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## **The Economic Case for the Tobin Tax<sup>1</sup>**

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### ***Introduction***

The international financial instability of recent years has prompted calls for a new international financial architecture. Often included in proposals for this new architecture is a tax on international currency transactions, commonly known as the Tobin tax. Proponents argue that a Tobin tax is feasible, and would help reduce financial instability. Opponents counter that it is infeasible, and could even worsen instability. This article examines the economic case for a Tobin tax, and argues that it is both desirable and feasible.

Three important points deserve emphasis. First, with regard to financial crisis prevention, the Tobin tax should be viewed as part of a package of reforms to the international financial architecture. No measure alone can prevent financial crises, and many measures generate synergies so that they work better as a package. A house has doors, windows, floors, and ceilings: a well-designed financial architecture will also have many elements, of which the Tobin tax should be one.

Second, James Tobin (1978) initially proposed the Tobin tax in connection with spot market currency transactions. Since then, there has been significant financial innovation in currency markets, including development of more extensive futures markets and derivative instruments. This means the Tobin tax must now be applied to all forms of foreign currency

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<sup>1</sup> This paper is a revised and expanded version of my article “Destabilizing Speculation and the Case for an International Currency Transactions Tax,” published in Challenge, May-June 2001, vol. 44, 70 – 89. Thanks to M.E. Sharpe for permission to re-use the material. The paper has benefited from comments made at a seminar held at the University of Bergamo, Italy, in December 2002, and at the New Rules Tobin Tax conference held in Washington, DC, in January 2003. All errors are mine. The views expressed in this paper are mine, and not those of the Open Society Institute.

related transactions to avoid evasion. More generally, the Tobin tax should be seen as part of a family of financial market transaction taxes, and many of the arguments for a Tobin tax carry over and support other forms of financial market transaction taxes. Indeed, from a purely technical standpoint, taxing domestic financial market transactions may be the easier place to start since these involve a single jurisdiction, and are therefore harder to evade.

Third, not only does the Tobin tax promise to improve international financial stability, it also has significant tax revenue raising capacity. This is an important feature at a time when public finances in many countries are under pressure owing to mobility of capital income. Moreover, this tax raising capacity can be justified in terms of conventional optimal taxation theory (Palley, 1999a).

In sum, not only is the Tobin tax good for financial stability, it also can raise large amounts of revenue in an economically efficient way. The same holds for modest financial market transaction taxes in general.

### ***The intellectual history of the Tobin tax***

The idea of an international currency transactions tax was first advanced by the late Nobel laureate economist James Tobin (1978) who proposed a small tax - these days the suggestion is 1/10 percent - on all foreign exchange (FX) dealings. The intention was to reduce disruptive speculation in FX markets by raising the cost of engaging in such activities.

The Tobin tax builds on an earlier proposal made by Keynes (1936) in his magisterial book, *The General Theory of Employment, Interest, and Money*. In *The General Theory* Keynes proposed the imposition of a small transactions tax on all stock exchange dealings to diminish instability in domestic stock markets. His proposal was motivated by the disastrous consequences of the stock market crash of 1929, combined with the observation that speculation tended to be more prevalent on Wall Street than on Throgmorton Street (home of the London stock exchange) in part due to the absence of a tax in the New York market.

“It is usually agreed that casinos should, in the public interest, be inaccessible and expensive. And perhaps the same is true of stock exchanges. That the sins of the London

Stock Exchange are less than those of Wall Street may be due, not so much to differences in national character, as to the fact that to the average Englishman Throgmorton Street is compared with Wall Street to the average American, inaccessible and very expensive. The jobber's "turn", the high brokerage charges and the heavy transfer tax payable to the exchequer, which attend dealings on the London Stock Exchange, sufficiently diminish the liquidity of the market to rule out a large proportion of the transaction characteristic of Wall Street. The introduction of a substantial Government transfer tax on all transactions might prove the most serviceable reform available, with a view to mitigating the predominance of speculation over enterprise in the United States (Keynes, 1936, p.159-60)."

More recently, following the U.S. stock market crash of 1987, the idea of using transactions taxes to curb speculation received support from Joseph Stiglitz (1989), the former Chairman of the U.S. Council of Economic Advisers and former Chief Economist of the World Bank. It has also received support from Lawrence Summers (1989), the former U.S. Treasury Secretary. The bottom line is that the Tobin tax has a highly respectable intellectual heritage. Though this does not make the Tobin tax necessarily right, it does dispel the notion that it is an outlandish idea.

### ***Overview of the paper***

The economic case for the Tobin tax is multi-faceted. Arguments for are that (1) it can reduce currency volatility and damaging speculation, (2) it can enhance the power of domestic monetary policy, (3) it can efficiently raise significant tax revenue, (4) it can reduce the dominance of financial interests over economic policy, and (5) it can reduce waste of scarce resources that goes with excessive financial transacting.

Regarding the question of feasibility of the Tobin tax, there are two distinct sets of issues. One set concerns administrative and technical feasibility – that is whether the tax can be put into effect if policymakers wish too. The second set concerns political feasibility. Here, the issue is obtaining appropriate political buy-in.

### ***Currency volatility and speculation: the evidence***

A key claim of Tobin tax proponents is that the Tobin tax can reduce currency volatility and damaging speculation. A natural starting point for discussion of this claim is the question of whether there is excess volatility in FX markets, and whether these markets are working well.

