- ***Electronic Payment System- Accountability Guidance***

The purpose of this note is to encourage an appropriate level of accountability in electronic payment systems in a manner consistent with historical precedent so that taxpayers can continue to rely on data from these systems to substantiate their tax position. Revenue authorities also often use these systems to verify the taxes and charges due to Governments by a business. The inclusion of an appropriate level of accountability in electronic payment systems can reduce the need for costly 'after-market' adjustments to the systems of taxpayers including businesses, customers and payment system providers.

Centre for Tax Policy and Administration

Tax guidance series

Tax Administration Guidance – Electronic Payment Systems

Electronic Payment Systems – Accountability Guidance

Caveat
Each revenue authority faces a varied environment within which they administer their taxation system. Jurisdictions differ in respect of their policy and legislative environment and their administrative practices and culture. As such, a standard approach to tax administration may be neither practical nor desirable in a particular instance.

The documents forming the OECD Tax guidance series need to be interpreted with this in mind. Care should always be taken when considering a Country's practices to fully appreciate the complex factors that have shaped a particular approach.

Introduction

1. The purpose of this paper is to encourage an appropriate level of accountability in electronic payment systems in a manner consistent with historical precedent so that taxpayers can continue to rely on data from these systems to substantiate their tax position. Revenue authorities also often use these systems to verify the taxes and charges due to Governments by a business. The inclusion of an appropriate level of accountability in electronic payment systems can reduce the need for costly 'after-market' adjustments to the systems of taxpayers including businesses, customers and payment system providers.

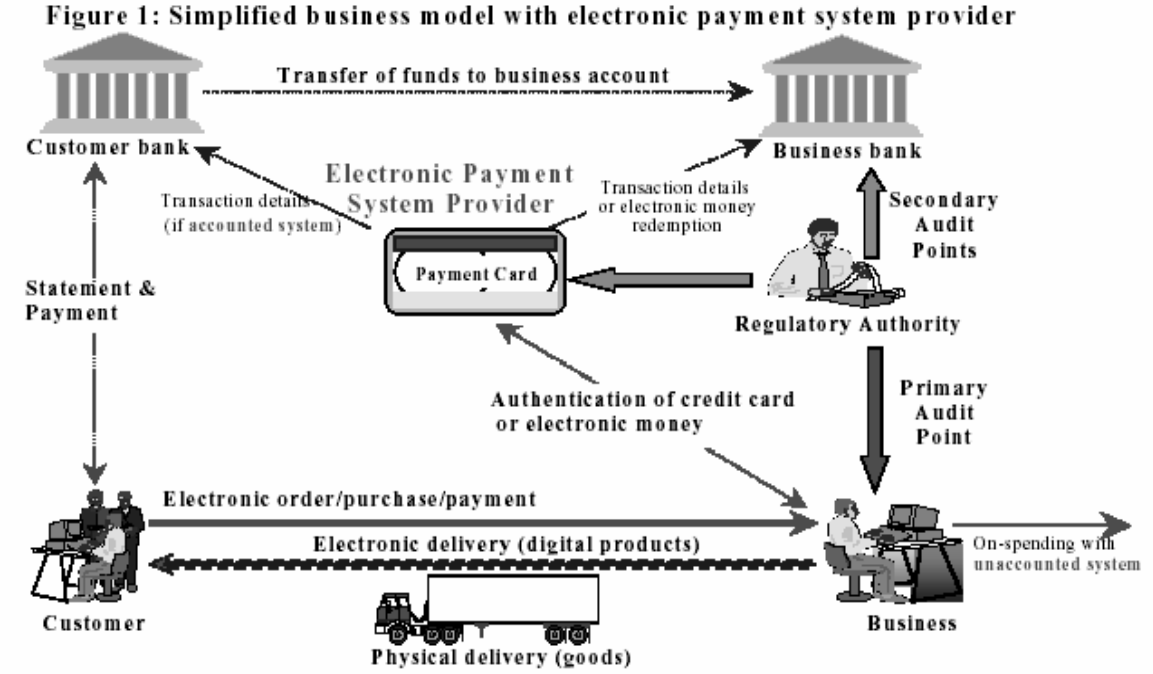
2. Accounted payment systems, based on double-entry record keeping principles, have provided both taxpayers and revenue authorities with a critical source of information to verify the accuracy of taxation liabilities for hundreds of years. With the development of electronic payment systems the need to verify taxation information has not diminished. As cross border electronic commerce becomes part of mainstream economic activity taxpayers and revenue authorities will have a continuing requirement to reliably access payment system information.

