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## Designing the Taxation of Financial Intermediation

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Tax bases related to the financial sector have eroded in recent years, the result of increased globalization, liberalization, and financial innovation. Therefore, the sector is no longer quite as central to fiscal concerns as it was in the past. But the design of financial sector taxation still tends to be arbitrary and distorting, and subject to sharp fluctuations in response to political and macroeconomic pressures. Poor tax design can impede the effective functions of the financial sector.

The main principles governing good design of taxation for financial intermediation parallel those for other sectors. Financial sector taxation cannot in practice be considered in isolation from the remainder of the tax system, in terms of achieving both static and dynamic (growth-promoting) efficiency and equity. But it is not always straightforward to interpret and apply these principles in the financial setting, and certain aspects—those relating to intertemporal distortions, inflation, and the existence of close substitutes—need more attention for financial intermediaries.

This note describes ways in which finance is taxed and how heavy the net burden is, before setting out a framework for considering the design of financial taxation, and outlining some key lessons.

### Over-taxed or a Burden on the National Budget?

Many financial sector specialists tend to jump to conclusions about the taxation of banks and other financial intermediaries: that they are overtaxed, on the one hand, or that they receive overly generous fiscal treatment, on the other. The reality is often rather more complex.

**Over Taxed?** Because it is a fixed and visible entity that maintains accounts, the financial system is an obvious early port of call for a government in search of administratively easy ways of collecting taxation.

- Governments can apply a wide variety of explicit taxes on the net income, revenue, or transactions of financial intermediaries, as well as make intermediaries responsible for the collection of withholding taxes on investment income payable to others.
- Banks are in the firing line for implicit taxation (or quasi-fiscal impositions) ([see box: quasitaxes](#)), especially that resulting from compulsory reserves and interest rate ceilings.
- Central to the question of financial sector taxation is inflation, which itself is an implicit tax on the holding of currency as well as a distortion to any transactions denominated in nominal terms (as most financial sector transactions are). ([see box: theoretical principles](#)) The interaction of implicit taxation with inflation is most evident in the case of unremunerated reserve requirements, the quasi-fiscal burden of which rises or falls roughly in proportion to the rate of inflation. ([see box: intermediation spreads](#))

**Oversubsidized?** The relation between banks and the fiscal authorities is not all one-way. Indeed, banks are sometimes used in the process of tax avoidance. It is not just in the popular imagination that banks play an important albeit unwitting conduit role in the laundering of taxable (or illicit) funds. (The Financial Action Task Force on Money Laundering coordinates the effort of the authorities in 26 countries to try to limit international money laundering. Their work is described at: (<http://www.oecd.org/fatf>.)

More prosaically, the use of directed or interest-controlled bank lending, allocations of under-priced foreign exchange, and other administrative measures make the banking system a vehicle for subsidies as well as taxation. The system is also subsidized in other ways, notably by bailouts of insolvent banks (Honohan 1999b), or more generally by under-priced explicit or implicit deposit insurance.

**It all depends.** Taking into account these quasi-fiscal elements as well as explicit taxation, the answer to whether the banking system is a net contributor of revenue to the government or net absorber of government funds would differ from country to country, and from time to time. Indeed, it may fairly be said that the quasi-fiscal treatment of the assets, revenue, and transactions of banks and other financial institutions in developing countries has tended to be opaque and

arbitrary, with a burden that varies in an unplanned and largely unmeasured way. Estimates of the burden of quasi taxation on the financial system has varied up to 5 percent of gross domestic product (GDP) in a year (depending largely on fluctuations in inflation), or even more in exceptional cases. On the other hand, resolution costs of banking crises have often reached 10–15 percent of GDP, and sometimes a great deal higher.<sup>1</sup>

### **An Approach to the Design of Financial Taxation**

A natural starting point for designing taxation of financial intermediaries is to apply criteria parallel to those employed for taxation of other sectors. If it is accepted as a broad generalization (Kay 1990) that effective tax systems have increasingly relied on three main forms—income, consumption, and corrective taxes—then the application of parallelism suggests that financial sector taxation should likewise be concerned with

- a. Taxation of income (including, for example, the income of a bank's shareholders as well as its depositors).
- b. Taxation of that element of the sector's output (or value added) that contributes to final consumption.
- c. Imposition of corrective taxes that adjust for externalities and other sources of market failure.

Such a program calls in particular for a consistent definition of tax base. Practical implementation requires careful mapping to the financial sector of concepts such as *income* and *value added*: experience shows that these have often been severely mismeasured for tax purposes. A correct treatment is much more significant for financial intermediaries than for other entities, in view of the huge size of interest flows for many financial intermediaries. At the same time, consistent treatment across sectors is also important because tax avoidance schemes can easily be arranged to exploit sectoral differences in the effective tax rate of interest income, resulting in unintended implicit subsidies for the favored sectors.