### *Currency volatility: the microeconomic evidence*

Foreign exchange rates are a key macroeconomic price, powerfully influencing the relative price at which goods and services in one economy trade for goods and services in another. According to economic theory, exchange rates should be determined by “economic fundamentals” such as a nation’s resource endowment, relative level of productivity, and prospects for productivity growth. These economic fundamentals are relatively stable, changing little from day-to-day, month-to-month, and even year-to-year. This in turn suggests that exchange rates ought to be relatively stable. Yet, the empirical data clearly shows that flexible exchange rates have been much more volatile than warranted by macro-fundamentals, a fact that is especially clear in the daily and monthly data.<sup>2</sup>

Along with this unexplained volatility, there has also been a massive unexplained increase in the quantity of foreign exchange trading. In 1973, daily trading volume averaged around \$15 billion. In 1998 it averaged \$1,500 billion (Felix, 2001). This increase far exceeds that which can be explained by inflation and increased international trade. Moreover, over 80% of this daily trading is of a very short-term nature, being for settlement within 7 days (Felix, 2001).

Formal statistical analysis shows that there is a robust positive correlation between volume and volatility. Research on the microeconomic structure of FX markets (Wei and Kim, 1997) shows that the open position of large FX traders Granger-causes volatility, and is unrelated to subsequent appreciation. This is an important finding since these open positions are speculative positions, and the evidence shows that taking of these positions occurs systematically prior to bouts of increased volatility, yet opening of these positions is unrelated to sustained changes in the exchange rate.

In sum, the microeconomic evidence paints a picture of a market characterized by significant speculation – that is patterns of trading and price movement cannot be explained by economic fundamentals. Instead, the evidence supports the picture described by Tobin (1978):

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<sup>2</sup> See Obstfeld (1995).

“In the absence of any consensus on fundamentals, the markets are dominated – like those for gold, rare paintings, and – yes, often equities – by traders in the game of guessing what other traders are going to think.”

*Currency volatility: the macroeconomic evidence*

In addition to microeconomic evidence based on high frequency (daily and monthly) data, there is also macroeconomic evidence based on lower frequency data. Over the last twenty five years, a clear feature of FX markets is that they have been subject to long swings that result in large departures of the real exchange rate from purchasing power parity (PPP) which theory predicts should hold (Rogoff, 1996).<sup>3</sup> In addition, economic models are empirically unable to predict actual exchange rates. This applies to all theoretically suggested models, and the best model over any modest time horizon is a simple random walk.<sup>4</sup> This is indicative of the presence of speculative noise traders.

Finally, the system of flexible exchange rates has been marked by increased frequency of financial crises. Mexico was afflicted by crisis in 1994, East Asia in 1997, Russia in 1998, and Brazil in 1999 and 2002. Financial crises have also afflicted industrialized countries. The French franc was subject to speculative attack in 1982. The British pound was attacked in 1992, as was the Swedish Krone. And U.S. markets were buffeted by the collapse of Long Term capital Management (LTCM) in 1998 that occurred as a result of the wave of unpredictable interest rate movements generated by the Russian financial crisis. The belief is that all of these crises were either triggered or exacerbated by financial speculation, and that measures to reduce speculation - such as the Tobin tax - would either have helped avoid the crises or reduced the extent of resulting damage.

From a policy standpoint, financial crises impose massive economic losses owing to the sharp deep recessions that follow. From a U.S. perspective, more damaging than the immediate effects of financial crises are long swings in exchange rates. Thus, for the U.S., more important

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<sup>3</sup> Economic theory predicts that exchange suggests that the equilibrium real exchange rate should be roughly equal to the ratio of country price levels, adjusted for differences in (1) *ad valorem* sales taxes, and (2) the value of non-tradeable inputs whose price is not equalized across country markets.

<sup>4</sup> The empirical literature on exchange rates is briefly reviewed in Taylor (1995).

than the immediate impacts of the East Asian financial crisis, was the plummeting of East Asian currencies relative to the dollar. This has undermined U.S. manufacturing by imposing a massive competitive disadvantage. Indeed, the persistence of the economic slump that began in 2001 (and continues as of this moment), can be significantly attributed to the effects of an over-valued dollar on manufacturing (Palley, 2003).

Moreover, the current episode of sustained dollar over-valuation is not the first. A similar episode occurred in the first half of the 1980s when the dollar underwent a prolonged period of over-valuation that rendered U.S. firms internationally uncompetitive. There have also been similar problems in the U.K., both in the early 1980s and late 1990s, when the pound sterling appreciated thereby making British manufacturing uncompetitive.

Finally, on a historical note, for much of the 1980s Europe's economy was adversely impacted by fears of currency crisis. To avoid this, many European governments raised interest rates to shore up their currencies, resulting in higher Europe-wide interest rates that contributed to higher unemployment. The introduction of the Euro in 1999 has significantly solved this problem by reducing the scope for currency crises amongst small European economies, but the episode illustrates how even developed countries can be hurt by currency market speculation.