3. Many types of electronic payment systems have been proposed. Most however have fallen by the wayside and SSL enabled credit card transactions remains the major form of consumer payment mechanism over the Internet. While e-cash systems have proved largely unsuccessful and electronic payment systems based around credit and debit cards and EFT are the dominant mode for transfers of consumer value at present, new payment approaches continue to evolve and be proposed. (See: http://ntrg.cs.tcd.ie/mepeirce/project.html.)

4. In most instances the information recorded in electronic payment systems, although sometimes held outside a jurisdiction, generally provides an adequate and detailed audit trail. Indeed in many cases a transaction utilising an electronic payment system provides a better audit trail than a corresponding transaction involving physical cash.

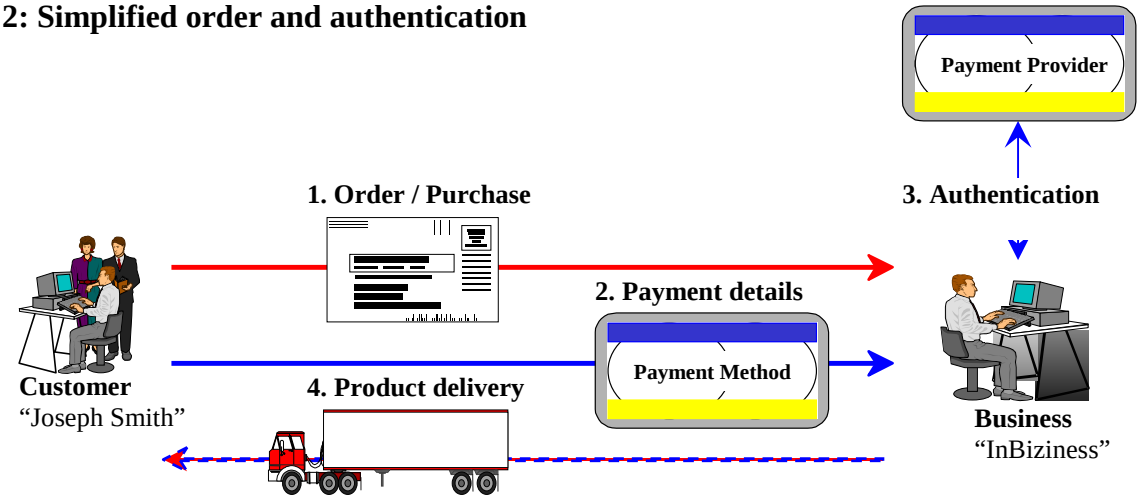
5. The following simplified business model, figure 1, can be used to illustrate the issues involved:

Figure 1: Simplified business model with electronic payment system provider



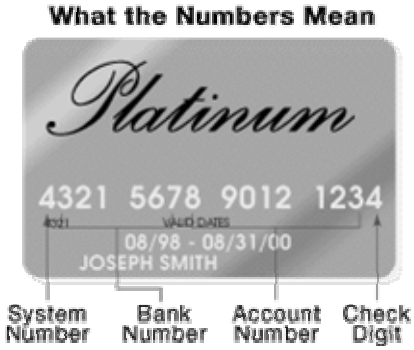
6. In this simplified model the Customer orders or purchases a product from the Business. The Business then authenticates the validity of the Customer's electronic payment. This authentication could range from a mere check of the validity of the 'form' of a credit card number through to an online real-time check of account details to the electronic payment system provider. The nature of this authentication check will generally vary according to the level of risk involved. Figure 2 shows the four basic steps involved.

Figure 2: Simplified order and authentication



7. The information about the transaction, held by the various parties involved, will vary according to the type of payment system used and its level of ***accountability***. A payment system that, in addition to the component amounts of the transaction, identifies both parties to the transaction is referred to in this paper as a '***fully accounted***' payment system. A payment system that identifies only the business undertaking the transaction is known in this paper as a '***semi-accounted***' payment system.

