Article

Technology: A Key to Solve VAT Fraud?

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This article is a follow up on a previous article from the same authors. In that article the authors concluded that keeping the current system for intra EU trade between businesses and addressing VAT fraud by using technological solutions may be the best way forward. In this article the authors address potential technological solutions that can help to solve the issue of VAT fraud. The technical solutions that are addressed are: split payment, blockchain technology, real time reporting and SAF-T. All these solutions have or are being considered by some EU Member States or even the European Commission.

1 INTRODUCTION

In October 2017 the European Commission made its outlines for a definitive Value Added Tax (VAT) system for intra-EU trade known, 1 followed by a detailed proposal of these rules in May 2018.2 Under this proposal intra-EU supplies will be subject to VAT in the Member State of arrival of the goods. As a main rule the supplier has to pay this VAT to the tax authorities. As a temporary relieve VAT can be reverse charged to reliable taxable persons, so called Certified Taxable Persons or CTPs.3 Before these proposals were even accepted by EU Member States, the EU Member States agreed on a temporary general reverse charge mechanism.4 Under this system VAT fraud is addressed because the supplier will no longer collect VAT from its customer on domestic Business to Business (B2B) supplies that it will need to remit to the tax authorities (and won’t in case of VAT fraud). Both systems have been criticized in literature.5 In our previous article we concluded that both systems have benefits compared to the current system, but also downsides as regards simplicity of the system and the ease of audits. We also established that in both systems that in order to make the system more fraud proof there will be an increase of compliance burdens and administrative costs for tax authorities.6 We therefore came to the conclusion that keeping the current system and addressing VAT fraud by using technological solutions may be the best way forward. According to the OECD, depending on developments in technology, automated systems may play a central role in facilitating tax collection in the future. Currently, it sees technology as a tool to support the operation of the existing collection regimes.7 The OECD encourages tax authorities to allow the use of electronic record keeping systems as business processes have become increasingly automated. Tax authorities can make use of reliable business records and accounting systems in order to acquire the information needed (e.g. type, date and place of supply and VAT payable).8 In this follow up on our previous article we will address potential technological solutions that can help to solve the issue of VAT fraud. After discussing the issue of VAT fraud in section 2, we will discuss some important

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7 Madeleine Merkx, Naomie Verbaan & Ruane Starksenburg, VAT and International Trade’s Crossroads: Right, Left or Straight On, 28 (3) EC Tax Rev. 233–244.


technological solutions in sections 3–6. Technical solutions can be implemented to prevent VAT fraud or detect this fraud more easily and/or more quickly. We however stress that when the risk of detection is higher this will also have a preventive effect.⁹ The technical solutions that we will be looking at are: split payment, blockchain technology, real time reporting and Standard Audit File for Tax (SAF-T). All these solutions have or are being considered by some EU Member States or even the European Commission. We stress that other technological solutions are also conceivable.¹⁰ In particular we mention Transaction Network Analysis (TNA) that has been promoted by the Dutch government.¹¹ This is a technological solution that detects fraud by analysing transactions. However currently there is not enough information available to duly analyse this instrument. We will conclude the article with a conclusion in section 7.

2 THE ISSUE OF VAT FRAUD

VAT fraud is a big problem in the EU. With an estimated VAT gap of EUR 152 billion a year within the EU, EUR 50 billion is ascribed to VAT fraud.¹² The CJEU describes what VAT fraud is in a number of cases.¹³ Technically VAT fraud is no more than the non-payment of VAT where it should have been paid. Important is that this is done with intent (in other words in case VAT is not paid by accident or because the taxable person does not have sufficient funds we won’t speak of VAT fraud). The most persistent VAT fraud is carousel fraud. VAT carousel fraud, also known as Missing Trading Intra-Community Fraud or simply MTIC fraud, in its simplest form requires three parties (A, B and C) and most likely high value goods with a compact volume or services. To conceal the VAT fraud from the tax authorities often more parties are used in the fraud supply chain, including innocent businesses. However, irrespective of the length or complexity of the supply chain the principle of the fraud is always the same.