In practice, probably the most common serious error in calculating the bank's income or its net output (value added) is neglecting to subtract interest paid. Using gross interest receipts (without deduction of interest paid) as a tax base is very far from an approximation either of the income attributable to the bank's shareholders, or of the bank's value added.<sup>2</sup> A gross interest receipts tax also suffers from being highly sensitive to the rate of inflation. ([see box: intermediation spreads](#))

#### **Income Tax**

It is useful to bear in mind the distinction between taxation of the corporate income of the financial institution, and taxation of the institution's customers. Making such a distinction may not be all that easy in the case of an investment or pension fund, or for some aspects of the long-term business of an insurance company. Indeed, tax avoidance schemes are often built on ambiguities in this regard. For the bulk of conventional financial intermediation, though, the investing customers and the shareholders are disparate groups.

(Of course one must not ignore issues of incidence: for example, if other sources of capital income are effectively taxed, withholding taxes imposed on banks in respect of interest payable to depositors may be thought of substantially as advance payment of depositors' income taxes; but if other capital income is not taxed, then those withholding taxes may be passed to lenders or to the bank.)

**Taxation of Corporate/Shareholder's Income.** There is, of course, no guarantee that the shareholders of, say, a bank will bear the incidence of a tax levied on the bank's corporate income. The presumption would be that at least some of the tax would be passed on in higher lending rates, especially for less mobile borrowers, and in lower deposit rates for small depositors. Indeed, Demirguç-Kunt and Huizinga (1997) present evidence from an extensive cross-country database of banks' accounts to show that corporate income tax paid by local banks tends to be fully passed on to customers (although foreign-owned banks pass on less than the full tax paid).

For the taxation of the intermediary's corporate income, a frequently contentious issue is the treatment of loan loss reserves. This issue is discussed below under the heading of corrective taxation.

**Taxation of Customers' Income.** Turning to the taxation of customers' income: it has to be said that the appropriate tax treatment of interest (and dividends) paid by financial intermediaries

is one of the most widely discussed current issues in financial taxation. Evidently, these payments form part of income in the hands of the recipients, and would be subject to taxation in a comprehensive income tax system.

In such a system, were it not for international capital mobility, administrative efficiency would point to the desirability of a withholding tax, just as it argues for pay-as-you-earn (PAYE) withholding tax of employee income. Fear of capital flight to jurisdictions that do not impose a withholding tax is a restraining influence here. (Although Huizinga, 1996, provides some intriguing evidence suggesting that gross interest rates paid by domestic corporate borrowers to foreign lenders may not increase by the full amount of the withholding tax). Furthermore, the Organisation for Economic and Co-operative Development (OECD) model income tax convention proposes withholding tax ceilings of 10 percent for interest and 15 percent for dividends for foreign recipients.

In contrast, Zee (1998) has recently advocated international agreement on a floor for such withholding taxes; this would facilitate retention of portfolio capital and tax revenue on interest income in developing countries.

The general issue of income tax treatment of capital income and of savings reaches well beyond the scope of the present note. (see box: [theoretical principles](#)) Preferential income tax treatment is often given to various forms of capital income, especially the proceeds of pension funds or other long-term investments, including life insurance, with the intention of encouraging long-term saving. These tax incentives can be partly rationalized on general theoretical grounds (Meade 1978), but in practice they are rarely uniform in their effect, and they often become the driving force behind financial innovation in the domestic financial system, sometimes with the result that financial ingenuity is diverted from more productive tasks to tax avoidance. The question of whether they do achieve a marked increase in overall saving has not been fully resolved (Honohan 1999a; OECD 1994).

### **Consumption Tax**

**VAT as a benchmark.** One way of looking at the many special indirect taxes, explicit and implicit, that fall on the financial system is to assess them as forms of sales or consumption tax. By effectively exempting intermediate goods, value added tax (VAT) satisfies a major theoretical principle ([see box: theoretical principles](#))—that is, it avoids productive distortions, in this context implying efficient methods of intermediation. More generally, it approximates to a theoretically coherent tax base, namely consumption, thereby avoiding the arbitrariness of many other forms of financial sector taxation.

**Extending VAT to financial services?** Financial services are exempt from VAT in the European Union (EU), which is a major center of VAT. The exemption is not quite as great a concession as it may appear, because (with the deduction system of VAT accounting) such financial services as are purchased by enterprises themselves subject to VAT are actually caught in the VAT net. Therefore, only those banking services sold directly to consumers (or outside the VAT system) escape VAT and warrant a separate form of tax.

