# The Ifo Institute's Model for Reducing VAT Fraud: Payment First, Refund Later

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In 2003, the tax authorities lost almost €18 billion[1] in value added tax (VAT) revenue due to fraud and bankruptcies. This figure was calculated by the Ifo Institute by comparing actual revenues with those that would theoretically accrue on the basis of information by the Federal Statistical Office on private consumption and non-taxable items (see Dziakowski et al. 2002).

As far as fraud is concerned, the calculated losses can be traced to activities in the underground economy as well as various versions of open tax fraud, where invoices are drawn up. This includes primarily input tax fraud including the so-called carousel deals. This paper deals with ways to prevent revenue losses due to tax fraud and bankruptcies.[2]

If VAT losses could be prevented, the authorities would receive estimated additional revenue of €6.5 billion. This would constitute a non-negligible contribution to a reduction of the fiscal problems of the various levels of government. In fact, the figure is twice the revenue from the inheritance tax and exceeds by half the potential revenue from a wealth tax, assuming the same conditions as in 1996, the last year in which this tax was levied. Germany would also be in a better position to meet the debt ceiling of the EU Stability and Growth Pact. The share of net borrowing in gross domestic product would fall by more than 0.3 percentage points.

## What explains the revenue losses?

One of the major causes of the revenue losses is input tax deduction. In the present system, the seller presents the buyer with a bill showing the VAT, and the buyer can deduct the VAT from his tax liabilities if he is eligible for input tax deduction. This may even lead to net refunds if input tax entitlements exceed the VAT owed on one's own sales. The refund of the input tax is independent of whether and when the bill is paid and also independent of whether the seller has paid over the VAT shown in the bill to the tax authorities. It further does not matter whether or not the buyer has received sales revenue that is subject to VAT and must therefore pay VAT himself. Since investments are VAT free, the refund of the input tax that is independent of one's own tax payment is an essential element of the VAT.

This procedure leads to an undesired loss of revenue if the buyer demands the refund of the input tax by presenting a bill, but fails to pay the bill because of bankruptcy. Tax losses also occur when the seller fails to pay over the VAT, which the buyer has already paid as part of the total sum billed, either because he himself goes bankrupt or because he does not declare the revenue subject to VAT on his tax statement.

Tax defrauders have thought of a multitude of tricks for taking advantage of loopholes in the system. Especially profitable are carousel deals. These are deals in which a good is actually or at least on paper shifted several times between several firms in order to qualify for fraudulent input tax refunds. Cross-border transactions frequently play a role in this because they make tax-free imports or exports possible and make controls by the tax authorities more difficult.

For example, mobile phones are imported from abroad and sold to a domestic commercial firm which ships them back to the initial shipper. The importer may buy the mobiles tax-free according to the present country of destination principle. By selling them to the domestic commercial firm, he includes the VAT in the invoice but does not pay it over to the tax authorities. The commercial firm receives the input tax refund and sells the mobiles tax-free to an importer in a foreign country. From there the good may be sent again to Germany and the carousel keeps going round and round. By the time the tax authorities detect the scam and try to collect the VAT from the importer, the participating firms have, as a rule, dissolved and the owners cannot be found.

[1] This figure is subject to considerable uncertainty at the present time, as it is based entirely on estimates of the Ifo Institute. In addition, tax losses due to recent decisions of the European Court of Justice, which may amount to €1.5 billion, have not been included.
[2] Underground economy activities are not considered here. Measures to fight moonlighting range from a change of the welfare system (see Sinn et al. 2002), which withdraws labour from the underground economy, to radical tax cuts (see Sinn et al. 1999), which generally lowers the attractiveness of moonlighting.

In order to contain the abuse, the law to reduce tax deficiency was passed in 2002 which among other things provides for the buyer's liability for the seller's culpable failure to pay over the VAT.

Neither did the new law achieve the expected additional tax revenue of €2.5 billion, nor did it effectively prevent carousel deals.

This is firstly due to the fact that to date a buyer is only liable for the seller's culpable failure to pay over the VAT if he knew of the latter's intention to cheat at the time the deal was struck, which is, of course, difficult to prove. Secondly, the law remains ineffective if not only the seller but also the buyer fails to pay over the tax.

Among the measures included in the law is one that demands collateral of newly established firms, because in a large number of cases firms were only established for the purpose of VAT fraud. This measure, too, proved ineffective because the people reacted swiftly by "stocking up" on newly established firms. In addition, such firms are increasingly abused for carousel deals that had been in the market inconspicuously for years in order to give the tax authorities the impression of orderly management. Only the VAT follow-up, i.e. unannounced tax audits, seem to have achieved some success in reducing tax fraud. According to the estimates of the Ifo Institute, tax losses due to fraudulent carousel deals and bankruptcies amounted to €5 billion in 2003, despite the law to reduce tax deficiency.