In our example party A is established in Germany. It supplies goods to B established in Greece. The goods are transported from Germany to Greece in relation to this supply. The supply therefore qualifies as an intra-Community supply and is exempt from VAT. B is required to report an intra-Community acquisition in Greece. It can deduct this VAT in the same VAT return. B subsequently sells the goods to party C established in Greece. This is a local supply. Party B will charge Greek VAT to party C. C will pay this VAT to B. Normally B pays this VAT to the tax authorities and C deducts this VAT in its local VAT return. In case of VAT fraud, however, B does not report the intra-Community supply and supply to C, but instead disappears with the VAT that party C paid to him. To make it a carousel fraud party C must supply the goods to party A so the fraud can start again with the same goods.

The fraud is lucrative because of the exemption applying in the A-B transaction followed by a local supply that is subject to the general VAT rate.

3 SPLIT PAYMENT MECHANISM

The split payment mechanism is a VAT collecting system that divides the payment for a supply of goods or services into an amount excluding VAT (i.e. the net amount or taxable base) and the VAT amount due. There are
KEY TO SOLVE VAT FRAUD

several versions of the split payment mechanism. One of them, for example, is a model in which the purchaser pays the net amount to the supplier’s business bank account and the VAT amount to a blocked bank account, which is used specifically for VAT purposes by the supplier. This bank account can only be used for paying VAT to either another taxable person’s blocked VAT bank account or to the tax authorities.18 The customer can make the two payments mentioned above. However, it is also possible that the customer makes a single payment, which subsequently will be split by the bank into the taxable base paid to the supplier and the VAT amount paid directly to the tax authorities.

Different types of split payment mechanisms are already in place in a number of third countries and in some Member States. For example, it has introduced a split payment system as of 1 January 2015 for payments to public authorities.15 In 2017 Italy obtained approval of the Council of the European Union to derogate from articles 206 and 226 of the VAT Directive to expand the scope of the split payment mechanism to companies controlled by central and local public authorities and to companies listed to the stock exchange.16 The Polish parliament approved a proposal to introduce a voluntary split payment system for B2B transactions in October 2017. Under this system the customer will have to include specific references in the payment instructions given to its bank. Subsequently, the bank will split the payment and only transfer the net amount to the supplier’s general bank account. The VAT amount will be transferred to a special blocked VAT account in the name of the supplier. It may only be used for VAT settlements with the tax authorities or to pay the VAT on acquisition invoices to the VAT account of a supplier.17 The Romanian government approved on 30 August 2017 the proposal for introducing a VAT split payment mechanism. The new mechanism is mandatory as from 1 January 2018 and also based on blocked VAT accounts.18 In addition, the system is applicable to taxable persons and public institutions which have tax debts above given thresholds or which are subject to insolvency proceedings. End of November 2017, Romania filed a request for derogation for the implementation of this VAT split payment mechanism. However, Romania started applying the split payment mechanism on 1 January 2018 without awaiting the Commission reply to its request. On 8 November 2018, the European Commission replied to the request. It takes the view that certain elements of the Romanian split payment model raise serious concerns regarding their proportionality. It also states that the split payment system puts an unjustifiable and disproportionate burden on the customer. As a result, the Commission objects to the request made by Romania.19

The European Commission has analysed the feasibility of the split payment mechanism in 201020 and 2017.21 The 2010 study concluded that the split payment system is an effective way to ensure the payment of VAT to the Member State, as missing trader fraud would become impossible.22 However, this study was limited in scope. The 2017 study analysed a wide range of technical split payment models and options. Results of the cost-benefit analysis show that all options are expected to reduce the VAT gap to some extent ranging from 27% to 56% reduction under the current regime. In addition, it was found that the split payment mechanism would also considerably reduce non-compliance due to new reporting requirements and increased transparency. At the same time, the study shows that implementations of the split payment mechanisms significantly increase the administrative costs of businesses and public bodies. The study found no strong evidence that the benefits of split payment would outweigh its costs. The main identified effects were that a wider scope of split payment would potentially provide a larger decrease of the VAT gap and hence have a positive impact on the Member States’ budgets, but would also significantly increase the related administrative costs for businesses, especially when applied on broad scale. However, the analysis was highly dependent on the specific design of the policy options as well as on the assumptions that had to be made in order to carry out the quantitative analysis. Therefore, a different design of the mechanism for split payment may come to considerably different results.23

As mentioned above, the split payment mechanism is an effective means to combat missing trader fraud as suppliers cannot disappear without paying VAT to the tax authorities. However, fraud is still possible with cash transactions or transactions in cryptocurrencies, such as