### ***Why the Tobin tax can help reduce harmful speculation***

The above evidence – both microeconomic and macroeconomic – points to dysfunction in FX markets. Proponents of the Tobin tax believe that it can help correct this dysfunction. Before detailing how the Tobin tax can do this, two important points. First, a Tobin tax will work best when introduced as part of an overall financial architecture, which is why proponents usually present it as part of a package of reform measures. Second, the Tobin tax does not prevent bad outcomes resulting from bad policy. For instance, a major reason for the damaging appreciations of the dollar and the pound sterling in the 1980s was tight monetary policy in the U.S. and U.K. respectively. This raised interest rates and attracted an inflow of foreign capital that appreciated the exchange rate. Consequently, an appreciation would likely have happened even in the presence of a Tobin tax, though it is possible that the inflows might have been

marginally dampened. Similarly, a Tobin tax will not prevent exchange rate collapses resulting from government attempts to maintain fixed exchange rates that are massively over-valued relative to the level warranted by economic fundamentals. Critics of the Tobin tax often point to the fact that the tax is so small (1/10 percent) that it would not deter speculators from attacking over-valued fixed exchange rates when large double-digit percent gains are anticipated.<sup>5</sup> However, such criticism misses the point. The Tobin tax is not intended to prevent speculation resulting from massive policy induced exchange rate overvaluation. It is intended to prevent groundless speculation that increases noise in financial markets and imposes costs on other sensible investors.

The traditional “Chicago School” view of speculation is that speculation is stabilizing (Friedman, 1953). This Chicago point of view is predicated on the argument that there exists a market price that is warranted by economic fundamentals. When the actual price exceeds this warranted price, speculators realize that the market is over-valued. They therefore sell, and drive the market down to its warranted price. Conversely, when the actual price is below the warranted price, speculators realize the market is under-valued. They therefore buy and drive the market up to the warranted price.

This traditional “Chicago School” view has been challenged from a number of directions. One challenge comes from the Chicago School’s own rational expectations theory of behavior which shows how asset price bubbles can be rationally self-fulfilling. All that is needed is that market participants expect that the future price will be higher, and they will buy now in anticipation of this higher future price. In this fashion, “market beliefs” can become the driving fundamental, and if speculators share and shape this belief they can drive prices away from the level warranted by economic conditions.

A second challenge comes from the noise trade literature (De Long, et al., 1990) that shows market participants who trade purely on the basis of noise may come to dominate the

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<sup>5</sup> See Davidson (1997). Spahn ‘s (1995, 2001) two tier Tobin tax can actually dissuade speculation even when larger gains are anticipated.

market. FX market noise traders look to make gains on very small basis point movements. Because they are indifferent to risk, they earn a higher rate of return than ordinary risk-averse persons. As a result, noise traders can come to dominate the market, and though the market remains stable, it produces socially sub-optimal outcomes.

A third challenge to the traditional view comes from the literature on herd behavior (Banerjee, 1992; Palley, 1995) that posits market investors may rationally act as a herd. Each individual acts rationally from his or her own standpoint, but collectively they behave as a herd, each following the actions of others for no reason other than the fact that others are doing it. In this case, the “behavior of others” becomes the market fundamental, and the actions of speculators can trigger herd-driven exchange rate movements that have no relation to underlying economic conditions.

A fourth strand of work, emphasizing economic efficiency concerns, focuses on how speculators may cause damage to other market participants when they cash out of their investments (Palley, 1999a). This seems to have been particularly prevalent in East Asia, where the decision to cash out and repatriate investments led to a fall in the exchange rate that then increased the debt burden of those east Asian entrepreneurs who had used foreign currency borrowings to finance their business expansions. In such instances, speculators impose a negative externality on other investors. These other investors (call them fundamentals investors) are in for the long haul, and their investment calculus is thereby compromised. Conventional economic theory advises that policy makers should tax activities having negative externalities, thereby making them more expensive and discouraging them. This is well-known theory of Pigouvian taxes, named after the English economist A.C. Pigou. Viewed from this vantage, the Tobin tax is a form of Pigouvian tax that is applicable to international financial markets.

The above theoretical arguments complement the earlier empirical arguments. They explain why FX markets exhibit the patterns they do, and they explain why these patterns are inefficient and sub-optimal. A Tobin tax can help improve the situation. The logic is simple. Speculation is economically disruptive and destabilizing. It is caused by noise traders whose



presence creates market volatility risk, and these traders profit from the induced volatility premium. The imposition of a very small tax can wipe out these gains, thereby discouraging noise traders from entering the market.

In addition to reducing daily FX market volatility, the Tobin tax may also help reduce medium term exchange rate swings that have so distorted the international economy. Here, the argument is that these swings can result from momentum FX trading strategies.<sup>6</sup> Once the wagon gets rolling, traders extrapolate that it will keep rolling, and they therefore have an incentive to jump on board. When everyone does this, the trading strategy can become self-fulfilling. A Tobin tax may be able to prevent this by stopping momentum from developing. The analogy is with a car on a hill, which if held by a small wedge, will not roll down the hill and gather momentum.<sup>7</sup>

Finally, the hill – wedge analogy also helps understand why the Tobin tax is of little use in stopping financial crises. Such crises can be thought of as analogous to a situation where the car has started rolling down the hill. In this event, placing a small wedge under the wheel will be of little use in stopping the car from moving. However, in this situation a modified two-tier Tobin tax, as proposed by Spahn (1995, 2001), may work. His proposal is that in times of speculative crisis the Tobin tax be raised to penalty rate levels – say 15% instead of the normal 1/10%. This second tier would become a form of FX market circuit breaker, akin to that used in stock markets where computer-trading programs are suspended when prices have fallen a given amount.