**A solution proposed by the Ifo Institute**

In order to solve the problem, the Ifo Institute proposes a modified value added tax procedure, which legally remains as close as possible to the present system, but prevents fraud effectively. It makes sure, firstly, that the buyer does not receive an input tax refund that had not been previously paid as VAT to the tax authorities, and secondly, that the VAT included in a bill is indeed paid over to the tax authorities when the bill is paid by the buyer. The buyer of a product may only claim the input tax deduction if he can prove that the seller has already paid over the VAT to the tax authorities, and the seller must pay over the VAT to the tax authorities at the same time at which he collects the VAT with payment of the bill. In this way, some frauds which are possible in the present system, and especially the carousel deals, are prevented.

In addition, possible tax losses resulting from bankruptcies are also largely prevented. Thus, the seller can no longer escape passing on the VAT collected in the case of bankruptcy, and it is impossible for the buyer to have the input tax refunded as a liquidity reserve without ever paying his bill.

Two procedures may be used to achieve these effects, depending on whether the sale is in cash or non-cash.

*1. Non-cash payment (trust account)*

If a bill is paid by bank transfer or by credit card, the amount of VAT, which is shown separately when payment is made, is directly passed on to the tax authorities. Toward this end, the bank involved acts as a trustee for the tax authorities. In detail the payment process can be explained as follows:

(1) As part of his business, the seller sells a good or a service to the buyer.
(2) He ships or presents the good. If it is not paid immediately, the good is accompanied by a bill of sale that includes the seller's tax number and the number of the bill of sale.
(3) The seller charges the buyer the agreed price plus VAT and notes the number of the bill and, as the case may be, the number of the bill of sales and his tax number.
(4) The buyer pays his bill plus VAT by bank transfer or credit card with the number of the bill, the tax number of the seller and his own tax number.
(5) The amount paid is always transferred by way of an intermediate account, from which not only the VAT is paid over to the tax authorities but also the net amount of the bill is credited to the seller. This special account, the VAT trust account, is administered by the seller's bank as trustee to make sure that the VAT is paid over to the tax authorities.
(6) In non-cash transactions, the seller hands over to the buyer a receipt for the gross amount received and, in addition, a receipt for the VAT paid over. In credit card transactions, the corresponding information is printed out on the buyer's record. In bank transfers, the bank makes out a record of transfer that contains all the necessary information.
(7) With the record of VAT paid the buyer can now claim the input tax from the tax authorities in the same way as it is done today. If fraud is suspected, the tax authorities can check with the

help of the printed tax numbers of the parties to the transaction and the number of the bill whether the VAT payment has actually been made.

*2. Cash payment (tax stamp system)*

To also make sure in the case of cash payments that the tax authorities receive the VAT due on the purchase price, a prepayment of VAT by the seller is planned. For this there are two possibilities:

a) The seller has a machine with which he stamps the receipt with the amount of VAT in question. This machine, which is connected to the telephone line, works like the well-known postage machines of the Postal Service and contains a kind of account, which the seller has "filled" in advance with payments to the tax authorities and against which the stamped VAT amounts can be debited. The tax credit in the machine account can be granted by telephone as in the case of postage machines.
b) For the few sellers who will not have a VAT machine and in special cases, a tax stamp system is planned. The seller buys tax stamps in advance directly from his tax authority, the printed amounts on the stamps being graduated like the amounts on notes and coins. This way any amount can be affixed. This is the system followed by tobacco stamps.

In detail, the cash payment system works as follows:

(1) As part of his business, the seller sells the buyer a good or service.
(2) The buyer pays the sales price plus VAT.
(3) The seller gives the buyer a receipt which contains the receipt number, the seller's tax number as well as a printed or affixed VAT receipt.
(4) If entitled, the buyer claims his input tax refund with the help of the VAT amount contained in the receipt.
(5) It he is not entitled to an input tax refund, he must still take the receipt. He must have the receipt on him when leaving the store.

The payment model can be considered an extension of the Italian Scontrino model. In Italy, no buyer may leave a store without a receipt. As a rule, the receipt is printed in standardised form by the automatic cash register, owned by even the smallest stores. The Scontrino System registers only the VAT to be paid, however, without implying an advance payment.

By connecting the cash register to an account of the tax authorities, from which the virtual VAT stamps can be downloaded, a VAT system for cash transactions is created that prevents input tax deduction without prior VAT payment as well as non-payment of the collected VAT to the tax authorities by the seller. The new cash payment system has the additional advantage that it generally makes transactions in the underground economy more difficult.

