VAT Treatment of the Financial Sector

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The U.S. Bureau of Economic Analysis estimates that financial services — including banking, brokerage, asset management, insurance, and rental and leasing services (other than real estate) — accounted for 9.7 percent of GDP in 2008 (see Table 1). Thus, as personal consumption expenditures accounted for 70.1 percent of GDP, financial services represented almost 14 percent of the potential tax base of a U.S. value added tax.

A company's value added generally is measured in the national income accounts as sales of goods and services, less purchases from other companies. Within the financial sector, however, charges for some services are not explicitly stated as fees or commissions, but are implicit in interest rate spreads and other financial margins. As a result, national income accountants must estimate value added in the financial sector using indirect methods.[1]

Most countries with VAT have chosen to exempt a broad range of financial services because of the difficulty in measuring implicit financial fees. However, that has led to VAT rules that are neither simple nor economically neutral.

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[1]*See* Brent R. Moulton and Eugene P. Seskin, "Preview of the 2003 Comprehensive Revision of the National Income and Product Accounts: Changes in Definitions and Classifications," U.S. Commerce Dept., *Survey of Current Business*, June 2003, 17-34. The output of banks includes implicit financial intermediation fees measured as interest received on loans, less interest paid to depositors and the imputed cost of equity supplied by shareholders. The value of insurance services, other than life insurance, is measured as premiums accrued less expected losses plus expected investment income on reserves.

Table 1. Contribution of Financial Services to GDP, 2008	
Industry	**Share of GDP**
Finance, insurance, and rental and leasing services (other than real estate)	**9.7%**
Federal Reserve banks, credit intermediation, and related activities	3.4%
Securities, commodity contracts, and investments	1.4%
Insurance carriers and related activities	3.2%
Funds, trusts, and other financial vehicles	0.4%
Rental and leasing services (other than real estate)	1.4%
Source: Bureau of Economic Analysis, U.S. Department of Commerce.	

This chapter describes the difficulties in measuring implicit financial fees, summarizes current international practices for applying VAT to financial services, assesses the limitations of those approaches, and discusses alternatives.[2]

Implicit Financial Fees

The concept of implicit financial fees can be illustrated by considering a bank loan. Banks incur labor and other costs in originating and servicing loans and, where necessary, working out bad debt. Some of these costs may be recovered through separately stated charges, such as loan application and document fees. However, some or all of these costs commonly are recovered as a component of the interest rate charged on the loan.

The interest charged on a loan can be thought of as comprising three parts: the risk-free interest rate representing the pure time value of money, a premium for risk of default, and an implicit fee.[3] This can be expressed formulaically as follows:

Equation #1:

$$\text{loan interest rate} = \text{risk-free rate} + \text{risk premium} + \text{implicit fee}$$

Similarly, premiums charged for general (i.e., non-life) insurance can be viewed as comprising three parts: the present value

[2]Countries use different terms to refer to a value added tax, such as goods and services tax or GST. The term "value added tax" is used here to refer broadly to similar taxes regardless of name.

[3]*See* European Commission, "Value Added Tax: A Study of Methods of Taxing Financial and Insurance Services," 2006.

of expected future benefit payments, a risk premium, and an implicit fee for underwriting and servicing the policy. Bid-ask spreads for trading in securities and foreign exchange also include implicit fees charged to buyers and sellers.

Inclusion of a bank's gross interest income within the base of a VAT would tax more than value added and would therefore discourage the consumption of financial services relative to other goods and services, unless a sufficiently reduced rate of tax were imposed.

Some argue that interest income should be entirely excluded from the base of a VAT. Under this view, financial intermediation is considered to be more in the nature of investment than consumption and thus not the proper object of a consumption tax.[4] Others have suggested that a distinction should be drawn between financial intermediation fees that are proportional to interest payments (deemed not appropriate to tax) and fees for services provided (which are deemed appropriate to tax).[5] This chapter adopts the view of Auerbach and Gordon, who argue that financial services should be included in the base of a VAT if real resources are used to produce them.[6]

International Practice

The Exemption System

No country that has VAT requires financial services companies to separate implicit fees from financial margins for purposes of assessing tax. Typically, countries treat implicit fees as exempt, meaning that these fees are not subject to tax, and VAT incurred on inputs deemed attributable to exempt financial services is not recoverable. Many countries also exempt a variety of explicit financial fees as well as implicit fees.