### ***Could the Tobin tax increase volatility and reduce efficiency?***

Critics of the Tobin tax maintain that it could actually increase market volatility by discouraging transacting, and thereby reducing the liquidity of the market. This would thin the

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<sup>6</sup> They can also be caused by bad economic policy, in which case the Tobin tax will be of no benefit.

<sup>7</sup> Momentum bubbles have a strong resemblance to rational expectations bubbles. The difference is that momentum investors only look one period ahead so that a small tax may be sufficient to prevent them from buying. A rational expectations investor looks into the infinite future, and a small tax may not be sufficient to prevent them from buying if they see future prices rising by a lot. The momentum model, with its truncated investor time horizon, seems a better model of reality. Given this, the Tobin tax could be very effective in preventing bubbles.

market, and increase volatility because thin markets are prone to “one-sided” market sentiment – i.e. everyone wants to sell or everyone wants to buy.

By definition, if the Tobin tax is successful at eliminating noise trading, it will reduce market volume. However, that does not automatically imply that the market will be thin. FX markets are so large (\$1,500 billion per day in 1998) that even if some trading were discouraged, they would remain highly liquid. Moreover, these markets would continue to have larger volumes than fifteen years ago. The markets were stable back then, and there is no reason to believe that they would not be now. Finally, empirical evidence from the International Monetary Fund (Habermeier and Kirilenko, 2001) shows that securities transactions taxes, which are far larger than the proposed Tobin tax, do not raise volatility in securities markets.

Another related objection is that the Tobin tax will drive *bona fide* market-makers out of business by raising their transaction costs. This in turn could contribute to a more inefficient and volatile market. Here too, the assertion is questionable. First, costs of transacting, even after the imposition of a Tobin tax, would be lower than they were a decade ago because of declines in other transactions costs. Thus, if market-makers could survive under the earlier cost structure, it stands to reason that they will be able to survive under a lower contemporary cost structure, even though it includes a Tobin tax.<sup>8</sup>

Second, it is not even clear that total transaction costs would be higher with a Tobin tax. The initial implementation of the tax would definitely raise transaction costs. But if successful at driving out noise traders, the tax would reduce volatility, in turn reducing the volatility risk premium. Transaction costs could therefore even fall owing to the changed composition of traders, with noise traders permanently kept out of the market by the presence of the Tobin tax. This type of link between low transactions costs, increased volume, and increased volatility is suggested by recent U.S. stock market data. Figures 1 and 2 show how volatility on both the New York and NASDAQ stock exchanges has increased significantly during the second half of the

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<sup>8</sup> Data on stock market volatility come from TIAA-CREF Participant, August 2000, p.2-3. Data for 2000 is through June and is annualized.

1990s, which was a period of sharply declining transactions costs. The figures suggest that a small increase in stock market transactions costs that reduced volume might reduce stock market volatility. By similar reasoning, an increase in currency dealing transactions might reduce exchange rate volatility.<sup>9</sup>

Another form of objection to the Tobin tax is that it reduces market efficiency by taxing all transactions, regardless of their economic contribution. Here, it is worth distinguishing between types of trader, and for this purpose let there be three types – short term speculators (noise traders), long term “fundamentals” investors, and traders engaged in financing international trade in goods and services. With regard to speculators and investors, the impact of the Tobin tax is likely to be significantly different. Speculators make their profit from small basis point movements on each trade, and even at 1/10 percent, the Tobin tax stands to eliminate this profit. Consequently, they have a very high elasticity of trading demand with respect to the Tobin tax, and their trading volumes will be significantly reduced. Conversely, investors are in for the long haul, and the 1/10% tax is close to insignificant for them. They therefore have a negligible elasticity of trading demand with respect to the tax, and their trading volumes are unaffected. This situation is captured in figures 3.a and 3.b, showing speculators and investors trading demands as a function of the Tobin tax. In the limit, investors could even be completely unaffected, in which case the Tobin tax functions as a screening device that matches the unremunerated reserve requirement (speed-bump) arrangement used by Chile’s monetary authority (Palley, 1999b). Indeed, investors’ demand might even be a positive function of the Tobin tax if the tax so reduced volatility that it reduced risk and increased return to investors.

Regarding international trade, it is true that the Tobin tax also taxes *bona fide* currency

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<sup>9</sup> Data on stock market volatility come from TIAA-CREF Participant, August 2000, p.2 - 3. Data for 2000 is through June and is annualized.

transactions made to finance international trade in goods and services. This is because it cannot distinguish between speculative currency dealings and dealings to finance trade. Since trade is *prima facie* welfare enhancing, this suggests that public welfare will be reduced to the extent that trade is reduced.

