

The Tobin Tax and Exchange Rate Stability

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Recent turbulence in world financial markets has rekindled interest in the so-called Tobin tax on international financial transactions as a way to discourage speculative currency trading and reduce exchange rate volatility. A two-tier structure might be more effective than a pure transaction tax.

THE PRIMARY aim of the Tobin tax, first proposed in 1972 by Professor James Tobin during his Janeway Lectures at Princeton University, is to reduce exchange rate volatility. A uniform international tax payable on all spot transactions involving the conversion of one currency into another, in both domestic security markets and foreign exchange markets, the Tobin tax would, in theory, discourage speculation by making currency trading more costly. The volume of destabilizing short-term capital flows would decrease, leading to greater exchange rate stability.

The proposed tax is said to possess a number of advantages. It would reduce “noise” from market trading while allowing traders to react to changes in economic fundamentals and policy, and would therefore

be superior to protective measures such as capital controls. Because it would require the international coordination of macroeconomic policies and could be used as a policy instrument by such organizations as the IMF and the World Bank, it would enhance not only market efficiency but also global financial stability.

As a pure transaction tax, however, the Tobin tax would not be effective. Because of problems in the way it is structured, the proposed tax would impair the operations of the international financial markets and create liquidity problems without deterring speculation. An alternative solution might be a two-tier structure consisting of a low tax rate for normal transactions and an exchange surcharge on profits from very short-term transactions deemed to be speculative attacks on currencies. Under this scheme, an exchange rate would be allowed to move freely within a band, but overshooting the band would result in a tax on the discrepancy between the market exchange rate and the closest margin of the band. Exchange rates would thus be kept within a target range through taxation rather than central bank intervention or the depletion of international reserves.

Policy dilemmas

The main problems limiting the effectiveness of the Tobin tax lie in four crucial areas: establishing the tax base, identifying taxable transactions, setting the tax rate, and distributing tax revenues.

The tax base. To limit financial market distortions, the base for any tax on international financial transactions would have to be as broad as possible. No category of

market participants would be excluded, and the nationality of traders would be irrelevant. The tax would apply to transactions by financial institutions, governments and international organizations, producers of goods and services, commercial enterprises, and private households.

However, even leaving aside exemptions for market interventions by central banks and for transactions between governments and international organizations, there are strong economic and political arguments for exempting certain types of trades from the tax—for example, those made by market makers and those that increase market liquidity. Indeed, a case can be made to exempt all financial intermediaries from the tax on the grounds that their trading is usually stabilizing (through liquidity trading) rather than speculative.

The first dilemma is, therefore, that the Tobin tax cannot distinguish, on an institutional basis, between normal trading that assures the efficiency and stability of financial markets and destabilizing noise trading, which should be the only target of the tax. The Tobin tax would be applied to all foreign exchange transactions whether or not they involve financial institutions and market makers. A solution to this dilemma is not readily found, however. On the one hand, exempting such institutions from the tax would simply encourage tax-free transactions by and through intermediaries; taxing them, on the other hand, would entail efficiency costs.

Taxable transactions. Applying the Tobin tax only to spot transactions involving foreign currencies is likely to be inadequate because it would be possible to avoid

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the tax by trading in financial derivatives. The substitutability of financial instruments thus poses a severe problem for the scheme. The markets have developed cash substitutes that would escape the tax; new short-term instruments, similar to banker's acceptances and commercial paper, could be used to evade a cash-based tax, as could foreign exchange market funds and repurchase agreements (made against collateral and not settled on central bank accounts). Moreover, financial derivatives (for example, forward transactions, futures, and financial swaps) permit the transformation of "long trading" into "short trading" with important repercussions on spot markets. The volume of such transactions has grown rapidly over the past few years and now accounts for a significant share of all foreign exchange transactions.

The problem cannot be resolved simply by extending the tax to transactions in derivatives because the size of such transactions cannot be related to the underlying long transactions in a straightforward manner. A Tobin tax on the transactions themselves would grossly understate the volume of funds that can be channeled through foreign exchange markets; however, taxing the notional value of a derivatives contract would probably severely damage the derivatives markets and might even destroy them completely. Given the important role played by the forward and futures markets in hedging risks related to exchange rate fluctuations, the eventual disappearance of these markets would threaten the stability of foreign exchange markets. Another option would be to tax the notional amounts of derivatives contracts, but at lower rates. However, although this would be justified by the lower costs of derivatives, it is undesirable because it would create a selective tax system that would be arbitrary, formidably complex to administer, and biased.