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[4]Harry Grubert and James Mackie, "Must Financial Services Be Taxed Under a Consumption Tax?" *National Tax Journal*, 53(1), Mar. 2000, pp. 23-40.

[5]William Jack, "The Treatment of Financial Services Under a Broad-Based Consumption Tax," *National Tax Journal*, 53(4), Dec. 2000, pp. 841-851.

[6]Auerbach, A. and R. Gordon (2002), "Taxation of Financial Services Under a VAT," *American Economic Review*, 92(2), pp. 411-416.

The European Council's VAT directive[7] generally requires European Union member states to adopt VAT legislation that exempts domestic supplies of specified financial services such as:

- insurance and reinsurance transactions, including related services performed by insurance brokers and insurance agents;
- the granting and the negotiation of credit and the management of credit by the person granting it;
- the negotiation of, or any dealings in, credit guarantees or any other security for money and the management of credit guarantees by the person who is granting the credit;
- transactions, including negotiation, concerning deposit and current accounts, payments, transfers, debts, checks, and other negotiable instruments, but excluding debt collection;
- transactions, including negotiation, concerning currency, bank notes, and coins used as legal tender, with the exception of collectors; items — gold, silver, or other metal coins or bank notes — that are not normally used as legal tender or coins of numismatic interest;
- transactions, including negotiation but not management or safekeeping, in shares, interests in companies or associations, debentures and other securities, but excluding documents establishing title to goods, and certain rights or securities; and
- the management of special investment funds as defined by member states.

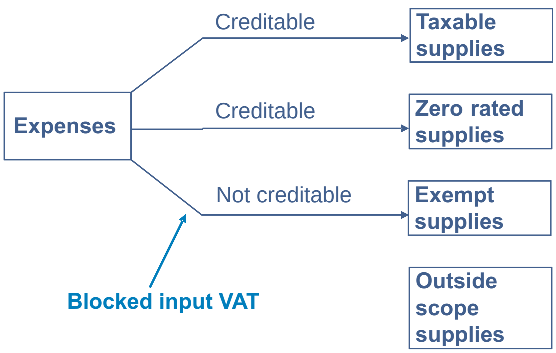
A zero rate (with input VAT recovery) may be applied to exports of these financial services. The tax treatment of other financial services is left to the discretion of EU member states.

While the exemption of financial services obviates the need for measuring implicit financial fees, it creates a different set of administrative difficulties.

First, it is necessary to define the scope of exempt transactions. This is challenging because of the diversity and sophistication of

[7] *See* article 135 Council Directive 2006/112/EC of Nov. 28, 2006 (on the common system of value added tax). Under article 137 of the directive, member states, in domestic legislation, may provide an option to elect taxation of these services, other than insurance and reinsurance.

Figure 1. Expense Allocation for Taxpayers Supplying Exempt Financial Services



financial services and the provision of some financial services by companies that are not subject to regulation and supervision under financial charters. The British Bankers' Association guide to the taxable status of banking services under the U.K. VAT rules (the "blue book") runs several hundred pages in printed form.[8]

Second, it is necessary to allocate inputs between taxable and exempt transactions. No recovery is allowed for VAT paid on inputs allocated to exempt transactions, referred to as "blocked" input VAT (see Figure 1 above).[9] Rather than allocate inputs according to the value of taxable and exempt transactions, a variety of proxies are often used, such as head count or square feet of office space.

Exemption distorts competition in several ways. It undertaxes business-to-consumer (B2C) supplies because value added by the supplier escapes tax. At the same time, exemption overtaxes supplies to VAT-registered businesses (B2B) because of blocked

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[8]Available from the British Bankers' Association for a fee at www.bba.org.uk.

[9]Out-of-scope supplies include activities conducted in foreign jurisdictions, gratis supplies to charity, issuance of shares, and payment of dividends. Some EU member states took the view that VAT costs related to shares transactions were not deductible. Recently, the ECJ has taken the view that these costs can be treated as overheads allocable to the taxpayer's in-scope activities (cf. case *Kretztechnick* C-465/03, AB SKF C-29/08, *Cibo* C-16/00). However, if the costs related to share transactions are not connected to in-scope activities, the VAT deduction will be denied (cf. case C-437/06 *Securenta*, 2008).

input VAT that is never recovered in the supply chain. Exemption thus encourages use of financial services by consumers and discourages use by businesses.