Comprehensive application of VAT to all financial services has often been considered to raise technical issues that are too complex to resolve in practice, but recent thinking has revisited this issue, and the introduction of some form of VAT is now under active consideration in the European Union and elsewhere (cf. Hoffman, Poddar, and Whalley 1987; Gillis 1990). The debate received a transitory boost from a variety of “flat tax” proposals that were considered by the U.S. Congress in the early 1990s (Merrill and Edwards 1996). (A review of current practice in industrial countries is presented in OECD 1998). It may well be that some approximation to a value-added system on financial services could be a useful benchmark for tax reform in this area for developing countries too.

**VAT as a metric for quantifying indirect financial taxes.** One simple way of assessing the overall scale of indirect financial taxes and quasi taxes is to calculate the revenue-equivalent uniform VAT rate on the financial system. Alternatively one can compare their revenue yield with that which would result from integrating the financial system into an economy-wide VAT regime. For such calculations, a bank or other financial intermediary's value added can be approximated by its labor costs and profits (not by its total interest income). In using the results of such calculations, one needs to bear in mind that the actual financial taxes may have significantly different effects on behavior than would a uniform revenue-equivalent value added tax.

**Uneven impact of existing taxes.** Considering the great variety of other explicit taxes that are levied on financial assets, transactions or revenue flows, it is clear that in most countries, taxation of financial intermediation falls unevenly on different aspects of intermediation and does not approximate to a uniform sales or value added tax. While differential sales taxation on the consumption of different services can easily be rationalized on Ramsey<sup>3</sup> grounds of differential elasticities, this is not a criterion that is used in practice. Indeed, the fact that a transaction or asset is recorded seems to be enough to make it a candidate for taxation.

Among the most widespread types of explicit tax are those levied on:

- The value of financial transactions (purchases/sales of financial asset; money transfer). These range from minor inconveniences such as the check tax (“stamp duty”) still levied in Ireland at a rate equivalent to about US\$ 0.1 per check to major revenue-raising instruments such as those announced in Brazil 1998.
- The gross receipts of financial intermediaries, including interest receipts.
- The capital value of loans advanced (one-time levy).

These tax bases do not correspond closely to the value of a consumed good or service. For example, the purchase or sale of \$100 million worth of foreign exchange is not commensurate with a million \$100 welfare payments: on the one hand, effecting the retail transactions is much more costly to the intermediary, on the other hand it conveys greater utility. Another example, already mentioned, is the sensitivity of gross receipts tax to the rate of inflation. A documentary credit open for just a few weeks and fully secured may represent a much smaller contribution to economic value than a ten-year project loan to a manufacturer. These taxes thus appear arbitrary in the context of standard optimal tax theory. As such, they can surely be improved upon.

A similar critique applies to the most important forms of implicit tax - those arising from unremunerated reserve requirements, directed lending, and more generally the inflation tax.

A further difficulty with many of the special taxes imposed on financial intermediaries is the existence of close substitutes. Many countries have seen the emergence of unregulated near-bank intermediaries driven wholly by the opportunities created by tax and quasi-tax arbitrage. The depth and performance of organized securities markets can also be strongly influenced by transactions taxes. Even modest duties have been sufficient to prevent the development of markets in certain instruments (even in as developed a market as Switzerland) where capital mobility is high or where fairly close substitutes are available. And even if domestic substitutes are quickly brought within the tax net, there are always possibilities offshore. By driving business offshore or to unregulated entities, the taxes can entail higher social costs by increasing market fragility. In general, the ready availability of substitutes argues against heavy special taxes on financial transactions, except where a low substitution elasticity can be demonstrated.

In sum, many of the special indirect taxes that are commonly levied on the financial sector perform poorly if seen in the lens of consumption or value added taxes. Furthermore, because of high elasticities, they tend to be relatively highly distorting for any given revenue target. Except for those that can fairly be regarded as corrective (see below), their underlying economic rationale must be questioned.

### **Corrective Taxation**

Although much attention has focused on the distorting nature of financial sector taxation and quasi taxation, it is also conceivable that some forms of tax or quasi tax could be corrective of pre-existing distortions. This is particularly relevant to problems of asymmetric information and agency. Risk-related deposit insurance premiums are a clear example. Likewise, capital requirements do impose a burden, but they improve the incentive for good corporate governance and risk management; by reducing the risk of intermediary failure they can improve welfare. Ceilings on deposit interest rates can also help reduce risk-taking, although they may nowadays be too easily evaded to have much practical effect. These kinds of regulatory restraint can be interpreted in a quasi-fiscal context, but are more naturally treated in the context of financial regulation (Honohan and Stiglitz 1999).