The tax rate. It can be argued that a tax on foreign exchange transactions should ideally operate with a zero rate (or, equivalently, a zero base) when the exchange rate for the currencies in a given transaction is in equilibrium and that the tax rate should increase in accordance with the deviation from equilibrium. This would mean a variable tax, however, and Tobin's proposal calls for a uniform tax rate. Moreover, a low, fixed-rate Tobin tax at, say, 1 percent on round-trip transactions (sale

and repurchase of foreign currencies) is unlikely to deter investors who expect a short-term devaluation of 3 percent during periods of speculation. A tax rate high enough to deter speculation would seriously hamper efficient financial intermediation.

The distribution of revenues. Revenues generated by the Tobin tax would depend on a number of factors, including the tax base, the tax rate, and the volume of exempt trading. The tax is likely to provoke a significant behavioral response by market participants that is difficult, if not impossible, to assess, although it is likely that a higher tax rate would result in a lower taxable base. Nonetheless, because of the sheer size of foreign exchange markets, revenues from the Tobin tax could be considerable.

“Whenever the tax is activated, transaction costs would rise significantly, inducing markets to smooth out large fluctuations . . . ”

Net turnover in the world's foreign exchange markets (spot, forward, and derivative contracts) is estimated at \$1.23 trillion a day. A static revenue estimate (that is, an estimate that does not take into account behavioral reactions to the tax) for a 1 percent tax on total net turnover in all of the world's spot and derivative markets would amount to \$13 billion a day, or about \$3,250 billion annually (assuming 250 business days per year). This figure is unrealistic, however, because it does not take into account the effect of the tax on the behavior of market participants. But, even if foreign exchange markets were to shrink by 99 percent in response to the new tax, it would still raise sizable revenues of \$32 billion. Alternatively, a tax rate of 2 basis points (0.02 percent) on \$1.23 trillion could raise \$64 billion annually. Such a small tax is likely to trigger only an insignificant behavioral response, and the static revenue estimate is more realistic for such a low tax rate.

The question as to who should be entitled to the proceeds from the Tobin tax presents yet another difficulty. Tax assignment is a highly controversial political question. Although the Tobin tax would be assessed and collected by national governments, international coordination would be required to set and enforce the rules. Tobin

proposed the World Bank and the IMF as candidates for this role. However, it does not necessarily follow that proceeds from the tax would be assigned to the institution responsible for orchestrating it.

Proceeds could be returned to national governments, but this poses several difficulties. Redistribution to the countries where the tax revenues originated would favor countries with important financial centers and would be inequitable. Another basis for determining redistribution of proceeds to national governments could be the relative size of countries' quotas (voting shares) in an international organization such as the IMF, although this, too, would result in certain inequities.

The basic philosophy behind Tobin's ideas on tax assignment is economically sound. Given the difficulty of determining the regional incidence of proceeds, they could be assigned to a supranational body and used to fund the provision of public goods or global causes such as basic research in health or protection of the environment. However, the revenue-raising potential of the Tobin tax is so large that this alternative is unlikely to be accepted by all countries. Moreover, assignment of tax revenues to an international organization would confer considerable power on that organization and is likely to arouse national resentments.

Significant costs could thus be incurred simply in trying to establish a worldwide consensus on the issue of tax assignment. Even if all technical and policy issues could be resolved, the issue of assignment could be a serious obstacle to implementation of the tax.

Other policy options

Despite these problems, there are few alternatives to the Tobin tax that could serve as stabilizing devices in the financial markets.

Foreign assets. A tax on the domestic stock of foreign assets—as opposed to one on flows—has been used by some countries (for example, Germany and Switzerland) in the past. Such a tax would increase the opportunity costs of holding foreign assets, causing investors to shift to domestic assets. It is questionable, however, whether a tax on the stock of foreign assets can deter short-term speculation—it is more likely to have a longer-term structural impact. Moreover, discriminatory taxation of foreign and domestic assets may not be

wholly consistent with the Liberalization of Capital Markets Code of the Organization for Economic Cooperation and Development or with the spirit of the World Trade Organization.