There are three counter-arguments to this trade argument. First, the Tobin tax would be very small in magnitude. This means that trade which could not bear the addition of a 1/10 percent tax contained little social value, and any loss to society would be correspondingly small. In effect, only the most marginal of trade would be displaced. Moreover, this marginal trade may in reality have negative social value, so that stopping it may be a social good. The reason is that trade often leads to a reallocation of production. This reallocation is decided on the basis of the private benefits and costs to firms, and firms reallocate as long as their net private benefit is positive. Yet, trade induced reallocations of production frequently impose large costs on workers and communities as jobs are lost and worker skills are rendered redundant. These costs are borne by the displaced workers and communities, and are not internalized (i.e. taken account of) in firms' decisions to relocate production. A small Tobin tax would serve as a way of proxying for these costs, and it would force firms to internalize them in their production relocation calculus. Furthermore, trade also has significant environmental externalities, in the form of pollution, that are not costed into the social value calculus of trade. A Tobin tax would serve to internalize this environmental externality.

A second counter to the trade-loss argument is that a Tobin tax might actually increase trade. This is because it stands to reduce currency market uncertainty, thereby making it easier for firms to trade. With reduced currency risk, firms would pay less to hedge against foreign currency risk exposures incurred in the course of financing international trade. This would lower

the cost of trade, thereby increasing trade.

Finally, a third reason why a Tobin tax could increase trade is that the reduction of currency risk that goes with reduced exchange rate volatility could induce firms to substitute away from multi-national production toward increased use of trade. Exchange rate volatility has likely been an important factor explaining the growth of multi-national production. This is because it has given firms a reason to build up a cross-country portfolio of production facilities to protect against exchange rate fluctuations. However, in doing so, firms have reduced their reliance on trade. Absent currency uncertainty, trade would be the best way of organizing production; with currency uncertainty, firms switch to multi-country production, often running facilities at less than full capacity.<sup>10</sup>

### ***Macroeconomic policy autonomy and the dominance of finance***

A significant original concern of Tobin (1978) motivating his proposal of the Tobin tax was the issue of country macroeconomic policy autonomy. Capital flight and exchange rate volatility can undermine this autonomy by compelling governments to abandon policies that may be in the national interest, but are disliked by financial interests. The classic example of this is France's attempt in 1982 to pursue a modest Keynesian stimulus to combat the effects of recession. Financial markets disapproved of the policy, and mounted a speculative attack on the franc that compelled the government to reverse course.

This power of financial markets rests on veto by exit. It is a power that has grown over the last two decades as transaction costs have fallen with advances in electronic communication and money transfer technology. A Tobin tax can help counter this power of financial markets since the imposition of a transactions tax makes movement between countries more expensive.

A second feature of the last two decades has been the explosion in the volume of

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<sup>10</sup> Another consequence of the shift to multi-national production concerns income distribution. By contributing to a changed structure of production, exchange rate volatility has helped change the pattern of bargaining power in favor of capital over labor, which in turn has contributed to deterioration in income distribution.

financial transacting. Excessive financial trading can be viewed as an economic distortion, in that it uses scarce real resources. Here, an analogy can be made with casinos. Operating a casino costs resources, and these resources are only justified if they produce net gains. In the casino industry, gambling is entertainment, and it is generation of entertainment value that justifies the industry. FX markets are not part of the entertainment industry, yet much activity may simply be a form of noise trader gambling.<sup>11</sup>

Finally, the introduction of a Tobin tax can also be viewed as contributing to the agenda of taxing capital. There is now widespread recognition that globalization has tended to favor capital by facilitating the movement of capital, thereby increasing options available to capital. This has contributed to twisting the distribution of income in favor of capital, and shifting the burden of taxation on to labor income. A Tobin tax can be a small step in redressing this shift of balance.

### ***The public finance case for a Tobin tax***

In addition to lowering market volatility and reducing damaging speculation, a Tobin tax also has a public finance justification that is by itself justification enough. Using 1995 currency transactions figures, Felix (2001) estimates the global revenues from a Tobin tax of 0.1% to be between \$186 billion and \$241 billion. If the tax were set at 0.05%, the revenue estimate is between \$134 billion and \$149 billion. Using 1997 data, Pollin et al. (1999) consider a joint Tobin - Keynes tax (they call it a Securities Transactions Tax) that applies within just the U.S. to all currency, equity, and bond market transactions. They estimate that this would raise between \$70 - 100 billion a year. These sums constitute enormous revenues that could either be retained by national governments to finance important public spending priorities, or could be used to finance equitable sustainable global economic development - a new global Marshall Plan. For

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<sup>11</sup> Hirshleifer (1971) provides theoretical arguments why the activities of financial markets may be socially unproductive even though they are productive from a private standpoint. The crux of his argument is that financial markets may engage in activities that are redistributive (my gain = your loss) rather than production augmenting. Tobin (1984) also criticizes the financial system for absorbing too many real resources to the detriment of the rest of the economy.

instance, the UN estimates that the annual funding needed to achieve the Millennium Development Goals (MDGs) is of the order of \$50 billion, so in principle a Tobin tax could fund the MDG project.

Such revenues are especially valuable given the widely acknowledged problem of tax competition (Tanzi, 1996; OECD, 2000) that has contributed to an erosion of national tax bases, and to a shifting of tax burdens away from capital on to labor (Rodrik, 1997). In this regard, there is also every reason to believe that a Tobin tax would be relatively progressive in incidence, with the burden falling predominantly on those with higher incomes.