Outsourcing by financial services companies is penalized because of blocked input recovery, unless the exemption system is extended to their suppliers. Moreover, exemption of financial services does not address the competitive advantage of foreign companies that, barring regulatory barriers, may be able to export financial services to the domestic market free of VAT.

To compensate for the perceived preferential treatment received by financial services as a result of VAT exemption, some countries impose special taxes on financial services companies. Examples include insurance premium tax (U.K.), payroll tax (Denmark and France), and wage and profit tax (Israel). These compensatory taxes typically exacerbate the overtaxation of B2B financial services.

Modified Exemption System

To reduce the complexity and economic distortions that arise under the exemption system, some countries have adopted modifications. They include: (1) taxing all explicit financial fees, (2) providing taxpayers with the option to treat otherwise exempt financial services as taxable, and (3) zero rating B2B supplies of some financial services. A survey of international practices illustrates these approaches.

Mandatory Taxation of Explicit Fees

South Africa initially followed the New Zealand GST when it enacted its VAT regime in 1991. Beginning in 1996, however, South Africa included all domestically rendered, fee-based financial services in the VAT tax base.[10] That lessened the amount of blocked input VAT, but did not eliminate the need to allocate input tax between taxable and exempt supplies. To reduce

[10]Alan Schenk and Oliver Oldman, *Value Added Tax: A Comparative Approach*, Cambridge University Press, 2007, pp. 331-333.

disputes, the South African Revenue Service later issued standardized input allocation guidance for members of the Banking Council.[11]

Compared with full exemption, taxing explicit financial service fees promotes economic efficiency by reducing the overtaxation of B2B supplies and the undertaxation of B2C supplies. Of course, if there is flexibility regarding the choice of pricing, financial companies will have an incentive to charge explicit fees only for B2B supplies. Thus, it might be expected that taxation of explicit financial intermediation fees would raise less revenue than the EU exemption system. However, that need not be the case if pricing decisions are dominated by nontax considerations.[12]

Option to Tax

Article 137 of Council Directive 2006/112/EC allows EU member states to enact legislation that provides an option to charge VAT on otherwise exempt financial services (except insurance and reinsurance). To date, only six of the 27 member states have enacted option-to-tax provisions: Austria, Belgium, Estonia, France, Germany, and Lithuania. Lack of widespread adoption may be due to revenue-loss concerns on the part of domestic tax authorities.

In theory, an option to tax would allow taxpayers greater control over the financial transactions subject to VAT as compared with mandatory taxation of explicit fees. In practice, however, option-to-tax rules include significant restrictions limiting taxpayer flexibility, such as:[13]

- limitations on the types of services eligible for the option to tax (Austria, Belgium, and France);
- requirements to opt for all services or all services of the same nature (Belgium, Estonia, France, and Lithuania);

[11] Ibid.

[12] Under section 73 of the VAT Act, the government can challenge tax-motivated manipulation of fees and margins based on the VAT status of the parties involved.

[13] European Banking Federation, ''Design and Impact of the 'Option to Tax' System for Application of VAT to Financial Services,'' Oct. 28, 2009.

- inability to opt selectively on a customer-by-customer basis (Belgium, Estonia, France, Germany, and Lithuania); and
- limitations on revocation of election (Belgium, Estonia, France, and Lithuania).

Taxpayer adoption of option-to-tax has been limited for several reasons, including: the restrictions imposed, the cost of upgrading accounting systems, and the lack of customer acceptance. Moreover, the option-to-tax system does not solve the fundamental problem of measuring the value of implicit financial intermediation fees. For example, where option-to-tax applies to lending transactions, the lender is required to treat gross interest received as taxable, rather than the loan spread. One exception is Lithuania, where the option to tax foreign currency transactions applies to the dealer's margin.[14]

Zero Rating

Effective in 2005, 20 years after enacting its GST, New Zealand revised its exemption system to allow, on an elective basis, zero rating of supplies to taxable customers.

