarily tentative and subject to uncertainty, but it is clear that making and publishing this adjustment improves the overall coherence of the accounts and the wider presentation of the economy in official statistics.

Notes

1. Estimates of GDP to be published on 22 August will be based on unrevised trade data.
2. The data used in the asymmetries section are based on Eurostat trade statistics from Customs administrations. These are on a different basis and therefore not directly comparable to trade statistics on a Balance of Payments basis used elsewhere in this article. More details about the adjustments made by the ONS to meet the IMF Balance of Payments Manual (BPM5) definition and the data sources can be found in *United Kingdom Balance of Payments: the Pink Book*.

ANNEX

Factors Influencing EU Asymmetries In Trade in Goods

While the adjustments for the impact of VAT MTIC fraud have made a major contribution to increased asymmetries between UK and other EU Member States' trade figures there are a number of other factors which also contribute to these asymmetries. This Annex explores some of these other factors influencing EU asymmetries in trade in goods.

The agreed international guidelines for trade statistics are those published by the United Nations 'International Merchandise Trade Statistics: Concepts and Definitions'. This is the standard to which most countries aspire. It consists of recommended guidelines rather than hard and fast rules. This can lead to inconsistencies between countries because some are easier to implement in one country than another. The list below sets out the known reasons for these inconsistencies:

- Valuation differences
  For statistical purposes the valuation bases recommended in the *International Merchandise Trade Statistics Concepts & Definitions* published by the United Nations and adopted by Customs are:

  - The valuation of exports is on a *free on board* (f.o.b.) basis, i.e. the cost of goods to the purchaser abroad, including:
  - packaging;
  - inland and coastal transport in the UK;
  - dock dues;
  - loading charges; and
  - all other costs such as profits, charges and expenses (e.g. insurance) accruing up to the point where the goods are deposited on board the exporting vessel or aircraft or at the land boundary of Northern Ireland.

  The valuation of imports is on a *cost, insurance and freight* (c.i.f.) basis including:
  - the cost of the goods;
  - charges for freight and insurance; and
  - all other related expenses in moving the goods to the point of entry into the UK (but excluding any duty or tax chargeable in the UK).

When goods are re-imported after process or repair abroad the value includes the cost of the process or repair as well as the value of the goods when exported.

Because of its link with VAT, the primary valuation for trade in goods with EU countries is that required for VAT accounting purposes, usually the invoice value. Regular sample surveys are conducted by HM Customs & Excise to establish conversion factors to adjust the invoice values to produce the valuation basis required for statistical purposes. Separate factors are imputed for a range of different delivery terms and for trade with each Member State.

The value recorded for imports and exports includes any duties or levies that have been applied to goods originating in non-EU countries but which have since cleared EU Customs procedures in one EU country prior to moving onto other EU countries.

- Exchange rate:
  The value recorded must be in the national currency even if the transaction was completed in another currency. Use of different exchange rates by the exporter and the importer can cause discrepancies.

- Timing differences resulting in movements of goods reported in different months by exporting and importing countries.

- Goods classified to different commodity codes by importer and exporter.

- Reporting concessions and simplifications:
  Countries allow special concessions for large traders. For example shipments of mixed products (e.g. vehicle parts) can be reported under one commodity code. Countries may have different thresholds below which value or tonnage a detailed commodity breakdown is not required.

- Methodological discrepancies in reporting:
  The trade statistics compiled by HM Customs & Excise are in accordance with the 'general trade' system of recording which is described in *International Merchandise Trade Statistics Concepts & Definitions* published by the United Nations. They comprise all merchandise crossing the national boundary of the UK including goods imported into and exported from HM Customs & Excise warehouses and free zones. Imported goods are recorded whether or not at the time of importation they are intended for use in the UK or for re-export. Import statistics therefore include British goods re-imported and goods imported for process or incorporation with other goods and subsequent re-exportation.

Such re-exports are not distinguished from exports of UK produce.

Goods in transit through the UK (even where transhipment is involved) are not included in the statistics.

The 'special trade' system of recording that is used for data supplied by HM Customs & Excise to Eurostat records transactions across the customs boundary (e.g. on release from a Customs & Excise warehouse).

- Differences in method of recording leased goods.

- Goods may be traded while in transit from one country to another (e.g. grain and crude oil).

- Reclassification of goods for confidentiality.

- Suppression of data to avoid disclosure of confidential information.

- Differences between country of consignment and country of origin and between country of consignment and country of final destination.

- Fraudulent declarations.

- Errors in data collection and processing.

All the above can apply equally to EU trade and to non-EU trade.

A lack of consistency between Member States in implementing the Intrastat system for EU trade introduced some additional causes of discrepancies for trade within the EU:

- no common approach to adjustments for non-response and below threshold trade;
- differences in the treatment of distance selling arrangements (e.g. mail order); and
- transactions between a reporting trader in one Member State with a trader below the threshold in another Member State so that the transaction is not reported in both countries.

Intra-Community VAT carousel fraud comes in different forms. A typical example of carousel fraud involves B (Buffer) â€“usually ignorant of the fraudâ€“ who purchases goods from F, a company established by the fraudster.Â 13 Ruffles/Tily/Caplan/Tudor, VAT missing trader intra-Community fraud: the effect on Balance of Payments statistics and UK National Accounts, â€˜Economic Trendsâ€™ No. 597 August 2003, 58. 4. buffer. As shown in the graph below, this last step closes the circle and the carousel has generated a â€œfraudâ€ profit of 180 (minus the margin of the participating unrelated Buffers, in this example 100, i.e., 80 net profits) that derives from the gaps in the VAT system. Carousel Fraud. MS Y.