8. With a ***fully accounted*** system, such as payment by credit card, the Customer provides a card number to the Business as part of the order/purchasing process. The Business passes this information, together with their merchant ID and the amount of the transaction to the payment system provider. The credit card number contains enough information to enable the identification of the payment provider system (see diagram below *e.g.* System No. 4=Visa, 5=MasterCard, 37=AmEx *etc*), the Customer's bank and their account. The transaction information is passed to the Business's bank and the electronic payment system provider enabling the Customer's bank to transfer the value of the transaction to the Business's bank and debit the Customer's account. The Customer is sent a statement with the transaction details, amongst others, on a periodic basis, generally monthly. All such transactions received create third party audit trails with both the Business's and Customer's banks as well as the electronic payment provider and gives some assurance that such sales are recorded and will be reported by the Business. (Picture from http://www.howstuffworks.com/credit-card1.htm – see http://www.iso.ch/cate/3524015.html for relevant ISO standard details for card systems.)



9. With ***semi-accounted*** payment systems, such as Mondex (www.modex.com) the customer is not readily identifiable to the electronic payment provider or the Business. Instead information representing electronic money (digital tokens that the customer has previously purchased and stored on their smartcard or computer) is passed to the Business's system and the Business then authenticates and redeems (banks) these tokens via the payment provider. The customer in such a system can be anonymous while assurance is provided that all such sales are recorded and reported by the Business.

10. With an ***unaccounted*** payment system, such as eCash (www.eCash.com) neither the Customer nor the Business is necessarily identifiable to the payment system provider. The Business receiving the tokens representing electronic money can on-spend these without redeeming them through the payment system provider, leaving no third party audit trail. These payment systems are thus designed or configured so that significant transactions can be carried out with ***full anonymity*** of both parties. As both the Customer and the Business can remain anonymous this payment mechanism is most analogous to physical money – but at the same time its unique advantages over physical cash raise special concerns for law enforcement agencies and revenue authorities.

11. The following simplistic representation of payment system provider accounts may assist in highlighting the differences in accountability of the systems:

Fully Accounted Payment System Provider Record

Customer	Merchant
01/01: Joseph Smith: $100	01/01: InBizness: $100

In a fully accounted system, the payment system provider can identify both parties to the transaction.

Semi-accounted Payment System Provider Record

Customer	Merchant
09/12: purchase tokens: $100	
01/01: redeemed tokens: $100	01/01: InBizness: $100

In a semi-accounted system, the payment system provider can identify only the merchant involved in the transaction when the tokens are redeemed. The customer can purchase tokens anonymously using physical cash. The merchant cannot on-spend tokens.

Unaccounted Payment System Provider Record

Customer	Merchant X
09/12: purchase tokens: $100	01/01: redeemed tokens: $100

In an unaccounted system, the payment system provider can identify only the merchant redeeming the tokens. The customer can purchase tokens anonymously using physical cash. The merchant can on-spend tokens anonymously.

Issues

12. ***Unaccounted*** electronic payment systems raise special concerns for revenue authorities because unlike physical cash such electronic payment systems allow for instantaneous transfers of significant value ***across***

jurisdictions in a manner that is undetectable for regulatory agencies. It is almost certain that unaccounted payment systems would facilitate money laundering. The risk that the perennial issue of the untaxed domestic cash economy becoming a global problem is a serious concern for revenue authorities and law enforcement agencies. In such a scenario even the secondary economic benefits of subsequent taxable transactions within the jurisdiction, arising from the spending of untaxed proceeds, is lost.

13. Legitimate ***personal privacy*** concerns are a major issue that need to be factored into electronic payment system design for the systems to be viable. Many jurisdictions have privacy legislation regarding this aspect that need to be taken into account and appropriate ***security*** and/or ***personal anonymity*** may need to be incorporated into the design of such systems to address this issue. Governments need to ensure that the mechanisms for maintaining personal privacy do not lead to a situation where taxes are unable to be calculated and collected on either the business (income taxes) or the consumer (consumption taxes).