Under this regime, electing companies may zero rate otherwise exempt financial services supplied to a GST-registered customer, but only if 75 percent or more of the customer's sales are taxable (at a positive or zero rate) under GST. If information is not provided by the customer, the electing company can establish whether the customer meets the 75 percent test based on the customer's standard industrial classification code. Zero rating is contingent on receipt of evidence that the customer is registered for GST. Under a special rule, financial services provided to another financial services company may be zero rated to the extent that the second company supplies financial services that are zero rated.[15]

Zero rating B2B financial services appears to be the most effective method of eliminating the tax cascading that otherwise occurs under the exemption method. However, it does not

[14]Ibid.
[15]This summary is based on Schenk and Oldman (2007) op cit.

address undertaxation of B2C financial services. And for financial companies with nonbusiness customers, zero rating B2B transactions does not eliminate the need to allocate input VAT between taxable and exempt transactions.

Partial Input Recovery

Exemption of financial services results in no input recovery, while zero rating allows full, 100 percent input recovery. Partial input recovery represents a middle ground.

Singapore annually publishes fixed percentage input VAT recovery rates for five types of exempt financial institutions: full banks, merchant banks, wholesale banks, offshore banks, and finance companies. The recovery percentages generally are based on the share of services estimated to be provided to VAT-registered customers and overseas customers.[16] Thus, the Singapore system is an alternative approach to zero rating transactions with VAT-registered and overseas customers that does not require a financial company to determine the VAT registration or residence status of its customers. However, the lower compliance burden on financial companies (as compared with zero rating B2B transactions) comes at the expense of accuracy, as the share of VAT-registered and overseas customers may vary considerably among companies within each of the five institutional categories.

Australia allows recovery of 75 percent of VAT on inputs allocable to exempt financial services. Unlike in Singapore, this percentage is not intended to approximate the proportion of VAT-registered and overseas customers. Instead the intent is to eliminate the disincentive for financial companies to outsource services. If 75 percent of the cost of outsourced activities represents value added by the outsourcer (and the remaining 25 percent represents materials purchased by the outsourcer), then the 75 percent input VAT credit would leave financial companies indifferent, from a VAT perspective, between self-provision and outsourcing.[17]

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[16]Howell H. Zee, ''VAT Treatment of Financial Services: A Primer on Conceptual Issues and Country Practices,'' *Intertax*, 34(10), 2006, pp. 458-474.

[17]Zee (2006) p. 463.

Assessment of Current Approaches

The inability to find a satisfactory measure of implicit financial intermediation fees has led most countries to exempt financial services where fees are wholly or partially hidden within financial margins. While avoiding the need to measure implicit fees, exemption has proved to be neither simple nor economically neutral. Exemption of financial services results in overtaxation of B2B services and undertaxation of B2C services, discourages outsourcing, and favors imported financial services over domestic supply.

Relatively few countries have chosen to modify the exemption system by the methods discussed above. Some countries have expanded the scope of exemption to include provision by third parties of some services to the financial sector. In general, allowing increased input tax recovery reduces the overtaxation of B2B transactions, reduces the disincentive to outsourcing, and limits the competitive advantage of imported financial services, but comes at the cost of exacerbating the undertaxation of B2C transactions.

Exemption alternatives that fully include financial services within the VAT base hold the promise of achieving neutral taxation of B2B, B2C, and outsourcing transactions.[18] The challenge is to find a way to do this with an acceptable level of compliance and administrative burden. Some options are discussed in the following section.

Alternatives to Exemption

A variety of proposals have been made to include financial intermediation services within the base of the VAT to avoid the deficiencies of the exemption system.

Cash Flow Taxation

The R+F Approach

In 1978 the Institute for Fiscal Studies in London released a report, known as the Meade Commission report, that proposed a

[18]Unless extended to imported financial services, full inclusion would not resolve (and could aggravate) the competitive advantage of foreign-based competitors.

cash flow tax on business that includes both real (R) and financial (F) flows in the tax base — or what has been referred to as the R+F tax base.[19]

The R base is the same as that in the flat tax originally proposed by Hall and Rabushka in 1985 — an origin-based, subtraction method VAT with a deduction for employee compensation.[20] The F base equals financial inflows less financial outflows. Financial inflows include:

- sales of financial assets (other than own shares or shares of other domestic residents);
- receipt of debt repayments;
- borrowing of funds;
- interest income;
- dividend income (other than from shares of domestic residents);
- other receipts in connection with financial instruments;
- receipt of insurance premiums; and
- receipt of insurance claims.