The amount of revenue raised will of course depend importantly on the extent to which the tax reduces currency speculation (i.e. on the elasticity of demand for foreign exchange transactions). If the tax has little impact, the revenues will be relatively larger: if the tax has a large impact, the revenues will be relatively smaller. However, interestingly, in both cases the tax is justified by the theory of optimal taxation (Palley, 1999a). If the impact is small, this implies the demand for currency transactions is relatively inelastic, and the theory of optimal public finance recommends that governments should tax activities with inelastic demands.<sup>12</sup> Conversely, if the impact is large, then speculation will have been reduced, thereby reducing the negative externality imposed by speculators on other investors in accordance with Pigouvian tax theory. This reveals the win - win public finance character of the Tobin tax.

### ***Is a Tobin tax feasible?***

The theoretical case for a Tobin tax represents one part of the debate. Equally important is the question of whether a Tobin tax is feasible. Critics claim that it is not. One criticism focuses on “avoidance through jurisdictional shopping”, while a second focuses on “avoidance through

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<sup>12</sup> The economic logic is as follows. Governments need to raise revenues, and hence the need to tax. But taxes change relative prices, thereby distorting the pattern of economic activity and shifting it away from the first best equilibrium that would prevail in the absence of taxes. Public finance theory therefore advises policy makers to tax those activities that are relatively insensitive to increased prices (i.e. in which demand is inelastic), in which case taxes will have relatively little impact on the pattern of economic activity. This is often advanced as an economic justification for “sin” taxes on tobacco, alcohol, and gambling, because the demand for sin is relatively inelastic. The Tobin tax can be seen as a form of sin tax - the sin being currency market speculation.

changed product mix”.

With regard to the former, the principal objection to the Tobin tax rests on the claim that it needs to be applied on a global basis in coordinated uniform fashion. Absent this, currency traders will have an incentive to engage in “jurisdictional shopping,” and traders will just shift their activities away from countries with the tax to countries without it.

Though some jurisdictional shopping would exist in the absence of uniform application, there are a number of reasons to believe that this effect would be inconsequential - especially if the tax were applied in a significant group of countries such as the G-7. This prediction derives from the Bank of International Settlements’ (BIS) experience with capital standards, which in many regards exactly parallel the Tobin tax. These standards impose an additional cost on banks by asking them to hold more costly equity capital, and banks therefore have an incentive to shift to jurisdictions where they are not applied. Yet, there is no evidence that this has occurred. Instead, conforming to the BIS standards has become the equivalent of a seal of good housekeeping, and this has given governments an incentive to apply and enforce them in order to retain good standing and attract business to their financial markets.

Furthermore, establishing a *de facto* global standard will be facilitated by the fact that currency trading is highly concentrated. Using 1995 data, Felix (1996) reports that 62% of trading takes place in the top five markets (U.K., U.S., Japan, Singapore, and Hong Kong) and that 84% takes place in the top 9 (top 5 plus Switzerland, Germany, France, and Australia). If these countries, plus the remaining G-7 countries (Italy and Canada) were to impose a Tobin tax, this would capture the vast bulk of the world’s markets.

Not only would it be feasible for the G-7 to go it alone in imposing a Tobin tax, Baker (2000) suggests that the U.S. could successfully unilaterally impose a Tobin tax. The bottom line is that a Tobin tax would fractionally raise the cost of doing business, but the U.S. is one of the world’s low cost producers of financial services. Because of this, the tax-induced small increase in the cost of doing business would not necessarily result in much loss of business to other markets. Decisions where to locate do not depend exclusively on narrow transactions costs. They



are also influenced by the business environment, the network of other support services and ancillary markets, and by the soundness of the regulatory system governing the conduct of business. All of these factors work to the advantage of U.S. markets, so that a small Tobin tax need not be critical in the business location decision.

A second issue regarding feasibility concerns avoidance by change of product mix. Here, the argument is that even if governments were to impose a Tobin tax, market participants would have an incentive to substitute out of financial instruments subject to the tax into instruments not subject to it. In this fashion, markets would innovate so as to avoid the tax.

There is merit to this observation, yet again it is not decisive. First, the extent of avoidance will depend critically on the design of the Tobin tax. To the extent that it is narrowly designed, avoidance by substitution will be larger. For instance, focusing on just spot currency markets would clearly induce a huge shifting of transactions into futures and derivatives markets. Thus, the real issue is how to design a tax that takes account of all the methods and margins of substitution available to traders. Taking account of these considerations implies a Tobin tax that is bigger in scope, and pushes the design toward a generalized securities transactions tax that resembles the tax suggested by Pollin et al. (1999). There are four benefits to this broader approach. First, it is likely to generate significantly greater revenues. Second, it maintains a level playing field across financial markets so that no individual financial instrument is arbitrarily put at a competitive disadvantage versus another. Third, it is likely to enhance domestic financial market stability by discouraging domestic asset speculation. Fourth, to the extent that advanced economies already put too many real resources into financial dealings, it would cut back on this resource use, freeing these resources for other productive uses.