Capital flows. Another possibility would be to levy taxes on capital outflows or inflows. The United States, for example, taxed outflows during the 1960s (the interest rate equalization tax); more recently, Israel imposed a tax on inflows. But such taxes have regularly been abandoned, perhaps because of their structural impact and ineffectiveness in fighting speculation. They have also failed to resolve underlying structural problems on a more permanent basis and been difficult to reconcile with the freedom of capital movements.

Capital gains. Another alternative to the Tobin tax would be a sliding-scale capital gains tax that would be higher for short-term capital gains. However, such a tax would presumably have to be embedded in national income tax legislation; it is difficult to see how it could be coordinated at the international level. Experience with national withholding taxes on interest income demonstrates that financial markets that benefit from low or no taxes on the incomes or capital gains of foreigners have little incentive to cooperate at an international level. A sliding-scale capital gains tax would also pose severe administrative problems because the tax rate would have to vary according to the term structure, as well as the source, of capital gains. Furthermore, in a world of integrated information and telecommunication networks, it is difficult to pin down where capital gains originate.

A two-tier Tobin tax

Achieving exchange rate stability through taxation would require high and/or varying tax rates, which would seriously obstruct the workings of international financial markets. In contrast, a small charge on international financial transactions would not create distortions but would also fail to inhibit speculative behavior in foreign exchange markets. A possible compromise would be a two-tier structure: a minimal-rate transaction tax and an exchange surcharge that, as an antispeculation device, would be triggered only during periods of exchange rate turbulence and on the basis of well-established quantitative criteria. The minimal-rate transaction tax

would function on a continuing basis and raise substantial, stable revenues without necessarily impairing the normal liquidity function of world financial markets. It would also serve as a monitoring and controlling device for the exchange surcharge, which would be administered jointly with the transaction tax. The exchange surcharge, which would be dormant so long as foreign exchange markets were operating normally, would not be used to raise revenue; it would function as an automatic

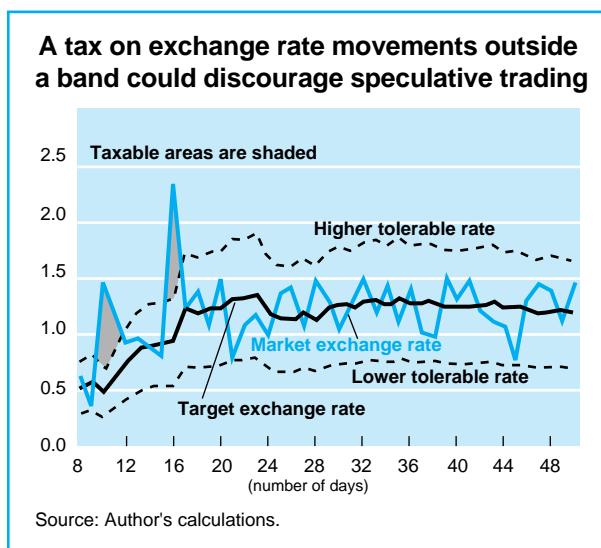
ing. The surcharge would be levied only during periods of speculative trading when the tax base becomes positive. It could be confined to cash transactions or, if necessary, could easily be extended to the derivative market. Ideally, if the exchange surcharge achieves its objective, it would generate no revenues.

The surcharge would be price-sensitive; it would be switched on whenever the trading price for a currency passed a predetermined threshold, which would be determined by a crawling peg (like a moving average) plus a safety margin (defined as a percentage of the target rate). The margins may vary for different currencies but the same rules would apply to all markets and to all institutions operating in the markets. Of course, the shorter the time interval for the crawl, the greater the scope for short-term fluctuations. The interval should, however, be short enough to avoid “leaning against the wind”—sustaining an effective exchange rate against market trends—so that markets can adjust fully to changes in fundamentals.