Financial outflows include:

- purchases of financial assets (other than own shares or shares of other domestic residents);
- payments to reduce debts;
- interest expense;
- other payments in connection with financial instruments (other than dividends paid);
- payments of insurance claims; and
- payments of insurance premiums.

While the report made clear that a cash flow method could be used to include financial services within an origin-based, subtraction method VAT, it did not address the destination-based, invoice credit method VAT that is the international standard. Subsequent authors have noted specific difficulties in applying

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[19]Institute for Fiscal Studies, *The Structure and Reform of Direct Taxation: The Report of the Committee Chaired by J. E. Meade*, London, George Allen and Unwin, 1978.

[20]Robert E. Hall and Alvin Rabushka, *The Flat Tax*, Hoover Institute, 2007. Under the flat tax, the business base equals sales less purchases from other businesses less payments of wages and benefits to employees, and the individual tax base equals employee compensation less a standard exemption.

the cash flow method within the VAT system, including compliance burden, strains on taxpayer liquidity, and windfalls.[21]

Under the cash flow method, all taxpayers, not just financial institutions, would have to include financial flows in determining tax liability. (For example, business would need to pay VAT on the receipt of loan proceeds.) This would be a burdensome and unfamiliar departure from existing accounting practices. Such a tax likely would be viewed as straining liquidity and impairing businesses' ability to invest, because tax would be due on the gross amount of borrowed funds.

Moreover, at the adoption of a cash flow tax (and later, if tax rates change), there would be unintended windfall gains and losses. For example, taxpayers that lent money before the effective date of the cash flow tax would be liable for tax on repayments after the effective date, even though no deduction had been allowed for the original loan.

The TCA System

The tax calculation account (TCA) system was developed to address the liquidity and windfall issues identified with use of the cash flow method to tax financial services under a VAT.[22] The TCA defers tax on principal amounts until accounts are settled, with an interest charge on deferred tax liability and an interest credit on deferred tax assets.

Tax liability is determined periodically on an account-by-account basis. The tax base includes interest charged (credited) on deferred tax liabilities (assets). Changes in VAT rates are handled by a tax-free restatement of deferred VAT liabilities and assets. Explicit financial fees that are not run through the TCA system are subject to VAT in the same manner as payments for other services.

Application of the TCA method is limited to transactions between financial services companies and their customers. The method does not apply to capital market transactions such as

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[21]Poddar, S.N. and M. English (1997), ''Taxation of Financial Services Under a Value Added Tax: Applying the Cash-Flow Approach,'' *National Tax Journal*, 50, pp. 87-111.

[22]Commission of the European Communities, ''Treatment of Financial Services Under a VAT,'' Aug. 1993.

issuance of debt and equity securities, payments to the owners of debt and equity securities, or investing in securities as a principal.

The detailed application of the TCA system to loans and deposit accounts is explained in the appendix following this chapter.

Truncated TCA Method

The TCA addresses the liquidity and windfall concerns with the cash flow method, but not the compliance burden that would arise if taxpayers outside the financial services sector were required to account for tax on financial transactions. The "truncated" cash flow system addresses this issue by limiting the cash flow method to financial services companies.

Under the truncated TCA method, financial services companies would determine VAT liability on an account-by-account basis using the TCA method and would issue invoices to VAT-registered customers, allowing them to claim an input VAT credit. Accounts with foreign customers would be zero rated. VAT-registered customers would follow normal rules for determining tax liability except that they would claim a credit for the amount of VAT reported to them by financial services companies.

Over a two-year period, beginning in 1996, the truncated TCA method was tested by 10 financial companies in Europe, including six banks, as part of a study sponsored by the European Commission. The results of the study indicated that the TCA method was technically feasible, but concerns were raised regarding disclosure of proprietary information, application to complex financial instruments, and cost of implementation.