14. It is noted that a clear distinction can be made between ***personal anonymity*** (where a private individual consumer is not identifiable) and ***business anonymity*** (where the business is not identifiable). Businesses hold themselves out to the world to conduct business and for direct taxation systems to work businesses cannot be anonymous. This is also true for indirect tax systems that use the business as a tax or information collection point. There is a strong synergy between ***consumer protection*** requirements regarding adequate business identification and the needs of revenue authorities in this regard.

15. Where the consumer is taxable and the business acts as the collection point for the tax, building it into the transaction, information on the ***consumer*** will generally only required to the extent necessary to identify the jurisdiction of the consumer for indirect tax purposes - ***where*** rather than ***who***. If the consumer seeks an exemption from, or credit of, taxation then more detailed information may be required so that the exemption could be given or the tax credit granted. If consumer self-assessment is adopted as the mechanism for the collection of consumption taxes by a jurisdiction then for verification purposes enough information to identify the Consumer (name, address, *etc.*) may be necessary.

16. Another set of issues concern the underlying cost of the transaction, an item that is significantly affected by the authentication procedures undertaken. ***Micro-payment*** systems (http://www.w3.org/ECommerce/Micropayments) are designed to operate on a pay-per-click basis as a means of generating sales revenue from digital products, such as photographs and text, where the costs associated with processing a credit card transaction would render the transaction otherwise unprofitable. An issue with unaccounted micro-payment systems is whether the Customer 'load' can be limited to a small amount per time period (*e.g.* <$100 per week). While micro-payment systems are designed for transactions of a few cents, without ***load limits*** the potential is there for significant transactions (or thousands of transactions adding up to a significant amount) to be undertaken. It should be noted that some micro-payment systems operate in a quasi-subscription mode with periodic Customer billing and are fully accounted.

17. A final issue for consideration is the reliance many taxpayers place on payment system provider records as a basis for completing and reconciling their own accounts. Electronic payment systems that do not provide such records could lead to a correspondingly lower level of adequate and accurate account keeping by taxpayers.

Proposal

18. Revenue authority and other law enforcement agency concerns regarding electronic payment systems would be greatly alleviated if such payment systems included an appropriate minimum level of accountability while at the same time meeting legitimate consumer needs for security and privacy.

19. To meet the expectations and needs of Government revenue authorities, the minimum standard of accountability appropriate for electronic payment systems is where the business undertaking the transaction is identifiable, the consumers jurisdiction (Country/State or Province) for taxation purposes is ascertained as well as the amount of the transaction. This equates to the information held in ***semi-accounted*** payment systems.

20. Concerns regarding ***unaccounted*** payment systems would be mitigated to some degree if such systems had ***load limits*** incorporated into their design so that significant transactions could not be carried out.

Guidance

1. **Revenue authorities *should* derive and promulgate a common position on the issue of electronic payment system accountability.**

2. **Revenue authorities *are encouraged to* raise the issue of electronic payment system accountability with relevant Government regulatory agencies.**

3. **Revenue authorities *may consider* suggesting to relevant government regulatory agencies that electronic payment systems should be at least semi-accounted in nature and/or that load limits for unaccounted systems should be adopted.**

4. **Revenue authorities *may consider* suggesting to electronic payment system developer's or other relevant parties that such payment systems should be at least semi-accounted in nature and/or that load limits for unaccounted systems should be adopted.**

5. **Revenue authorities *should* closely monitor developments in new electronic payment systems.**

History

1998: At the Ottawa "Electronic Commerce: A Borderless World" conference in October 1998 revenue authority concerns, about the adequacy and accuracy of business identification on the Internet, were explicitly expressed in the Ottawa Taxation Framework conditions:

"Tax administration, identification and information needs
(ii) Revenue authorities should maintain their ability to secure access to reliable and verifiable information in order to identify taxpayers and obtain the information necessary to administer their tax system."