Lastly, there are also significant market forces that deter avoidance by product substitution. A Tobin tax imposes a small cost on transactors, giving them reason to substitute into different financial instruments. But such substitution is costly both in resource use, and because alternative instruments do not provide exactly the same services. These costs act as a check on the incentive to substitute. Thus, just as the market provides an incentive to avoid a Tobin tax, so

too it automatically sets in motion forces that deter excessive avoidance.<sup>13</sup>

The above arguments regarding feasibility are theoretical in character. A final empirical point of support comes from the history of use of transaction taxes in asset markets. Baker (2000) documents how these taxes have been widely used in most major economies, and they continue to be used in many countries. When it comes to domestic asset markets, securities transactions taxes have clearly not prevented efficient functioning of securities markets. The Tobin tax represents a marginal expansion of the domain of these taxes to include currency transactions. Given the history of use of securities transactions taxes, it is hard to see why such an extension would be either dangerously destabilizing or infeasible.

***The Tobin tax, political will and the principles of good public policy***

Reflection on the issues of enforcement, evasion, and avoidance that surround the Tobin tax raise critical technical questions. But beyond this, are issues of political will and the principles of good public policy. The Tobin tax raises a series of complex issues related to the economic need for and feasibility of such a tax. Argument and the evidence suggest that it is needed, and that it is feasible. This means that “political will” is the ultimate constraint. Much has been made of the issue of feasibility, but the experience regarding BIS capital standards shows that international collective action problems can be solved when governments choose.<sup>14</sup>

Critics argue that the problems of enforcement, avoidance, and evasion make the Tobin tax infeasible. Not only are these problems over-stated by the critics, they also miss the point that evasion and avoidance are not decisive in determining whether a tax is warranted. Every tax system is subject to some evasion and avoidance, and the extent of such behaviors is an appropriate concern. But such behaviors are only part of the decision calculus. Also relevant is

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<sup>13</sup>. The same market forces also operate to contain the problem of jurisdictional shopping and evasion. Moving the geographic location of transacting is costly in terms of lost business networks, ancillary markets, etc. This dampens the incentive to move.

<sup>14</sup> Baker (2000) makes similar claims about political will comparing the problem of Tobin tax enactment and enforcement to that of money laundering. With regard to the latter, the political will exists to stop it, and governments have therefore joined together to do so.

the amount of needed revenue that the tax raises, and the behaviors it discourages. This is the test that should be applied to the Tobin tax - just as it should for all tax systems - and on this test the Tobin tax scores well. Taxes are imposed on a wide variety of goods and services, and these taxes are generally regarded as being in line with market principles. The same holds for the Tobin tax.

Beyond this is an even broader principle concerning the nature of regulation in a dynamic global economy. Critics of the Tobin tax argue that financial markets will innovate to avoid it. This is undoubtedly true, yet it does not mean that a Tobin tax is unwarranted. Effective taxation places costs on profit maximizing firms, while effective regulation imposes constraints that prevent them from doing what they would like. Firms therefore have an incentive to search out ways of avoiding taxes and regulations, and over time they tend to succeed in doing so. Indeed, if the incentive to avoid is not there, it probably means the regulation is of little consequence. Seen from this analytical vantage, it becomes clear that good regulation always sows the seeds of its own destruction. This should be the Rosetta stone of all regulators.<sup>15</sup>

Over time financial markets will undoubtedly innovate in directions that allow some avoidance of a Tobin tax. But this does not invalidate the case for a Tobin tax. Instead, it affirms the fact that regulation is an on-going process - a dynamic game played between regulators and regulated - that needs to be continually updated. Sometimes regulators manage to get ahead of the game, and other times they just manage to stay even. However, there is never an excuse for capitulating and surrendering the public interest to the dictates of the market. Unfortunately, much of the opposition to a Tobin tax partakes of such a surrender. This is unjustified in principle, and unjustified on the particular merits of the Tobin tax.

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<sup>15</sup> See Palley (1999c, p.110).

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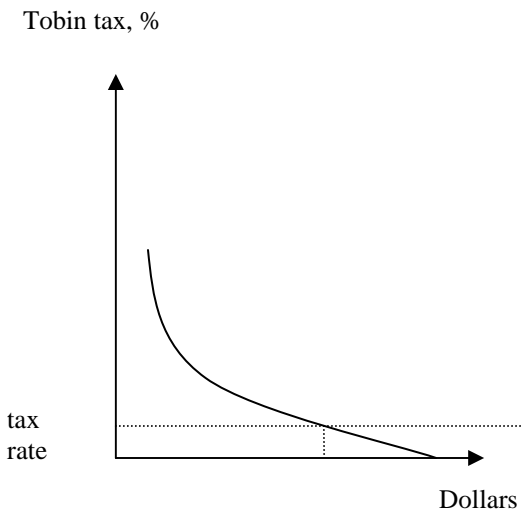


Figure 3.a Speculators' demand for currency trades as a function of the Tobin tax rate.