**Loan Loss Reserves.** An important practical issue for corrective explicit taxation is the treatment of loan loss reserves. Many tax authorities have tended to err on the side of refusing to accept loan loss reserves as deductions from a bank's taxable income, fearing that they will be used to excess as an unverifiable way of deferring tax. Experience, however, suggests that banks are naturally too slow to recognize the risk of loan losses and to provision for them. A liberal tax

policy in this regard would be corrective by restoring the tax incentive to make adequate advance provision for losses (Escolano 1997)

**Tobin Taxes.** Another important area for possible corrective taxation is that of “Tobin” taxes. These are small taxes imposed on international capital flows, and designed to reduce the volatility of such flows because they reduce the return on short-term flows much more than on long-term flows (Haq, Kaul, and Grunberg 1996).

**Ex post capital levies.** Ex post capital levies on financial intermediaries or investment funds are normally avoided by governments for fear of a damaging loss of credibility. True, such levies have occasionally been imposed without evident damage, especially to correct what has been seen as an excessively lenient previous tax treatment (for example, on pension funds during the stock market boom of the 1990s). But in general, the market can be expected to react very unfavorably to revenue raids that it perceives as fiscal “mugging.” and the long-term net revenue impact of such levies could easily be negative. Moreover, ad hoc or frequently negotiated taxation can have the effect of reducing the financial autonomy of intermediaries, with potentially disastrous incentive consequences.

### **Some Key Lessons**

There is general agreement on a few *universal guidelines*:

- Avoid sources of revenue that are highly sensitive to the rate of inflation, especially in volatile macroeconomic conditions. Examples are unremunerated reserve requirements and ad valorem taxes on the gross interest receipts of financial intermediaries.
- Avoid taxes on transactions or asset holdings for which close untaxed substitutes exist. It is in this context that increased globalization of financial markets is likely to constrain the scope for raising revenue from the financial sector.
- Allow additions to loan loss reserves as a deduction for income tax purposes because that action is corrective.
- Resist the temptation for ad hoc capital levies on the financial sector.

Going beyond these guidelines brings us into more controversial territory. The approach of this note favors greater integration of financial sector taxation into the general structure of the national tax system. Within this approach:

- Establish net income and (something approximating) value added as the major bases for taxation, along with a small number of corrective taxes.
- Minimize the quasi-tax component in financial regulation, except to the extent that it is corrective, or that it helps to ensure that an approximation to a value added tax is in the base.
- Hold taxes on financial transactions to a minimum, because they are arbitrary and distorting.

**Some theoretical principles**

There is no consensus on what the appropriate level of taxation on financial intermediation should be. Three powerful general theoretical principles point in the direction of avoiding an undue burden of tax on the financial system.

First is the proposition that *intermediate goods and services* would not be taxed in an efficient tax system, because the resulting distortions to productive efficiency are not needed to achieve the revenue and redistributive aims of the tax system (Diamond and Mirrlees 1971). Although some financial intermediation services are sold directly to final consumers, the bulk are sold to enterprises and as such would not be taxed in an ideal system. To be sure, the ideal conditions under which these theoretical propositions are derived do not actually prevail, they do warn against over-reliance on taxing financial intermediation.

Second is the consideration that, because paper money is almost costless to produce, an undistorted economy would have a zero *nominal* rate of interest - implying some deflation. While this consideration needs to be moderated by taking account of the nominal rigidities that might make a policy of deflation costly, it does provide an additional argument against high inflation, over and above the empirical observation that moderate and high inflation is associated with low growth across countries. Several of the most distorting financial sector taxes and quasi taxes are highly sensitive to the rate of inflation, further reinforcing this message.

Third (perhaps less robust) is the view that taxation influencing the rate of return on capital can have extremely large welfare effects, implying that capital income should not be taxed in net terms (Chamley 1985). Even if this conclusion is too strong for practical application, it does caution against financial sector taxation that could substantially increase the rate of return on capital.

**What are financial quasi taxes?**

It has long been recognized that inflation acts like a tax on the holding of currency, and to the benefit of the government as monopoly issuer of currency. The same logic extends to required reserves on banks, when these are unremunerated. More generally, regulations on the banking system, such as controls on interest rates, can also be interpreted as implicit taxes or "quasi taxes," and indeed the goal of reducing the cost of servicing government debt has often been a motivating force for these regulations. The fiscal approach to financial intermediation policy (cf. Honohan 1994) assesses financial regulation in this light. To say that regulations have an important revenue component is not to deny that they may also serve other functions, such as influencing risk-taking behavior, or providing a buffer against liquidity or solvency shocks. As such, these quasi taxes may on balance be corrective, even if many can be shown to be suboptimal.