Whenever the tax is activated, transaction costs would rise significantly, inducing markets to smooth out large fluctuations to avoid such high costs. Traders would be given the right to recontract, however, because transaction costs could not be known in advance. This would make a significant proportion of contracts contingent, and speculative attacks would become more difficult to carry out because traders would automatically withdraw from markets during periods of large fluctuations in prices. Ideally, this should induce markets to behave more smoothly, in their own interests, and the tax would seldom need to be activated.

The idea is illustrated in the chart. An effective exchange rate is simulated over 50 days with a forward-looking moving average as the target exchange rate for each day. A higher and lower tolerable rate are defined in proportion to the target rate. As long as daily fluctuations remain within the band, no tax is levied. Once the effective rate moves beyond the tolerable range, the difference between the band and the effective rate (shaded area) is taxed at a constant but high rate.

The scheme is very similar to the European Monetary System’s mechanism for achieving exchange rate stability



circuit-breaker whenever speculative attacks against currencies occurred (if they occurred at all under this regime). The two taxes would thus be fully integrated, with the former constituting the operational and computational vehicle for the latter.

The underlying transaction tax. A minimal nominal charge of, for example, 2 basis points on foreign exchange transactions would raise the cost of capital insignificantly and would probably have no effect on the volume of transactions involving currency conversions. A transaction tax could also be imposed on derivative trades at half the standard rate, or 1 basis point. This would allow the derivatives markets to continue functioning at low cost while preventing the use of derivatives to evade taxes.

The exchange surcharge. The exchange surcharge would be administered in conjunction with the underlying transaction tax, but its aim and implementation would be different. The aim would be to tax negative externalities associated with excessive volatility. For normal operations, the fixed-rate surcharge would be zero because the tax base is zero, which assures market liquidity and allows efficient trad-

through a target rate and an admissible spread or band. However, rather than supporting a weakening currency through high premiums on overnight money deposits or through sales of foreign exchange reserves, with the exchange surcharge, currencies are defended by taxing technically well-defined windfall profits. Unlike the Tobin tax, which would indiscriminately tax all transactions at the “wrong end” and therefore penalize normal liquidity trading, the exchange surcharge would apply only to transactions at the “speculative end” and would not affect normal trading.

Ideally, the two-tier scheme would work on a global scale, as would the tax originally proposed by Tobin, but, initially, it could be implemented unilaterally by one or a few countries.

Benefits

The exchange surcharge proposed in this article is intended to be a short-term stabilizing tool of monetary policy, of

course; it would not be used to correct structural problems. Its purpose would be to allow smooth adjustment of exchange rates to economic fundamentals, not to restore an ailing economy to health. Nor would the surcharge be able to prevent speculative trading triggered by sudden fears of payment defaults or political crises.

The exchange surcharge would, however, avoid the negative effects of other monetary policy measures that sacrifice valuable international reserves or offer excessively generous interest rates to combat speculative attacks. Instead of depleting public assets, it would generate revenues. It would also eliminate expectations of recurrent bailouts by central banks, reducing moral hazard as well as the incidence of financial crises. Moreover, the surcharge would be likely to stabilize longer-term exchange rate movements, primarily through its impact on investors' expectations.

The goal of the surcharge—exchange rate stability—is, of course, not an end in

itself. Stability reduces the scope for price bubbles and false signals, improves the allocation of international resources, and reduces risk premiums—in particular those related to inflation. It also restores some of the autonomy governments and central banks can lose as a result of heavy speculation and may help prevent harmful political measures taken in attempts to correct misaligned exchange rates. F&D

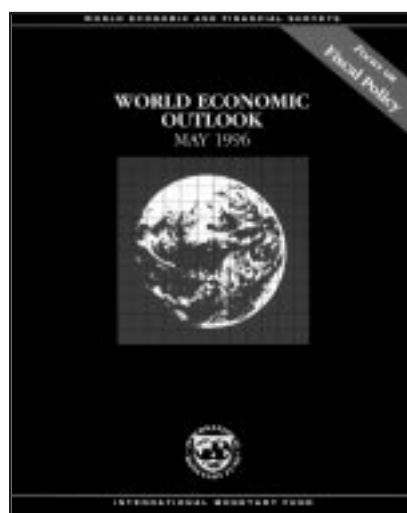
Suggestions for further reading:

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