20 PricewaterhouseCoopers, Study on the feasibility of alternative methods for improving and simplifying the collection of VAT through the means of modern technologies and/or financial intermediaries, 2010.
22 PricewaterhouseCoopers, Study on the feasibility of alternative methods for improving and simplifying the collection of VAT through the means of modern technologies and/or financial intermediaries, 2010.
Blockchain is suitable as a means to record transactions and other data. It is best known as the technology behind the popular cryptocurrency bitcoin, but the application of blockchain is much wider. Blockchain technology can be used in smart contracts. Smart contracts are no real contracts. It is merely a recording of agreements made in a contract by the parties involved on the blockchain. Once the event mentioned in the contract occurs the smart contract will automatically implement the related effect. For example, a seller of e-books can settle with his buyers that if the download is completed and received, the agreed payment for the e-book takes place automatically. Neither of the parties in the contract will thus run the risk of non-performance by the other party. The payment of VAT can be transferred automatically to the tax authorities instead of being received and paid by the supplier. Such a system is in fact a combination of split payment and blockchain technology.

4 Blockchain technology

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Other solutions using blockchain technology can also be considered. Ainsworth and Shact propose to use a system called Digital Invoice Customs Exchange (hereinafter: DICE) (see also section 7.4). Within this system, in case of cross-border transactions, the buyer, seller and the tax authorities of both countries concerned are aware of the transaction before a formal VAT invoice is issued. There is time for a risk analysis. With the help of artificial intelligence, transactions with a high risk can be spotted. Suspicious transactions can be delayed or blocked by the tax authorities. Ainsworth and Shact admit that with their proposal VAT fraud cannot be resolved completely, but it can be reduced.

In a later publication, Ainsworth, Alwohaibi and Cheetham claim that a combination of the system outlined above with a VAT coins system can prevent VAT fraud altogether. VATcoin is a digital currency like bitcoin. Only the government can convert VATcoins into real money. In the VATcoin system entrepreneurs do no longer own the VAT as real money. All VATcoins are held in the ‘cloud’. According to the authors VATcoins are not sensitive to cyberattacks. If VATcoins are stolen, they are immediately worthless. VATcoins may only be exchanged by the government. A sale or purchase of VATcoins is therefore illegal. In addition, a payment with stolen VATcoins will be refused by the blockchain. It will be immediately clear from where the stolen VATcoins originate. The underlying transaction will be refused, the stolen VATcoins will be cancelled and an audit will be activated.

In our opinion blockchain technology is promising in addressing VAT fraud. It can both be used to prevent
VAT fraud or to detect VAT fraud. However there are issues to consider. First of all using blockchain technology requires an investment from EU Member States. Split payment through the use of smart contracts seems the simplest option to apply. However still many legal questions arise as regards smart contracts, such as: who sets up these smart contracts, who checks them, are the smart contracts publicly available and how are they secured? Such issues need to be solved before we can use smart contracts. The split payment and blockchain technology combination also has an impact on cash flows. However different than the split payment mechanism on a stand-alone basis, the smart contract can pay and refund the VAT automatically and – depending on the necessary checks – (almost) real time. The combination of DICE and blockchain technology has clear benefits but it will require a bigger investment and involves more legal questions, such as legal protection of taxpayers in case ‘the system’ considers the transaction a suspicious transaction, while it is in fact not. VATcoin too can contribute to the prevention and detection of VAT fraud, but again requires a bigger investment and more legal issues arise as regards the exchange of money for VAT coins and vice versa. Businesses might be willing to invest in blockchain technology together with the EU Member States when the solution prevents them from unintentionally getting involved in a fraudulent supply chain or from otherwise being affected negatively by VAT fraud (e.g. because fraudsters use lower prices than market prices). Especially when the blockchain solution matches other business needs, such as supply chain management needs or trade checks, businesses may be willing to support the technological solution financially.

5 Real Time Reporting

When talking about real time reporting within the EU the Spanish Immediate Information System or IIS directly comes to mind. Under the system certain businesses are required to provide information to the tax authorities almost real time using VAT books where invoices are registered. The deadline for submitting invoices issued by the business is four calendar days from the due date (eight calendar days in case the invoice is issued by the recipient or a third party). For purchase invoices the deadline is four calendar days from the date of the accounting entry. Next to IIS taxable persons still need to file monthly self-assessment returns and pay the VAT based on the return filed.