Under the truncated TCA method, banks would be required to provide invoices to business customers showing VAT paid by the bank on customer accounts. This would have the effect of disclosing implicit financial fees, which could be inferred from invoices and are considered proprietary information by some financial companies. Also, questions were raised about the application of the TCA method to complex financial products, such as derivatives. Further, there was concern about the cost to financial companies of purchasing, installing, and operating new accounting systems to implement the TCA method.

Portfolio TCA Method

Harry Huizinga has proposed a simplified TCA method, which we refer to as the portfolio TCA method. This approach would address some of the concerns that surfaced in the testing of the truncated TCA method sponsored by the European Commission.[23]

Under the portfolio TCA method, transactions with VAT-registered customers would be treated as zero rated, meaning that no tax would be paid by the supplier and no tax credit would be claimable by business customers. The revenue effect of zero rating supplies to a registered customer is the same as taxing these supplies provided that the customer has the right to fully recover input VAT. For transactions with nonregistered customers, financial companies would be allowed to make TCA calculations on an aggregated basis for portfolios of similar financial products, rather than on an account-by-account basis.

The portfolio TCA method addresses concerns regarding disclosure of proprietary loan pricing information because no invoices would be required. Moreover, as complex financial products primarily are sold to business customers, the portfolio TCA method eliminates the need to calculate VAT on many of those products. Also, the portfolio TCA method partially addresses the cost of accounting system modifications by excluding B2B accounts and allowing TCA calculations to be made on an aggregated basis for B2C transactions.

General Insurance and Warranties

Premiums charged for insurance or reinsurance coverage and services provide by insurance agents and brokers generally are treated as exempt supplies under the VAT systems of most countries. By contrast, warranty charges that are embedded in the price of goods and services, and thus not separately stated, generally are included in the VAT base.

For example, an appliance with a one-year manufacturer's guarantee may be sold for $1,000, with the customer having an

[23]Harry Huizinga, "A European VAT on Financial Services?" in George de Menil, Richard Portes, and Hans-Werner Sinn (eds.), *Economic Policy*, 35, Oct. 2002, 493-534.

option to purchase a $100 contract to extend the warranty another two years. Alternatively, the appliance might be sold for $1,100, with the manufacturer guaranteeing the appliance for three years. In the first case, most countries with VAT systems would exempt the $100 premium for the extended warranty contract and apply VAT only to the $1,000 appliance price. In the second case, VAT would be charged on the $1,100 appliance price, including the embedded $100 charge for the extended warranty. As a result, in the case of B2C sales, VAT generally can be reduced by separately stating warranty fees. This tax advantage may be offset by imposition of an insurance premium tax, as in the U.K.[24]

A few countries have departed from the common practice of exemption by taxing general insurance (i.e., insurance other than life insurance) on a modified cash flow basis, similar to the treatment of embedded warranties. This is referred to as a modified cash flow tax because cash flows associated with the investment activities of insurance companies are treated as outside the scope of tax.

New Zealand

New Zealand was the first country to adopt a VAT or GST regime in which general insurance is taxed on a modified cash flow basis. Under the New Zealand system, general insurance premiums are subject to VAT. Similar to the treatment of warranties, VAT incurred by an insurance company for repair or replacement of insured property is creditable. Where the policyholder is reimbursed for the cost of repairs, the claims payment is viewed as VAT inclusive, and the imputed VAT is allowed as a credit to the insurance company.

Consider the following example: If the VAT rate is 10 percent and a $1,100 general insurance claim is paid to a policyholder, the insurance company would be allowed a VAT credit for $100 (0.10/(1+0.10)) * $1,100). Consequently, the same amount of VAT credit is claimed whether the insurance company pays the repair

[24] *See* Schenk and Oldman (2006), pp. 346-356.

company for a $1,000 repair (on which $100 of VAT is due) or the insurance company pays the policyholder $1,100.

VAT charged on general insurance premiums is reported on a VAT invoice and is creditable in the normal manner for VAT-registered policyholders. Receipt of a general insurance claims payment by a VAT-registered policyholder is treated as a taxable supply by the policyholder on a VAT-inclusive basis if the payment relates to a loss incurred in the conduct of the policyholder's taxable business.