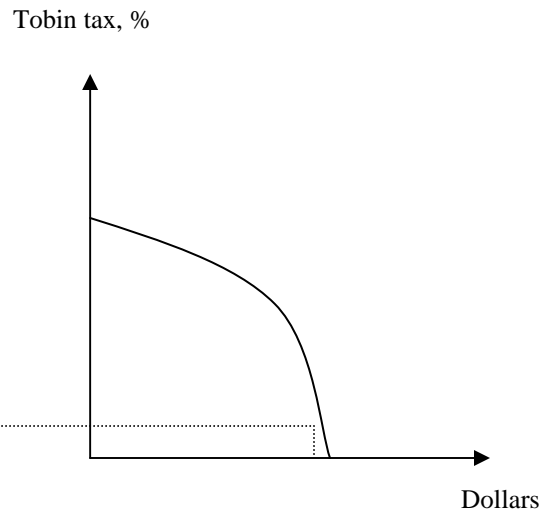
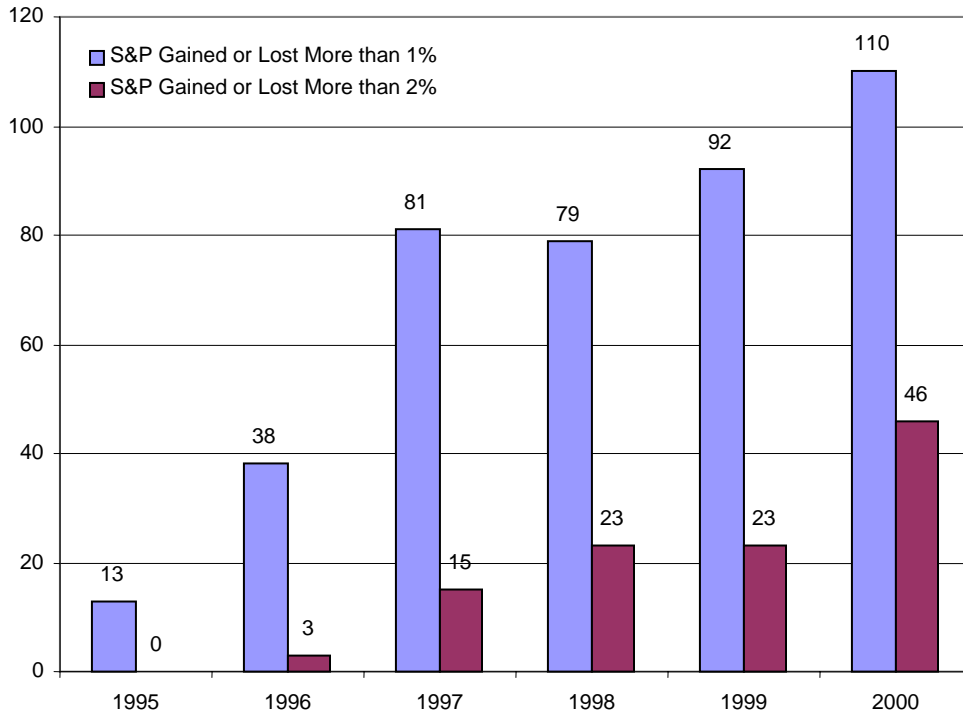
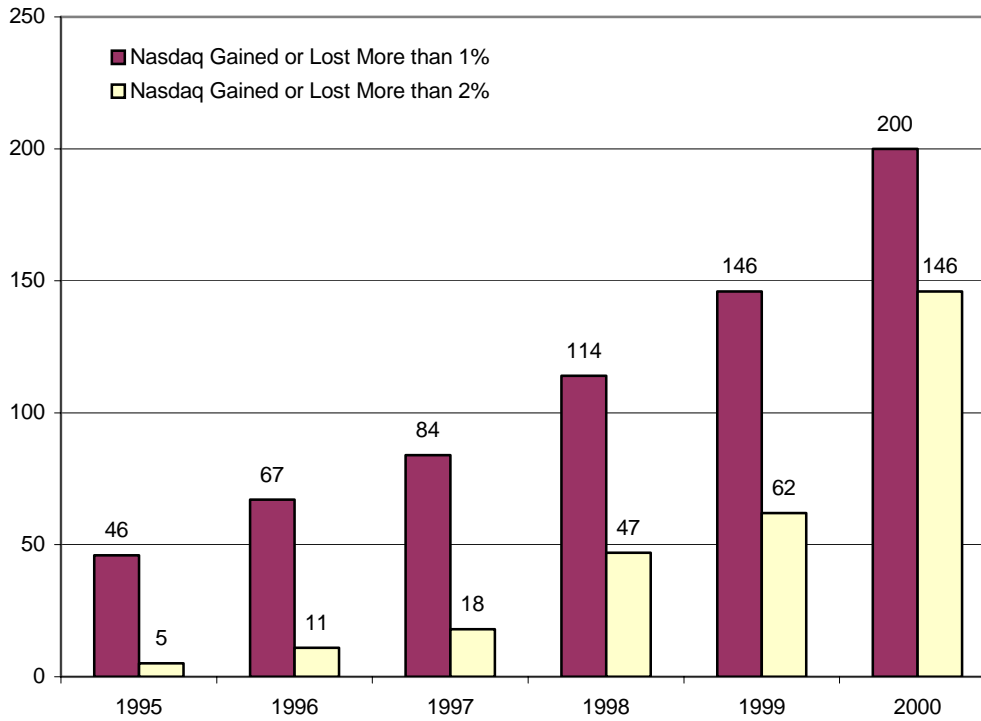


Figure 3.b Long term investors' demand for currency trades as a function of the Tobin tax.

**Figure 1** Number of days S&P gained or lost more than 1% or 2%.



**Figure 2**



**Figure 2** Number of days NASDAQ gained or lost more than 1% or 2%.