Italy has a mandatory e-invoicing system called Sistema di Interscambio (SdI). This system requires taxable persons to file electronic invoices in an XML-format with the tax authorities for an automatic approval before the invoice is being sent to the customer. The obligation applies to supplies of goods and services between parties resident, established or VAT registered in Italy, regardless of whether the customer is another taxable person or a final consumer. In order to implement these new rules Italy has obtained derogations to deviate from the VAT Directive. From the request it becomes clear that the objective of these new rules is to acquire invoices in real time to do timely and automatic checks of the consistency between VAT declared and paid. This measure should bring effective results in the fight against tax fraud due to the greater comprehensiveness, timeliness and traceability of the information. However tax authorities must have enough human and technical resources to duly analyze this information. Italy submits that before the SdI system it takes around eighteen months for the tax authorities to become aware of the existence of a missing trader. The SdI would allow this interval to be reduced to up to three months according to Italy. The derogation provided to Italy applies until 31 December 2021. This allows for an assessment of whether the special measure is appropriate and effective in light of its objectives. From the proposal it becomes clear that an assessment report should include an evaluation of the measure on taxable persons and in particular the increase of their administrative burdens and compliance costs. Qualifying taxable persons will also have to submit data on cross-border transactions they have supplied or received from persons established abroad. The data that needs to be reported includes data on the parties involved in the transaction, the date and number of the related document, the taxable amount, the applied VAT rate and VAT amount or the nature of the transaction when VAT is not due. The communication of this data is optional in case of supplies for which a customs bill or qualifying electronic invoices have been issued.

The SdI is comparable to the DICE system as described by Ainsworth and Todorov. Of particular interest is their proposal to apply DICE for international transactions. Their proposal includes a DICE system that is used by both origin and destination country and consists of eight steps:

1. The seller generates a file in XML format and digitally signs it. The file is transmitted to the tax authorities in the origin country.

37 Simonette La Grutta, Italy – Electronic Invoicing – Implementing Rules Issued (30 May 2018), IBFD Database.
2. A check is done on the XML-file for accuracy and completeness.

3. If the file is in order the tax administration of the origin country will send an access key to the seller and simultaneously notifies the destination country by sending it a copy of the XML file and the access key.

4. The seller will produce a pro-forma invoice that includes relevant access codes

5. The seller transmits the pro-forma invoice to the buyer.

6. The buyer creates an XML file reproducing all necessary contract information and digitally signs the file. He transmits the file to the tax administration of the destination country.

7. The tax administration of the destination country will match the buyer’s XML file with the seller’s XML file. If the data is correct the tax administration of the destination country will issue a second access key to the buyer. The buyer transmits the XML file and the second access key to the seller.

8. The seller will process an exempt intra-Community supply to the buyer from the origin country. SAF-T is considered a clear increase of the VAT-related compliance burden. On the other hand the taxable person will have access to information on the website of the Spanish tax authorities and information from third parties. They are therefore able to check this information prior to filing their monthly VAT returns. There is also a reduction in the requests for information by the Spanish tax authorities. The SdI has not been in place long enough to say something about the increase of administrative burden. This concern has however been expressed in the proposal. Another benefit of both systems is in the authors’ view that transactions can be matched. With IIS a customer can see whether a supplier has reported a transaction and vice versa. If a mismatched is detected, however, the transaction has already taken place and invoices have been issued. This is different for SdI and DICE, where transactions have to be approved before taking place.

9. Within both systems fraudsters can still report the transactions in the system, but fail to file their VAT returns and disappear. Tax authorities will however more quickly track the fraudsters and have more information on the transactions on which they have not paid VAT. On the other hand fraudsters have a smaller time frame to commit the VAT fraud and therefore it will be less lucrative. What’s more there is scientific evidence that if people know they are being watched they are less likely to commit fraud. Fraud may thus shift to other jurisdictions that have not implemented real time reporting. Cash flow is not affected by IIS.