From: Taxation Framework Conditions, Box 3 – Elements of a Taxation Framework,
http://www.oecd.org/daf/fa/E_COM/framewke.pdf

In an accompanying discussion paper released at the Ottawa conference these matters were developed further into implementation options for the taxation framework. Two of these implementation options foreshadow aspects of this paper on electronic payment system accountability. These are:

"Implementation Option 13
Revenue authorities should express their views to the appropriate bodies to ensure that features of electronic payment systems do not exacerbate the challenges associated with the cash economy

a) In conventional commerce, cash does not provide a very good audit trail and cash transactions are thought to account for a significant amount of the transactions that are untaxed in an economy. The tax not collected from the conventional "cash economy" is an enduring concern for Revenue authorities.

b) In the context of electronic commerce, cash-like electronic payment systems or unaccounted electronic payment systems, represent the same types of concerns as physical cash does in conventional commerce. However, unaccounted electronic payment systems raise additional concerns in that they can be used to conduct transactions over large distances, unlike physical cash, and they do not have the bulk of large quantities of physical cash, making the value easier to conceal.

c) While Revenue authorities do not have jurisdiction over the banking, finance and payment system sectors of the economy, they should express their views to the appropriate bodies to ensure that features of electronic payment systems do not exacerbate the challenges associated with the cash economy. For example, Revenue authorities might press the appropriate bodies to ensure that electronic payment system providers operate their systems in a way that enables the flows of funds to be properly accounted according to prevailing legislation. In addition, Revenue authorities may seek limits on the values attached to unaccounted electronic payment systems.

Nonetheless, while Revenue authorities have identified challenges to the reliability and verifiability of information, they also recognise that the electronic commerce environment offers the prospect of increased use of computerised accounting systems and the completeness, reliability and integrity of records associated with many of these systems.
…
Implementation Option 15
Revenue authorities may consider expressing their views on information requirements to appropriate bodies developing standards or protocols for electronic commerce

a) Revenue authorities have, wherever possible, used or adapted commercial developments for taxation purposes so as to avoid the creation of a separate and burdensome tax regime. However, modifying systems after they have been finalised is costly and should be avoided where possible. Revenue authorities could co-operate with business initiatives to create protocols for trade that facilitate electronic offers, delivery, payment and documentation and express their views in a timely manner to the bodies developing such protocols or standards so that they can be developed, taking into account the views of Revenue authorities.

b) Further, private sector groups aiming at the introduction of new technical standards or protocols for electronic commerce could co-operate by contacting Revenue authorities, e.g. through the OECD, at an early stage to enhance a constructive dialogue designed to find mutually acceptable solutions."

From: *Electronic Commerce: A Discussion Paper on Taxation Issues,*
http://www.oecd.org/daf/fa/E_COM/discusse.pdf

April 2001: The FSM Electronic Commerce Sub-group forms a team to analyse the issue of electronic payment system accountability further. The team (*France, Denmark, Germany, Italy, Canada and the EC*) was asked to:

- Identify revenue authority Electronic Payment System requirements, including minimum levels of accountability, load limits etc
- Identify mechanisms and practices that could satisfy these requirements
- Formulate these requirements and practices into a guideline
- Identify parties to whom this guidelines should be promulgated (Including software developers, ISO, *etc.*)

September 2001: The FSM Electronic Commerce Sub-group accepts the draft subject to the inclusion of the additional guidance point:
"5. Revenue authorities *should* closely monitor developments in new electronic payment systems."

March 2002: This exposure draft is released for comment. The paper is to be published as part of the "Tax Guidance Series" from the Centre for Tax Policy and Administration.

Compatibility

The principles in this document are compatible with those contained in:

- **Electronic Commerce: Taxation Framework Conditions**

OECD October 1998

- **GAP001 Principles of Good Tax Administration**

Centre for Tax Policy and Administration, OECD May 2001

Privacy

- **Guidelines governing the protection of privacy and transborder flows of personal data**

OECD Council recommendation adopted 23 September 1980

- **Guidelines concerning computerized personal data files**

United Nations General Assembly adopted 14 December 1990

- **Convention for the protection of individuals with regard to automatic processing of personal data**
Council of Europe directive adopted 24 October 1995

Contact

For further information please contact Mr Richard Highfield, Centre for Tax Policy and Administration, Tel: +33 (0)1 45 24 94 63, Fax: +33 (0)1 44 30 63 51