For example, if the VAT rate is 10 percent, receipt of a general insurance claim payment of $1,100 regarding a loss incurred in the conduct of a taxable business would be treated as a taxable supply of $1,000 ($1,100/(1+0.10)) on which $100 (10 percent of $1,000) of VAT is owed by the policyholder. Policyholders that are not VAT registered are not liable for VAT on insurance claim payments and may not claim input credit for VAT charged on insurance premiums. Similarly, no recovery is permitted for VAT on general insurance premiums paid in connection with an exempt business activity, and no VAT is due on receipt of claims payments regarding those policies.

When the New Zealand VAT went into effect, general insurance companies were allowed to claim imputed VAT credits on claims payments made on policies for which premiums had not been subject to VAT.

South Africa and Australia

South Africa has adopted the New Zealand model, while Australia has adopted a modified version. Under the Australian system, taxable VAT-registered policyholders are not taxed on receipt of general insurance claims payments and no imputed VAT credit is allowed to the insurance company. Australia follows the New Zealand approach with respect to exempt policyholders. For partially exempt policyholders, claims payments are treated as partially taxable supplies.[25]

[25]Ibid., p. 355.

Singapore

Under the Singapore VAT system, general insurance premiums are subject to tax. The insurance company is allowed a notional input tax credit for cash payments made to non-VAT-registered policyholders and to policyholders unable to claim input VAT recovery on the premiums. Imposition of VAT on medical and accident insurance premiums and on passenger car insurance is prohibited under the Singapore VAT system.

Life Insurance

Life insurance contracts — including whole life, variable life, universal life, and annuity contracts — provide insurance against mortality-related risks. Unlike general insurance contracts, life insurance contracts often extend over more than one year and may have a savings component that is similar to a savings account or mutual fund. If bank savings accounts and mutual funds are included within the VAT system, competitive neutrality requires that the savings component of life insurance be similarly taxed.

The TCA system can be extended to life insurance contracts by dividing premiums between a pure insurance component and a savings component and making separate TCA calculations for both components.[26] Premiums could be separated between insurance and savings components based on actuarial reserves computed for financial, regulatory, or income tax purposes, or by reference to the cash surrender value of the contract. As with loan and deposit accounts, TCA calculations could be made on a portfolio basis.

Bid-Ask Spreads

Market-makers for currency, equities, bonds, options, futures contracts, and other securities recover their costs through brokerage commissions and bid-ask spreads. The bid-ask spread is the difference between the price quoted by the market-maker for an immediate purchase from a customer (bid) and an immediate sale to a customer (ask).

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[26] *See* European Commission, 2006, op cit.

Where the bid-ask spread is readily observable, a reference price for the security can be calculated as the midpoint (i.e., average) of the bid and ask prices. The reference price can be used to allocate the implicit brokerage fee between buyers and sellers as follows. The excess of the price at which a security is purchased over the reference price is the implicit brokerage fee charged to the buyer, and the excess of the reference price over the price at which a security is purchased is the implicit brokerage fee charged to the seller.

In principle, implicit brokerage fees could be calculated at the time of the transaction and reported to VAT-registered customers. Alternatively, as under the portfolio TCA method, implicit brokerage fees could be calculated on a portfolio basis for B2C transactions, and B2B transactions could be zero rated. In either case, explicit brokerage fees would be subject to tax, and VAT incurred on inputs would be fully recoverable.

Conclusion

The economically neutral application of VAT to financial services requires their inclusion within the tax base as fully as possible. Because of the practical difficulties in measuring the value of implicit financial fees, most financial services historically have been exempt from VAT. However, advances in theory and information technology make exemptions unnecessary.

As a starting point for the design of a U.S. VAT, there seem to be few impediments to including all explicit financial services fees within the base of a VAT, as in South Africa. Experience also shows that it is relatively easy to include general insurance within the VAT system, following the approach pioneered by New Zealand. Although there is only limited experience, it does not appear inordinately difficult to impose VAT on market-makers based on the bid-ask spread for currency and securities that are regularly traded.