6 SAF-T

SAF-T stands for Standard Audit File for Tax and is developed by the OECD in relation to the consequences of globalization where businesses are confronted with a variety of accounting requirements around the world and tax administrations have an increased need for co-operation through exchange of information and, where necessary, joint audits. SAF-T’s objective is to minimize compliance costs for businesses and administration costs for revenue authorities. It provides for tax reporting and filing standards and ensures tax audit processes can be carried out with greater reliability. SAF-T is an accounting file with data exported from the original accounting system relating to a specific time period. It is easily readable because of the standardization of its layout and format. It also provides for computer-assisted audits. It will help auditors in testing electronic accounting data for the purposes of identifying risks and quantifying possible errors. This allows auditors to target their resources more effectively at those errors with a material impact. Depending on the way SAF-T is designed it may also allow more detailed analysis of business transactions, because it allows for testing transactions down to line level. Because more detailed information must be provided it may lead to an improvement of compliance. It is designed to be used by multinational enterprises as well as small and medium enterprises. Using SAF-T does not fully discharge the taxpayer from providing information to the tax authorities. Information not normally found in accounting system may be necessary to determine the tax liability for VAT. SAF-T can also be used by other parties such as private accountants. Management of the business can also get access to reliable information and use this in its decision making process.

The idea behind SAF-T is that all OECD Member States use the same format which will minimize administrative burdens for businesses. Any deviations from the SAF-T concept of the OECD will place a corresponding burden on businesses and international software developers.

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58 See also Isabelle Desmettre, EU Standard VAT Return – A Real Tool or Just ‘Nice To Have’, Int’l VAT Monitor (Nov./Dec. 2014).
61 OECD 3 (2005).
62 Ibid., at 4.
63 Ibid., at 26.
64 Ibid., at 7 & 8.
68 OECD 12 & 14 (2010).
SAF-T has been designed to capture the following data:

1. General ledger
   (a) Journals
2. Accounts receivable
   (a) Customer Master Files
   (b) Invoices
   (c) Payments
3. Accounts payable
   (a) Supplier Master Files
   (b) Invoices
   (c) Payments
4. Fixed Assets
   (a) Asset Master Files
   (b) Depreciation & Revaluation
5. Inventory
   (a) Product Master Files
   (b) Movements

Some EU Member States have implemented SAF-T. However, because the approach lacks harmonization multinational enterprises are faced with different local requirements. As mentioned before this reduces the added value of SAF-T for businesses. But this applies to tax authorities too. In case data has a different format or scope it cannot be easily matched with data from other jurisdictions. From experience it becomes clear that many companies have serious implementation costs such as the purchase and installation of new reporting solutions or reviews of the systems and the quality of data. On the other hand, Poland is the first EU country that announced to abolish VAT returns because of its mandatory SAF-T for all types of businesses. SAF-T will also enhance voluntary compliance, because the tax authorities have more information on the taxpayer. There is evidence that if taxpayers believe they are observed or if information is known they are more likely to comply. SAF-T has no impact on cash flows.

The authors are however of the opinion that SAF-T will contribute to the solution in addressing VAT fraud if the information can be accessed (nearly) real-time and if EU Member States operate together. A harmonized EU approach will contribute to a reduction of administrative burden for businesses and tax authorities. SAF-T originally intended to do so. However as EU Member States failed to reach agreement on the standard VAT return and EU Member States have already implemented SAF-T using their own standards the authors fear that a fully common approach is not likely.

7 Conclusion

It is difficult to compare technological solutions that prevent VAT fraud to solutions that contribute to the detection of VAT fraud. In general prevention is of course better than curing. Where SAF-T and IIS and SdI may (in the long run) contribute to the reduction of compliance and administrative costs, blockchain and split payment require a continuous investment by either businesses banks or tax administration. Split payment as such is a VAT only solution and therefore should not be preferred in the authors’ opinion. Blockchain solutions may match other business needs and businesses may be more willing to invest. Most importantly a harmonized EU approach is necessary to prevent high compliance and administrative costs and blocking systems implemented to communicate to each other.

A change of the current VAT system for intra EU trade will have up and downsides compared to the current system. The same is true for the general reverse charge mechanism. Some of the technological solutions look promising, but require initial investments and have recurring costs. These investments should in the authors’ view be made by businesses and governments together. In particular the EU should perform research on the options of blockchain technology and focus on a harmonized SAF-T implementation. If information within SAF-T can be accessed real time there seems no need to require real time reporting of invoices or VAT books and VAT returns can be abolished. According to the authors’ these technological developments should be given a chance before the new system is adopted. The effect of Transaction Network Analysis should also be considered first. Only if these mechanisms fail a new system should be considered.

51 Ibid., at 10.
52 Bronzewska, supra n. 47, 569 & 572. See Majdanska & Dziwinski, supra n. 49, at 582–92 describe the state of play as regards SAF-T in six EU Member States.
54 Bronzewska, supra n. 47, at 572.
56 See also Majdanska & Dziwinski, supra n. 49, at 585.