As shown by the Italian example, it is easily and effectively possible to check whether someone has a receipt or a bill of sales when leaving a store. In this way, a greater measure of discipline in cash transactions in stores may be generated. Italy has always had much greater problems of collecting taxes than the German tax authorities (see Nam et al. 2001). Therefore that country has felt the need to fight VAT fraud much earlier. The Italian experiences can and should be utilised.

## Why the Ifo proposal is better than the reverse-charge procedure

A long discussed alternative to the present system, which is to prevent the present VAT losses, is the so-called reverse-charge procedure (see Ministry of Finance 2003). With this procedure the tax liability is transferred to the buyer, and his input tax claim is directly balanced against his VAT liability. As the result, the shipment between two firms remains tax-free. The entitled buyers are assigned a special identification and entitlement number, the so-called R-number.[3] An electronic system is supposed to let the seller check the R-number online in order to make sure that the shift of the tax liability and balancing takes place only if the buyer is firm entitled to claim the input tax refund. To be sure, the R-number may only be used for purposes that do not preclude an input tax deduction. Furthermore, the reverse-charge system is not applied to negligible transactions, for example up to €1,000, and probably not to cash transactions.

[3] The concept of an R-number is used in recent publications on the reverse-charge system.

The seller must report the concluded sales online and must also itemize his receipts in the annex to the advance value-added tax return, according to whether they are from entitled or not entitled buyers. The buyer must keep a record of the use of his R-number.

Like the Ifo model, the reverse-charge system also largely prevents carousel deals and tax losses due to bankruptcy that are based on claiming input tax refunds from the tax authorities without ever having paid the tax. However, the reverse-charge system has at least four important disadvantages compared to the Ifo proposal.

Firstly, the reverse-charge system promotes the crime of shifting private expenditures to the business. Carrying private expenditures on the books of the business is already a widely practiced fraud at present. But at least he who wants to get input taxes refunded must actively file a claim with the tax authorities. With the reverse-charge system purchases of consumer goods may be assigned to the business from the start and in this way be exempted from VAT. This greatly facilitates fraud.

Secondly, the reverse-charge procedure increases the probability of VAT fraud in transactions with final consumers. For example, a firm which is in financial trouble may buy goods at net prices and sell them at gross prices, i.e. including VAT, to final consumers without paying over the VAT. Via an excessive volume of transactions, it can generate liquidity in this way without involving the tax authorities and raising their suspicion. In case of flight, the VAT collected is as a rule lost to the tax authorities.

In the Ifo procedure, this risk is small. In order to generate liquidity in the same way, the final consumers and the tax authorities must be party to the fraud. The former would have to do without a bill, as payment per bill requires paying over the VAT. The latter would have to refund the input tax without becoming suspicious of the excessive transaction volume. Fulfilling both conditions at the same time should be most difficult.

A milder form of this disadvantage of the reverse-charge system occurs in the case of simple bankruptcy that is not preceded by an excessive transaction volume and is absent a fraudulent intention. If the firm supplying the final consumer goes bankrupt immediately after the sale of the goods, the tax authorities as a rule lose the entire VAT collected at the final sale. In the Ifo procedure, this possibility is at least precluded if the consumers are honest and buy only with a receipt. The firm can claim the input tax refund from the tax authorities, but it cannot sell to the consumers in a regular way without at the same time paying over the VAT on the value of the goods.

Thirdly, the introduction of the reverse-charge system could imply parallel systems, as the seller would have to differentiate his buyers according to whether they are entitled to an input tax refund or not. In contrast to the present system and the Ifo proposal, the seller would have to know the status of his customers and could no longer ask for the payment of VAT on each sale. The negligibility rule and the exclusion of cash sales, which are important characteristics of the reverse-charge procedure, also add complications.

Fourthly, before the reverse-charge system can be introduced, considerable resistance on the EU level will have to be overcome. In view of the similarity of the Ifo procedure to the present system, the required approval by the European Commission of such a modification of the system may be expected much rather than that of a reverse-charge system.

## Concluding remarks

The value added tax replaced the cumulative all-stage turnover tax in the 1960s. While it has many theoretical advantages, its collection has proven more difficult over time than expected. Especially the present practice of input tax refunding is highly problematic. It has invited fraud. The volume of fraud charges has reached such an extent that the state must act without delay in order to stop a further erosion of one of its major taxes. This contribution shows a way to prevent VAT fraud and to safeguard the tax revenues of the state. In times of scarce financial resources, the state should not hesitate to implement the proposal presented here for an improvement of the value added tax system.

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