The portfolio tax calculation account method seems to hold considerable promise for including lending and deposit-taking services in the VAT base with a relatively low compliance burden. The key to simplification of this approach is treating implicit financial fees charged on transactions with VAT-registered customers as zero rated, and measuring and taxing value added on transactions with unregistered customers on an aggregated basis. Portfolio approaches could also be applied without use of the tax calculation account methodology by, for example, using the addition method (profit plus wages) to calculate value added attributable to B2C transactions.

Zero-rating supplies to VAT-registered customers, of course, would be at variance with the normal operation of VAT rules. However, it is economically equivalent to full taxation for customers that are entitled to full recovery of input VAT. Special rules would be needed for partially exempt customers.

Portfolio approaches to taxing life insurance also seem promising, although additional development and testing would be necessary before implementation.

As traditional VAT systems are modified to expand the range of financial services included in the base, it will be important to ensure equivalent taxation of financial services that are: (1) economically similar but differently characterized (for example, finance leases versus loans); (2) supplied by companies that are not regulated as financial institutions; and (3) supplied by foreign-based financial companies to domestic consumers.

Appendix

Consider the application of the TCA system to loans and deposit accounts. In a loan transaction, VAT liability (V) under the TCA method can be expressed as follows:

Equation #2:

$$V = TCA_b * (1+r) - t * (I+P) - TCA_e$$

where:

- TCA_b = tax calculation account at the beginning of the accounting period;
- TCA_e = tax calculation account at the end of the accounting period;
- t = VAT rate for the accounting period;
- I = interest received for the accounting period;
- P = principal received for the accounting period; and
- r = short-term government bond rate for the accounting period.

The TCA is determined as the outstanding loan balance (A) at the beginning and the end of the period (expressed as a negative number) times the tax rate for the period.

$$\text{Equation \#3:}\quad TCA = -A * t.$$

The loan balance at the end of each accounting period (A_e) is equal to the loan balance at the beginning of the period (A_b) plus accrued interest, less the sum of interest and principal paid, and less write-offs of bad debt.

$$\text{Equation \#4:}\quad A_e = A_b * (1+i) - (I+P) - w * A_b$$

where:

- i = interest rate charged on loan for the accounting period; and
- w = portion of beginning of period loan balance written off during accounting period.

From equations 2, 3, and 4, it can be seen that the VAT base for a loan transaction under the TCA method is equal to the interest rate spread over the short-term government bond rate less bad debt write-offs during the period.

$$\text{Equation \#5:}\quad V = t * (i-r-w) * A_b$$

Over a portfolio of loans, if the risk premium built into the interest rate accurately prices the risk of default, the tax base under the TCA method is equal to the implicit fee charged by the lender, as defined above in Equation #1 (loan interest rate = risk-free rate + risk premium + implicit fee). Unanticipated favorable loan performance will increase the tax base, while unanticipated unfavorable loan performance will decrease the tax base.

Application of the TCA method to deposit accounts is described by the same algebra, except that there are no write-offs of bad debts and the signs of financial stocks and flows are reversed.[27]

The index rate used to adjust deferred tax assets and liabilities in the TCA to reflect the time value of money is the government borrowing rate that corresponds to the TCA accounting period. For example, if TCA calculations are made monthly, the 28-day Treasury bill rate at the beginning of each month could be used to index TCA accounts for that month.

Use of a short-term government bond rate to index the TCA for a long-term loan may be viewed as too low a rate where the yield curve is upward-sloping (overstating value added) and too high a rate where the yield curve is downward-sloping (understating value added). However, under the market expectations theory of the term structure of interest rates, the long-term government bond rate equals the yield that market participants expect could be earned by investing successively in short-term government paper.[28]

If market expectations are correct, repeated indexing of the TCA at the T-bill rate over the maturity of a long-term loan would be equivalent to using the initial long-term government rate over the entire loan period (if the VAT rate is unchanged).

Where market expectations are incorrect, however, there would be a capital gain or loss to the lender, and that gain or loss would be subject to tax or credit.

[27]Outstanding deposits, interest paid, and amounts withdrawn from an account have the opposite signs as outstanding loans, interest received, and principal repaid on a loan, respectively.

[28]Alternative theories suggest that factors other than market expectations about future short-term rates affect the yield curve, such as a premium to compensate investors for sacrificing the liquidity of short-term bonds. If so, these other factors would be included in the VAT base of the lender under the TCA method.

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