The taxlike nature of unremunerated reserve requirements has been noted by many authors. Brock (1989), Bacchetta and Caminal (1994), and Caminal (1997) present models in which reserve requirements are exactly equivalent to a proportional tax on bank deposits plus a reallocation of investible funds. The views that unremunerated reserve requirements are not necessary for monetary policy management and that they do represent a tax are now widely held, though there remain some dissenting views, cf. Garber and Weisbrod (1997)

### **Impact of taxation and quasi taxation on intermediation spreads**

Several common forms of tax and quasi tax can have a substantial and highly variable impact on intermediation spreads. Notable examples are two forms of quasi tax: namely (a) unremunerated, or low-interest reserve requirements and compulsory lending to government or preferred sectors at low interest rates, and (b) taxes on gross interest receipts. Although both forms of quasi tax have been declining, there appears to be a resurgence of the gross interest receipts tax. The burden of these quasi taxes increases sharply with nominal rates of interest and so bites severely during anticipated high inflation or during panics. As such they are especially to be avoided in volatile macro environments.

As an illustration of this sensitivity to high inflation and high nominal rates of interest, suppose that real interest rates are invariant to the expected rate of inflation. Then an increase in inflation will translate into an increase in nominal interest rates, and hence into an increase in the real tax take. For instance, a gross receipts tax of 5 percent imposed on a banking system that charges 10 percent real interest on a quantity of lending equivalent to 20 percent of GDP will mean a tax bill of 0.1 percent of GDP if there is no inflation; but this jumps to 0.5 percent of GDP if inflation is running at 40 percent per year.

In practice these taxes and quasi-taxes have usually resulted in high intermediation spreads, being passed on in higher interest rates for non-preferred borrowers, and lower rates for depositors (though *de facto* capital mobility limits the scope for lower wholesale deposit rates). Simple calculations show extremely high implicit revenue gains to the government in many countries (Honohan 1995) and also very high break-even marginal lending rates to the non-preferred sector.

Both because these taxes and quasi taxes are opaque and because they can be quite large, it is often useful to calculate their impact on bank intermediation spreads. A variety of alternative models have been used to derive these break-even rates. For example, if default probability and marginal administrative cost can be ignored, then the break-even lending rate on non-preferred lending to remunerate a marginal deposit rate of  $r^d$  when a proportion  $\rho$  of deposits must be placed in an unremunerated reserve is:

$$r^l = \frac{r^d}{1 - \rho}.$$

If gross interest receipts are taxed at a rate  $\tau^g$ , the break-even lending rate rises to:

$$r^l = \frac{r^d}{(1 - \rho)(1 - \tau^g)}.$$

A more elaborate formula, taking account of marginal default probability  $d$ , marginal proportional administrative expenses  $c$ , and a compulsory lending of a proportion of deposits  $\sigma$  to a preferential sector at rate  $r^p$ , is:

$$r^l = \frac{r^d}{(1 - \rho - \sigma)(1 - \tau^g - c)} + \frac{(1 - \rho)d - \sigma r^p}{(1 - \rho - \sigma)}.$$

Further refinements can be added, including the assumption that part of the loan is financed by additional capital, and as such requires an even higher break-even rate.

**Notes**

<sup>1</sup> Recent cases may displace Chile and Argentina from the top of the league of banking crisis resolution costs. Some estimates for those countries puts the fiscal cost at between one-third and over one half of annual GDP, figures which suggest that these bail-outs may have been more generous than necessary.

<sup>2</sup> The recent extension of the Brazilian COFINS social security tax (levied on revenue at the rate of 3 percent) to financial institutions has been criticized on similar grounds. Along with renewal at a higher rate of the "temporary" CPMF tax on financial transactions (imposed on withdrawals from bank accounts and money market instruments at a rate increased from 0.20 percent in 1998 to 0.38 percent in 1999 and 0.30 percent thereafter), this was a centerpiece of Brazil's 1998 fiscal stabilization program.

<sup>3</sup> Ramsey's tax problem considers how best to raise a given revenue from proportionate (ad valorem) taxes on the consumption of different commodities. The optimal tax rates depend on demand elasticities: in a simple case (of additive utility) optimal tax rates are inversely proportional to the income elasticities of demand (Diamond and Mirrlees 1971).

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